

WHOLESALE DEMAND RESPONSE MECHANISMS – CONSULTATION ON THE CREDIT LIMIT PROCEDURES

FINAL REPORT AND DETERMINATION

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EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the consultation by AEMO on proposed amendments to the Credit Limit Procedures (Procedures) in respect of the Wholesale Demand Response Mechanism (WDRM) under the National Electricity Rules (NER).

The Procedures will be amended as at 19 January 2021 to:

- Apply bespoke prudential requirements for Demand Response Service Providers (DRSPs) for determining the Maximum Credit Limit (MCL).
- Require the call amount for DRSPs to be determined as outstandings less trading limit.

Under the Procedures, the MCL will be determined as the sum of outstanding limit and prudential margin –\$8,000 and \$2,000 respectively – as adjusted to account for any reallocation transactions to which a DRSP is a party.

AEMO received two submissions in response to the Issues Paper:

- Brickworks raised issues on the requirement for DRSPs to provide credit support, as well as negative settlement quantities. However, these issues relate to the WDRM rule made by the Australian Energy Market Commission (AEMC) to facilitate wholesale demand response in the NEM, through the wholesale demand response mechanism (WDRM Rule). AEMO has no discretion to adjust or deviate from the NER. Accordingly, the final Procedures will remain unchanged in this regard.
- Origin Energy proposed that AEMO review the new methodologies one year after their commencement, to ensure their fitness for purpose. However, the NER already requires AEMO, at least once a year, to review, prepare and publish a report on the effectiveness of the methodology developed under clause 3.3.8 in achieving the objective of the Procedures, with any recommendations for the enhancement of the methodology.

AEMO considers that the Procedures, as proposed, effectively manage the potential exposure to DRSPs and maintain the NEM prudential standard, with minimal administrative costs.

AEMO's Final Determination is to amend the Procedures in the form published with this Final Report.



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1. STAKEHOLDER CONSULTATION PROCESS

AEMO is consulting on the Procedures as required by NER clause 3.3.8, in accordance with the Rules consultation process in rule 8.9.

AEMO’s indicative timeline for this consultation is outlined below. Future dates may be adjusted depending on the number and complexity of issues raised in submissions.

Deliverable	Indicative date
Notice of First Stage Consultation and Issues Paper published	4 September 2020
First stage submissions closed	16 October 2020
Draft Report and Notice of Second Stage Consultation published	13 November 2020
Submissions due on Draft Report	4 December 2020
Final Report published	19 January 2021

The publication of this Final Report concludes this consultation process.

A glossary of terms used in this Draft Report is at Appendix A.

2. BACKGROUND

2.1. NER requirements

Under NER clause 3.3.8, AEMO is responsible for developing, publishing and maintaining the Procedures. The Procedures may be amended in accordance with the consultation process in NER rule 8.9.

2.2. Context for this consultation

The Procedures establish the methodology by which the AEMO determines the prudential settings for each market participant so that the prudential standard is met for the NEM. The prudential settings for a market participant comprise its maximum credit limit (MCL), outstandings limit (OSL) and prudential margin (PM). The MCL is the sum of the OSL and the PM.

The prudential standard represents the value of the probability of a market participant’s MCL being exceeded by its outstandings at the end of the reaction period following the market participant exceeding its OSL on any day and failing to rectify this breach. NER clause 3.3.4A defines the prudential standard as 2%.

Under NER clause 3.3.8, AEMO must determine the prudential settings, that is the MCL, for the new market participant category of DRSPs.

2.3. First stage consultation

AEMO issued a Notice of First Stage Consultation on 4 September 2020. AEMO’s Issues Paper¹ sets out the need for prudential requirements for DRSPs, given DRSPs may be liable for negative settlement amounts, where consumption of a wholesale demand response unit (WDRU) exceeds its baseline, in an interval when it is dispatched to provide wholesale demand response (WDR).

AEMO proposed a bespoke prudential requirement for DRSPs, noting that the unpredictability of WDR does not allow the use of the standard MCL methodology. Under this methodology, DRSP prudential requirements would be assessed as:

¹ https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/clp/clp-wdrm-changes-issues-paper.pdf?la=en



- $MCL = OSL + PM$
- OSL is set at the value of \$8,000
- PM is a set at the value of \$2,000
- OSL and PM values will be adjusted to account for any reallocation transactions to which the DRSP is a party.

In practical terms, the methodology will result in a requirement for all DRSPs to provide AEMO with a guarantee of \$10,000 upon registration, to meet their prudential obligations.

AEMO’s Issues Paper outlined the proposed approach to calculate the typical accrual amount to determine the call amount, for the purposes of issuing a call notice where the Outstandings of a market participant exceed its trading limit under NER. As it is not feasible to use the standard methodology, AEMO proposed that the call amount will be determined as Outstandings minus the Trading Limit.

AEMO did not receive any written submissions in the First Stage Consultation or hold any meetings and/or forums on the proposed amendments to the Procedures.

2.4. Second stage consultation

AEMO issued a Notice of Second Stage Consultation, with accompanying Draft Report,² on 13 November 2020. AEMO did not propose and changes to the draft Procedures that had been published as part of the First Stage Consultation.

AEMO received two submissions:

- Brickworks raised issues on the requirement for DRSPs to provide credit support, as well as negative settlement quantities, as discussed in section 3 and 4. However, these issues relate to the WDRM Rule. AEMO has no discretion to adjust or deviate from the NER. Accordingly, the final Procedures will remain unchanged in this regard.
- Origin Energy proposed that AEMO review the new methodologies one year after their commencement, to ensure their fitness for purpose. However, the NER already requires AEMO, at least once a year, to review, prepare and publish a report on the effectiveness of the methodology developed under clause 3.3.8 in achieving the objective of the Procedures, with any recommendations for the enhancement of the methodology.

AEMO did not hold any meetings and/or forums on the proposed amendments to the Procedures.

3. SUMMARY OF MATERIAL ISSUES

The key material issues arising from the proposal and raised by Consulted Persons in the are summarised in the following table:

No.	Issue	Raised by
1.	Bespoke prudential requirement for DRSPs	AEMO
2.	Calculation of typical accrual for DRSPs	AEMO
3.	Requirement for DRSPs to provide credit support	Brickworks
4.	Negative settlement quantities	Brickworks

² https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/clp/draft/draft-determination-clp-wdr-amendments.pdf?la=en



A detailed summary of issues raised by Consulted Persons in submissions, together with AEMO's responses, is contained in Appendix B.

4. DISCUSSION OF MATERIAL ISSUES

4.1. Bespoke Prudential Requirement for DRSPs

4.1.1. Issue summary and submissions

Prudential requirements for DRSPs cannot be determined through the application of the standard MCL methodology, due to the lack of data, as well as the unpredictable nature of WDR. AEMO has proposed bespoke prudential requirements for DRSPs, as discussed in section 2.3.

AEMO did not receive any submissions on this issue.

4.1.2. AEMO's assessment

AEMO considered other simplified prudential methodologies which could be applied in these circumstances.

The proposed methodology allows AEMO effectively mitigate the market's potential exposure to DRSPs, as well as being administratively simple.

4.1.3. AEMO's conclusion

AEMO considers the proposed bespoke prudential requirements will effectively manage the potential exposure to DRSPs and maintain the NEM prudential standard, with minimal administrative costs.

4.2. Calculation of typical accrual for DRSPs

4.2.1. Issue summary and submissions

The standard methodology for determining the typical accrual amount cannot be used for DRSPs. AEMO has proposed a methodology used for MNSPs, where the call amount is determined as Outstandings minus the Trading Limit.

AEMO did not receive any submissions on this issue.

4.2.2. AEMO's assessment

AEMO has assessed the typical accrual methodology for MNSPs as being appropriate for the application to DRSPs. This proposed approach to determining the call amount will allow the potential exposure to DRSPs to be effectively managed.

4.2.3. AEMO's conclusion

AEMO considers the proposed bespoke prudential requirements will effectively manage the potential exposure to DRSPs and maintain the NEM prudential standard, with minimal administrative costs.

4.3. Requirement for DRSPs to provide credit support

4.3.1. Issue summary and submissions

Brickworks' submission queried whether a DRSP should be required to provide credit support to AEMO in order to participate in WDRM. The basis was that Brickworks did not agree with the NER's contemplation that negative settlement amounts can result through a DRSP participating in WDRM.



The issues concerning negative settlement quantities are discussed in Section 4.4 below.

4.3.2. AEMO's assessment

A negative settlement quantity is possible under the NER. Accordingly, a potential exists for prudential exposure through DRSP participation in WDRM. As such, under NER clause 3.3.8, AEMO must determine the prudential requirements for DRSPs, so that the prudential standard is met for the NEM.

AEMO determined that as WDR by nature is unpredictable, the standard methodology to assess prudential requirements is not appropriate for DRSPs. Instead, in the draft Procedures, AEMO has outlined bespoke arrangements for DRSPs, which in practical terms translates to a requirement for all DRSPs to provide AEMO with a guarantee of \$10,000 upon registration, to meet their prudential obligations.

4.3.3. AEMO's conclusion

The Procedures must be consistent with the NER. Accordingly, the Procedures remain unchanged in this regard.

4.4. Negative settlement quantities

4.4.1. Issue summary and submissions

Brickworks' submission raised concerns over the potential for a DRSP to have negative settlement, that large users would be penalized by being exposed to paying a pool price for failing to meet dispatch targets, as well as through the non-conformance process.

4.4.2. AEMO's assessment

The WDRM Rule contemplates the occurrence of negative settlement, in which a WDRU consumes above its baseline in an interval when it is dispatched to provide WDR. While a DRSP (and its customer) would not intentionally be bidding in WDR in these circumstances, unexpected outcomes can occur.

In these circumstances, DRSPs would be exposed to the overs and unders of baseline inaccuracy. Further, DRSPs would be exposed to pool prices, meaning they would be pool price payers rather than pool price recipients (i.e. have negative settlement amounts).

AEMO noted in its submissions to the AEMC during the Rule change process that negative settlement should not occur for WDRM and that settlement quantities should be floored at zero. This approach would have eliminated a need for prudential requirements for DRSPs.

However, the AEMC did not agree with AEMO's submission that WDR settlement quantities should be floored at zero. In its final determination, the AEMC stated that it considered it appropriate for DRSPs to be exposed to both the positive, as well as negative, monetary flows. This approach will provide DRSPs with a stronger incentive to ensure that they deliver WDR in accordance with their dispatch instructions.

Consequently, the settlement equations that are specified in the NER will result in negative settlement quantities where:

- WDR NMI is dispatched.
- WDR NMI's metered consumption is above its baseline quantity.

However, negative settlement quantities do not arise automatically as a result of failing to meet dispatch target. Further, WDRM settlement does not occur if there is no dispatch instruction. Instead, dispatch is based on bids by DRSPs of their capacity which reflect their availability and the pool price at which they are willing to provide WDR. Negative settlement quantities are only possible if the load for the WDRU is above the baseline for the WDRU, when it is bid in and subsequently dispatched.



4.4.3. AEMO's conclusion

AEMO has no discretion to adjust or deviate from these settlement equations, as set out in the NER. The requirement for credit support directly results from this risk of negative settlement.

As the Procedures must be consistent with the NER, AEMO has no ability to address the issue of negative settlement through the Procedures. Accordingly, the final Procedures remain unchanged in this regard.

5. FINAL DETERMINATION

AEMO's Final Determination is to amend the Credit Limit Procedure in the form of Appendix C, in accordance with clause 3.3.8 of the NER.



APPENDIX A. GLOSSARY

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator Limited
DRSP	Demand Response Service Provider
MCL	Maximum Credit Limit
MNSP	Market Network Service Provider
NEM	National Electricity Market
NER	National Electricity Rules
OSL	Outstandings Limit
PM	Prudential Margin
Procedures	Credit Limit Procedures
WDRM	Wholesale Demand Response Mechanism
WDRU	Wholesale Demand Response Unit



APPENDIX B. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES

No.	Consulted person	Issue	AEMO Response
1.	Brickworks	<ul style="list-style-type: none"> Do not agree that a WDR participant should be required to provide credit support to AEMO in order to participate in WDR. It was never the intention that a WDR market could result in large users paying a pool price because of a mismatch between actual load and a deemed load profile, should a site fail to meet its dispatch target for WDR. 	<ul style="list-style-type: none"> AEMO argued in its submissions during the Rule change process that settlement quantities should be floored at zero. During the WDR rule change process, the AEMC did not agree with AEMO's submission that WDR settlement quantities should be floored at zero. Consequently, the settlement equations that are specified in the NER will result in negative settlement quantities where: <ul style="list-style-type: none"> a WDR NMI is dispatched and its metered consumption is above its baseline quantity. AEMO has no discretion to adjust or deviate from these settlement equations. The requirement for credit support directly results from this risk of negative settlement. Negative settlement quantities do not arise automatically as a result of failing to meet a dispatch target. Negative settlement quantities are only possible if the load for the WDRU is above the baseline for the WDRU when it is bid in and subsequently dispatched.
2.	Brickworks	<ul style="list-style-type: none"> The methodology to determine the demand response volume should be floored at 0, so that it is not possible for any large user to have to pay a pool price for consuming electricity. Almost all large users have a contract to supply electricity and should not be exposed to the additional risk of paying a pool price as a condition for providing demand response. Noting that the greater the volume of demand response provided to the market, the greater the benefit enjoyed by electricity consumers through increased bidding competition with generators during high price periods. 	<ul style="list-style-type: none"> In essence, the design of the WDR mechanism in the NER allows large users to gain access to pool prices when they are dispatched for demand response. As noted above and codified in the rules, the AEMC decided that this exposure should be bidirectional. It is important to note that no WDR settlement occurs if there is no dispatch instruction. Dispatch is based on bids, and DRSPs can bid their capacity to reflect their availability and the pool price at which they are willing to provide WDR.



No.	Consulted person	Issue	AEMO Response
3.	Brickworks	<ul style="list-style-type: none">Not having a floor of zero on the demand response volume, represents a double penalty to large users that does not exist for any other electricity market participants. The first penalty being that large users are exposed paying a pool price for failing to meet dispatch target and secondly, via the non-conformance process. This proposed situation only exists because of the unique load deeming methodology and does not apply to any other market participant which results in unfairly disadvantaging large users.	<ul style="list-style-type: none">Negative settlement quantities can only occur if the WDRU is bid in and dispatched, and the WDRU load is above the baseline for that load.Negative settlement quantities do not arise automatically as a result of failing to meet a dispatch target. Negative settlement quantities are only possible if the load for the WDRU is above the baseline for the WDRU when it is bid in and subsequently dispatched.



APPENDIX C. FINAL CREDIT LIMIT PROCEDURES

The Final Procedures are available at:

<https://aemo.com.au/consultations/current-and-closed-consultations/credit-limit-procedures-wdrm>