



13 March 2009

Dr John Tamblyn (Chairman)
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear John

**Futures Offset Arrangement Rule Change Proposal 2008
Submission to Draft Rule Determination (22nd January 2009)**

Ref: ERC0056

As foreshadowed in our submission dated 6 March 2009, d-cyphaTrade is pleased to have the opportunity to provide the AEMC with an alternative to the Futures Offset Arrangements (**FOAs**) Rule Change Proposal which includes the attached Draft Rule for implementing the alternative in the National Electricity Rules (**Rules**). The alternative, the Direct Retailer FOAs:

- allows for the use of futures offset arrangements in the NEM within the existing regulatory structure whereby the FOA would be between the Market Participant (a Registered Participant) and NEMMCO;
- addresses the concerns raised by the AEMC in its draft Rule determination on the Futures Offset Arrangement Proposal;
- in comparison to the current arrangements in the NEM and the FOA Rule change proposal, better contributes to the achievement of the national electricity objective (NEO); and
- is within the AEMC's powers to make a more preferable Rule.

We address each of these points below

How the Direct Retailer Futures Offset Arrangement would operate

The Direct Retailer FOAs would be implemented in a similar way to which reallocation transactions have been implemented in the Rules, thus providing market participants with a prudential offset alternative to reallocations. The administration of a Direct Retailer FOA under the Rules involves the following:

1. A Market Participant (normally a retailer) will lodge a FOA Request with NEMMCO. If a FOA Request is lodged with NEMMCO in the appropriate form;
2. NEMMCO will register a FOA at the "Futures Lodgement Price";
3. As a condition of the FOA, the Market Participant must procure and provide to NEMMCO from the Market Participant's SFE Clearing Participant a confirmation of the **Market Participant's futures position in writing each morning** during the term of the FOA;
4. NEMMCO will recalculate the Maximum Credit Limit (MCL) for the Market Participant in consideration of the FOA such that taking into account the FOA the new MCL (measured in \$/MWh) should be equal to the maximum of (i) the Futures Lodgement Price at inception of the FOA and (ii) the Prudential Margin (in \$/MWh), adjusted for GST and Loss Factor. A formula for calculating the MCL with regards to the FOA is specified such that the MCL will not exceed the MCL prior to the FOA;

5. NEMMCO will calculate the FOA payment on a daily basis during the term of the FOA using a defined formula which references price movements of defined futures **contracts above the "Futures Lodgement Price" registered at** the inception of the FOA;
6. If the calculated FOA payment is a positive amount (due to a futures price increase), the Market Participant is then obligated to make a cash payment to NEMMCO via their existing Security Deposit Arrangement. If the FOA payment calculation results in a nil amount (from a futures price decrease or unchanged futures price) the Market Participant is not required to do anything;
7. A Market Participant cannot terminate a FOA without NEMMCO's consent;
8. NEMMCO may terminate a FOA at the request of the Market Participant but may determine a new MCL and Trading Limit for the Market Participant as a condition of termination;
9. Interregional offsets are not allowed under FOAs; and
10. NEMMCO may need to apply for a Ministerial Exemption from holding an Australian Financial Services License (AFSL) to deal in FOAs, on similar grounds to those used to obtain NEMMCO's exemption to hold an AFSL to auction SRA derivatives.

Please see the attached Draft Rule regarding the implementation of the above Direct Retailer FOA in the Rules.

How the Direct Retailer FOA alternative addresses the concerns raised by the AEMC regarding FOAs

The Direct Retailer FOA addresses the concerns raised by the AEMC in its draft Rule determination on the FOA Rule change proposal. We demonstrate below how the Direct Retailer FOA will address the AEMC's concerns by reference to the subject matters identified in the draft Rule determination:

- ***MCL offset methodology:*** Our analysis (see previous submission) demonstrates that Direct Retailer FOAs would have retained a much higher retailer MCL credit support for NEMMCO than under reallocation since 2005 (an average \$50.08/MWh of FOA bank guarantee support compared to \$17.35/MWh under reallocation) plus FOAs would have contributed additional Security Deposit protection which has been ignored in the analysis. The increased competition in the supply of FOAs and elimination (via daily margining of FOAs) of off market bilateral credit default risks between NEM Participants required under reallocation will however regularly yield operating cost savings to retailers under FOAs despite the larger credit support retained with NEMMCO;
- ***Legal rights and obligations of FOA parties:*** SFE Clearing Participants would not be a party to the FOA. Hence legal rights and obligations of the FOA parties (NEM Participants) are governed by the Rules. The obligation is on the Market Participant to ensure its SFE Clearing Participant provides NEMMCO with a confirmation of the Market Participant's relevant futures position daily;
- ***Non-firmness of FOA payments:*** the Direct Retailer FOA is between the Market Participant and NEMMCO and only NEMMCO can terminate an FOA. NEMMCO will not terminate an FOA at the Market Participant's request unless the Market Participant provides sufficient alternative credit support under the Rules. Therefore, the uncertainty regarding FOA payments under the initial proposal is removed.
- ***clawback risks of security deposits:*** the Direct Retailer FOA arrangements utilise existing payment arrangements and will not change the status quo regarding legal clawback risk.

The risk of clawback would be at the same level that currently exists in relation to security deposit payments that are used for billing purposes. Similarly the risks would be the same as those risks associated with a bank guarantee relating to credit support. The frequency and size of FOA payments are less when compared with ex-ante reallocations as under a Direct Retailer FOA the Retailer only has to pay NEMMCO amounts that are greater than the “Futures Lodgement Price” whereas reallocation transactions include the gross pool price;

- **Lack of clear dispute resolution procedure:** both parties to the Direct Retailer FOA (Market Participant and NEMMCO) are governed by the Rules, hence the dispute resolution process is governed by the Rules as well;
- **Inter-regional FOA offset:** the Direct Retailer FOA does not (and nor did the original FOA proposal) permit interregional MCL offsets; and
- **Counterparty default risk:** under Direct Retailer FOAs, counterparty default risk is reduced through daily margining of the retailer’s futures hedge contracts, thereby reducing costs. In comparison, ex-ante reallocation merely transfers the risk of a retailer’s default from NEMMCO to a generator via an opposing (and very large) over-the-counter counterparty exposure.

How the Direct Retailer FOA alternative contributes to the NEO

d-cyphaTrade shares the Commission’s view that it is important to balance the prudential needs of generators and retailers whilst maintaining a sound and efficient prudential regime in line with the NEO. d-cyphaTrade considers that Direct Retailer FOA best meets the NEO in comparison to the alternatives as:

- there is currently no complementary offset mechanism to reallocations in the Rules that contributes to the effectiveness and efficiency of the current prudential regime;
- it supports the prudential regime of the NEM whilst reducing the working capital cost to retailers and generators alike which is in the long term interests of consumers of electricity;
- the reduction of working capital costs:
 - lowers barriers to entry and thus promotes the efficient investment in electricity services; and
 - leads to increased competition which in turn promotes efficient operation and use of electricity services.
- addresses the concerns and issues that resulted in the AEMC determining that the FOA Rule change proposal did not satisfy the NEO.

The AEMC's power to make the Direct Retailer FOA Rule

d-cyphaTrade submit that the AEMC should make the Direct Retailer FOA as an alternative to the Initial Rule proposed (and which was rejected) as part of the FOA Rule change proposal rather than considering this alternative as part of the market review that has recently commenced on the same issue.

Section 91B of the National Electricity Law gives the AEMC the power to make the Direct Retailer FOA instead of the Rule proposed by the FOA Rule change proposal. In addition, if the AEMC considers further consultation is required, section 102A of the National Electricity Law empowers the AEMC to issue another draft Rule determination and conduct another round of consultation to give stakeholders the opportunity to comment on the Direct Retailer FOA prior to AEMC determining to make the Rule.



We therefore urge the AEMC to consider the Direct Retailer FOA alternative in making its final Rule determination on the FOA Rule Change Proposal.

Yours sincerely,

A handwritten signature in black ink that reads "Dean Price".

Dean Price
General Manager

Draft Rule - Direct Retail Futures Offset Arrangement

The following Rule Changes will be required to implement and support FOAs:

New National Electricity Rules

- 3.3.2B Futures Offset Arrangement Request
- 3.3.2C Preserved cash flows from Futures Offset Arrangements
- 3.3.2D Termination of Futures Offset Arrangements
- 3.15.11B Futures Offset Arrangements

Amendments to existing National Electricity Rules

- 1.11 NEMMCO Rule funds
- 3.3.8 Maximum credit limit and prudential margin
- 3.3.8A Security Deposits
- 3.3.13 Response to Call Notices
- 3.15.1 Settlements management by NEMMCO

Schedule 3.3 - Principles for Determination of Maximum Credit Limits & Prudential Margins

Chapter 10 Definitions

3.3.2B Futures Offset Arrangement Request [NEW RULE]

- (a) A *Market Participant* may request *NEMMCO* to register a proposed *futures offset arrangement* ("a *futures offset arrangement request*") in accordance with the *futures offset arrangement rules*.
- (b) A *futures offset arrangement request* must set out the details of the proposed *futures offset arrangement* which includes:
 - (1) the term of the *futures offset arrangement*, including:
 - (i) the first day on which the arrangement is to take effect ("**the starting day**");
 - (ii) the last day that the arrangement is to be in effect ("**the termination day**");
 - (2) a confirmation in writing from a *SFE Clearing Participant* to *NEMMCO* that the *SFE Clearing Participant* holds futures contracts on behalf of the *Market Participant* or an entity controlled by or related to the *Market Participant* as specified in the *futures offset arrangement request*, in a volume greater than or equal to the quantity of futures contracts specified at subparagraph (iv);
 - (3) specification of the futures contracts nominated to become subject of the arrangement including:
 - (i) the *region* of futures contract;
 - (ii) the futures product code as referenced by the Sydney Futures Exchange;

- (iii) the futures contract term (specifying the time and date of the first half hour interval of energy and the time and date of the last half hour interval of energy encompassed by the term of the futures contract);
 - (iv) the quantity of futures contracts;
 - (v) the MWhs incorporated in one futures contract;
 - (vi) the futures contract cash settlement day;
 - (vii) the futures contract load shape (being either Base or Peak); and
 - (viii) the official Sydney Futures Exchange settlement price of the futures contract on the Sydney Futures Exchange business day immediately before the day the *futures offset arrangement request* is lodged with NEMMCO by the *Market Participant* ("**Futures Lodgement Price**"), quoted in \$/MWh.
- (c) NEMMCO must register a proposed *futures offset arrangement*:
- (1) within 1 hour of receipt of a *futures offset arrangement request* where such receipt occurs between 9 am to 4 pm on a *business day*;
 - (2) by 9 am on the next business day following the receipt of a *futures offset arrangement request* where such receipt occurs after 4 pm on a *business day*; or
 - (3) by 9 am on the same *business day* of receipt of a *futures offset arrangement request* where such receipt occurs before 9am of that same day.
- (d) NEMMCO must immediately inform the *Market Participant* of the registration of the *futures offset arrangement* under paragraph (c) including the confirming the details of the *futures offset arrangement* (being the details set out in paragraph (b)).
- (e) NEMMCO may impose conditions on the registration of a *futures offset arrangement* including requiring the *Market Participant* to procure from a *SFE Clearing Participant*, a daily confirmation to be provided to NEMMCO that the volume of relevant contracts held on behalf of the *Market Participant* or an entity controlled by or related to the *Market Participant* is no less than specified in the *futures offset arrangement request*.
- (f) A *Market Participant* who has registered a *futures offset arrangement* must pay NEMMCO monies equivalent to futures variation margins above the Futures Lodgement Price (as specified in the *futures offset arrangement request*) in accordance with clause 3.15.11B.

NB: Prescribes (a) the minimum balance of Security Deposit (SDA) for a *Market Participant* which is subject to a FOA. The clause is silent on how the FOA amount in the SDA will be used after the term of the futures offset arrangement has expired. NEMMCO would have the discretion to apply the money to billing period transactions.

3.3.2C Preservation of security deposit from futures offset arrangements. [NEW RULE]

During the term of a *futures offset arrangement* the *Market Participant* must retain an amount (in cash or other approved security) in the *Market Participant's* security deposit of no less than:

Max [(DSP_t – FLP) x FQ, 0] where such terms are as defined in clause 3.15.11B [new],

unless otherwise agreed with *NEMMCO*.

Defines the notification procedure and obligations for early termination of FOA.

3.3.2D Termination of Futures Offset Arrangements [NEW RULE]

- (a) If a *default event* occurs in relation to the *Market Participant* which is a party to a *futures offset arrangement* prior to the termination day (as specified in the *futures offset arrangement request*), *NEMMCO* may terminate the *futures offset arrangement* by giving notice to the *Market Participant* at any time whilst the *default event* is subsisting. The termination is effective immediately from the receipt of the notice of termination by the *Market Participant*, notwithstanding that the *default event* may be subsequently cured.
- (b) *NEMMCO* may terminate a *futures offset arrangement* if the *Market Participant* breaches its *prudential support* obligations.
- (c) *NEMMCO* may terminate a *futures offset arrangement* if the *Market Participant* fails to comply with any conditions imposed by *NEMMCO* in respect of the *futures offset arrangement* at the time it was registered.
- (d) *NEMMCO* may terminate a *futures offset arrangement* at the request of the relevant *Market Participant*. *NEMMCO* may make such termination conditional upon the *Market Participant* meeting requirements specified by *NEMMCO*, including but not limited to *NEMMCO* being satisfied that the *Market Participant* will meet *prudential support* requirements upon termination of the *futures offset arrangement*.
- (e) In addition to any other right which *NEMMCO* may exercise in relation to a *default event*, upon termination of a *futures offset arrangement* *NEMMCO* may redetermine the *maximum credit limit*, *prudential factor* and *trading limit* for the *Market Participant* which was the subject of the *futures offset arrangement* having regard to the termination which has occurred.

3.15.11B Futures Offset Arrangements [NEW RULE]

Calculation methodology

- (a) The *Market Participant* must pay the amounts calculated in accordance with paragraph (c) to *NEMMCO* on:
 - (1) the next SFE business day after the starting day (as specified in the *futures offset arrangement request*) ("**First Calculation Day**")
 - (2) each business day of the Sydney Futures Exchange ("**SFE business day**") other than the First Calculation Day that occurs during the term specified in the *futures offset arrangement request* but excludes days

after the last trading day of the relevant futures contract ("**Calculation Day**"); and

- (3) where the termination day of the *futures offset arrangement* (as referred to in the *futures offset arrangement request*) occurs after the last trading day of the relevant futures contract, the cash settlement day of the relevant futures contract after the last trading day of the relevant futures contract ("**Last Calculation Day**").

- (b) The amount payable by a *Market Participant* under paragraph (b) is as follows:

$$\text{Max} [(DSP_t - \text{Max} [DSP_{t-1}, \text{FLP}, DSP_h]) \times \text{FQ}, 0]$$

Where:

FLP means the Futures Lodgement Price as specified in the *futures offset arrangement request*;

DSP_h means the previous highest Sydney Futures Exchange official daily settlement price that has occurred during the term of the *futures offset arrangement* as specified in the *futures offset arrangement request*;

FQ means the quantity of Futures Contracts multiplied by the MWhs incorporated in each Futures Contract; and

DSP_t means:

- (1) for the First Calculation Day, the SFE official daily settlement price as at close of business on the starting day (as specified in the *futures offset arrangement request*) (unless the starting day is not an SFE business day, in which case DSP_t means the SFE official daily settlement price as at close of business on the next SFE business day); and
- (2) for a Calculation Day, the SFE official daily settlement price immediately prior to the Calculation Day;
- (3) for a Last Calculation Day, the Sydney Futures Exchange official cash settlement price of the relevant futures contract;

DSP_{t-1} means:

- (1) for the First Calculation Day, FLP;
- (2) for a Calculation Day, the most recent SFE official daily settlement price prior to DSP_t;
- (3) for the Last Calculation Day, the Sydney Futures Exchange official daily settlement price as at close of business on the last exchange trading day of the relevant futures contract.

- (c) On a Calculation Day, NEMMCO may reset DSP_h if:

- (1) DSP_t < DSP_h; and
- (2) the Market Participant has withdrawn funds or instructed NEMMCO in **writing that it will withdraw funds from the Market Participant's Security Deposit** thereby reducing the balance of the Security Deposit to $\text{Max}[(DSP_t - \text{FLP}) \times \text{FQ}, 0]$

and in which case DSP_h will be reset on this Calculation Day to $\text{Max} [DSP_t, \text{FLP}]$ and NEMMCO will inform the *Market Participant* of the new DSP_h

Form and Timing of payments to NEMMCO

- (d) If a *Market Participant* is required to pay *NEMMCO* under this clause 3.15.11B, the *Market Participant* must pay *NEMMCO* by no later than 11 am on the relevant Calculation Day.
- (e) *NEMMCO* must deposit the money in its security deposit fund established in accordance with rule 1.11 in respect of the *Market Participant*.
- (f) NEMMCO will provide the *Market Participant* with a daily invoice detailing:
 - (1) any amount payable under the *futures offset arrangement*;
 - (2) the volume in MWh of the *futures offset arrangement*; and
 - (3) the relevant Sydney Futures Exchange official daily settlement prices (including FLP, DSPT-1, DSPT and DSPH) of futures contracts relevant to the *futures offset arrangement*,by 9:00 am on the relevant Calculation Day.

Termination

- (g) Upon termination of the *futures offset arrangement* by *NEMMCO* in accordance with 3.3.2D, the obligation for the *Market Participant* to make payments to *NEMMCO* in accordance with the *futures offset arrangement* will cease upon payment by the *Market Participant* to *NEMMCO* of all amounts owing in relation to Calculation Days up to and including the date of termination.

Amendments to Existing National Electricity Rules

Note: new wording is denoted in underlined blue.

N.B: The amendments to clause 1.11 are to enable NEMMCO to use the security deposit fund to retain monies relating to FOAs.

1.11 NEMMCO Rule Funds [amended]

- (a) **NEMMCO** must continue to maintain, in the books of the corporation:
 - (1) the registration and administration fund;
 - (2) the security deposit fund; and
 - (3) any other fund which the **Rules** provide will be maintained in **NEMMCO's** books,(each a "**Rule fund**").
- (b) **NEMMCO** must ensure that there is paid into each **Rule fund**:
 - (1) in the case of the registration and administration fund, all amounts of **Participant fees** and **auction expense fees** and any other amounts payable under the **auction rules** or **SRD agreements** as **NEMMCO** considers necessary from time to time other than those which are to be paid into another **Rule fund**;
 - (2) in the case of the security deposit fund, amounts which are received by **NEMMCO** under clauses 3.3.8A, 3.3.13(a)(2) and 3.3.13(a)(3) and the future offset arrangement rules;
 - (3) in the case of a fund referred to in paragraph (a)(3):
 - (i) all amounts which are received by **NEMMCO** in connection with carrying out its functions or powers in relation to that fund;
 - (ii) all amounts of **Participant fees** which are received or recovered by **NEMMCO** which relate to **NEMMCO's** actual or budgeted costs and expenses for carrying out its functions or powers in relation to that fund; and
 - (4) in the case of each **Rule fund**, income from investment of money in the **Rule fund**.
- (c) In respect of the security deposit fund, **NEMMCO** must keep records, in respect of each individual **Market Participant**, of:
 - (1) security deposits made by that **Market Participant** and actual interest or other income earned on that **Market Participant's** payments to that fund which will be recorded as credits for that **Market Participant**;
 - (2) any application, or return to that **Market Participant**, of monies in the security deposit fund in accordance with clause 3.3.13A or the futures offset arrangement rules;

- (3) deductions for liabilities and expenses of the security deposit fund referable, or allocated, to that **Market Participant** which will be recorded as debits to that **Market Participant**; and
 - (4) the credit or debit balance for that **Market Participant**.
- (d) **NEMMCO** must ensure that money from each **Rule fund** is only applied in payment of:
- (1) in the case of the registration and administration fund, costs and expenses of **NEMMCO** carrying out its functions or powers:
 - (i) in relation to a fund referred to paragraph (a)(3) to the extent that such costs and expenses cannot be met from the money contained in that fund; or
 - (ii) other than those functions and powers referred to in subparagraph (i);
 - (2) in the case of the security deposit fund, monies owing to **NEMMCO** by a **Market Participant** or the return of monies to a **Market Participant** in accordance with clause 3.3.13A [and the futures offset arrangement rules](#);
 - (3) in the case of a fund referred to in paragraph (a)(3), costs and expenses of **NEMMCO** carrying out its functions or powers in relation to that fund; and
 - (4) in the case of each **Rule fund**:
 - (i) other than the security deposit fund, reimbursement to a **Registered Participant** or another **Rule fund** to make any necessary adjustment for any excess amounts which are paid as **Participant fees** as a result of any of **NEMMCO's** actual costs and expenses being less than the budgeted costs and expenses or as a result of the payment of any interim **Participant fees**; and
 - (ii) liabilities or expenses of the **Rule fund**.

3.3.8 Maximum credit limit and prudential margin [amended]

- (b) The **maximum credit limit** for a **Market Participant** is a dollar amount determined by **NEMMCO** applying the principles set out in schedule 3.3, being an amount determined by **NEMMCO** on the basis of a **reasonable worst case** estimate of the aggregate payments for **trading amounts** (after **reallocation** [and futures offset arrangements](#)) to be made by the **Market Participant** to **NEMMCO** over a period of up to the **credit period** applicable to that **Market Participant**.
- (g) **NEMMCO** must notify the **Market Participant** of any determination or change under this clause 3.3.8 of that **Market Participant's maximum credit limit** or **prudential margin** (as the case may be) and, on request from that **Market Participant**, provide details of the basis for that determination or change, **including the trading, price, volatility, prospective futures offset arrangement assumptions and prospective reallocation assumptions and the average spot prices and ancillary service prices and average trading amounts**.

The amendments to the below clause has been amended to ensure that the Market Participant can provide NEMMCO money in relation to the security deposit for FOAs.

3.3.8A Security Deposits [amended]

At any time, a *Market Participant* may provide a security deposit to *NEMMCO* [with respect to:](#)

(a) [securing](#) payment of any amount which may become payable in respect [of a billing period; and](#)

(b) [in relation to a futures offset arrangement.](#)

NB: 3.3.13 amended to enable Market Participants to lodge a *futures offset arrangement request* to meet Call Notices in a similar way in which NEMMCO reallocations may be applied for that purpose.

3.3.13 Response to Call Notices [amended]

- (a) Subject to clause 3.3.13(b), where *NEMMCO* has given a *call notice* to a *Market Participant*, the *Market Participant* must before 11.00 am (*Sydney time*) on the next *business day* following the issue of the *call notice* either:
- (1) agree with *NEMMCO* to an increase in the *Market Participant's maximum credit limit* by an amount not less than the *call amount*, and provide to *NEMMCO* additional *credit support* where, by virtue of the increase in the *maximum credit limit*, the *Market Participant* no longer complies with its obligations under clause 3.3.5;
 - (2) (where clause 3.3.13(a)(1) is not satisfied) pay to *NEMMCO* in cleared funds a security deposit of an amount not less than the *call amount*;
 - (3) lodge either a *reallocation request* [and/or futures offset arrangement request](#) which would give rise to a reduction in the [Outstandings of the Market Participant](#) or both equal to an amount which is not less than the *call amount* and which is accepted by *NEMMCO*; or
 - (4) provide to *NEMMCO* any combination of clauses 3.3.13(a)(1), (2) and (3) such that the aggregate of the amount which can be drawn under the additional *credit support* provided and the amount of the security deposit paid and the amount of the *reallocation request* [or futures offset arrangement request](#) accepted by *NEMMCO* is not less than the *call amount*.
- (b) If *NEMMCO* gives a *call notice* to a *Market Participant* after noon (*Sydney time*), then *NEMMCO* is deemed to have given that *call notice* on the next *business day* for the purposes of this clause.

NB: 3.15.1 amended to include the facilitation of FOAs in billing and payments facilitation provided by NEMMCO.

3.15.1 Settlements management by NEMMCO [amended]

- (a) *NEMMCO* must facilitate the billing and settlement of payments due in respect of *transactions and futures offset arrangements* under this Chapter 3, including:
- (1) *spot market transactions*;
 - (2) *reallocation transactions*; and
 - (3) ancillary services transactions under clause 3.15.6A.
- (b) NEMMCO must determine the Participant fees and the *Market Participants* must pay them to NEMMCO in accordance with the provisions of rule 2.11.

NB: Amendments to Schedule 3.3.1 to:

1. Introduce the consideration of FOAs within the Principles for Determination of Market Participant's MCL;
2. Define the calculation of the amount of MCL reduction created by FOAs. The MCL reduction is commensurate with the quantity, term and Lodgement Price of the relevant futures contracts in comparison to the volatility adjusted price assumption (adjusted for GST and Loss Factor) used by NEMMCO to calculate the MCL, before reallocations and FOAs. The residual MCL after reduction due to FOA cannot be less than the Prudential Margin in Schedule 3.3.2.

Schedule 3.3 - Principles for Determination of Maximum Credit Limits & Prudential Margins [amended]

This schedule sets out the principles to be followed by *NEMMCO* in determining the *maximum credit limit* and *prudential margin* for a *Market Participant*.

Schedule 3.3.1 Principles for determining maximum credit limits

- (a) The *maximum credit limit* should be set on the principle of imposing a guarantee of payment being made to *NEMMCO* to a level of a *reasonable worst case*.
- (b) When calculating the *maximum credit limit* *NEMMCO* should have regard to:
- (1) impartial objectivity rather than subjectivity, though it is recognised that some key parameters will need to be subjectively estimated from a limited amount of data - the estimation should be as impartial as possible;
 - (2) the average level and volatility of the *regional reference price* for the *region* for which the *maximum credit limit* is being calculated, comparable to the frequency of breaches of the *maximum credit limit*;
 - (3) the pattern of the quantity of electricity recorded in the *metering data* for the *Market Participant*;

- (4) the quantity and pattern of the *prospective reallocation* in the immediate future;
- (5) the correlation between the metered amounts of electricity and the *regional reference price*;
- (6) the length of the *credit period*, which is the number of days from the start of a *billing period* to the end of the *reaction period* taking into account:
 - (i) the length of the *billing period*;
 - (ii) the typical time from the end of the *billing period* to the day on which *settlement* for that *billing period* is due to be paid (the *payment period*);
 - (iii) any current written request from the *Market Participant* to *NEMMCO* for the *maximum credit limit* to be determined on a *payment period* taken, for the purposes of clause 3.3.8 and not otherwise, to be 14 days; and
 - (iv) the time from a *default event* to the suspension or other removal of the *defaulting Market Participant* from the *market*, being a period of up to 7 days (the *reaction period*);
- (7) the statistical distribution of accrued amounts that may be owed to *NEMMCO*; and
- (8) the degree of confidence that the *maximum credit limit* will be large enough to meet large defaults (i.e. the degree of reasonableness in a *reasonable worst case*).
- (9) reducing the *maximum credit limit* for the *Market Participant* that is subject to a *futures offset arrangement* that is commensurate with the quantity and the term of the futures contracts for the immediate future which are the subject of a *futures offset arrangement* and the difference between:
 - (i) the expected worst case volatility-adjusted price outcome assumed by *NEMMCO* for *maximum credit limit* calculation purposes in accordance with this schedule 3.3.1; and
 - (ii) the Futures Lodgement Price (as specified in the *futures offset arrangement request*) of the *futures offset arrangement*;

and which is calculated using the following methodology:

Max [(P_R x VF_R - FLP_R) x FL_R x T x LF_R x (GST+1), 0] but limited such that the reduced *maximum credit limit* is never less than the *prudential margin* calculated in accordance with schedule 3.3.2 assuming nil *futures offset arrangement*

where for each *futures offset arrangement*:

FLP_R represents the Futures Lodgement Price covering *region R*;

FL_R represents the associated average daily energy of *futures offset arrangement* for the *Market Participant* where the offset is to be calculated with reference to the spot electricity price of *region R*.

P_R represents NEMMCO's estimate of the average future pool price for each region R;

VF_R is a volatility factor, which ensures that the maximum credit limit is not exceeded more than once in 48 months;

T is the number of days assumed in NEMMCO's maximum credit limit credit period which coincide with days in the term of the futures contracts which are the subject of the futures offset arrangement.

GST represents the applicable rate for the Goods and Services Tax;

LF_R represents NEMMCO's estimate of the loss factor applicable across all participants for each region R.

- (c) As far as practicable, this schedule 3.3 must be read and construed as taking into account *market ancillary service transactions* for the calculation of the *maximum credit limit* for the relevant *Market Participant*.

Schedule 3.3.2 Principles for determining prudential margins

NB: Amendment to Schedule 3.3.2 to recognise that schedule 3.3.1 ensures that under FOA, the reduced MCL cannot be less than the prudential margin without an FOA.

3.3.2(4) eliminates a doubling of credit support coverage of the reaction period for FOAs.

(4) the extent to which the Market Participant's futures offset arrangements overlap with the reaction period, the prudential margin will be taken to be zero.

Chapter 10 definitions

futures offset arrangement

A proposed future offset arrangement the subject of a futures offset arrangement request that is registered by NEMMCO under clause 3.3.2B.

futures offset arrangement request

A request by a Market Participant to NEMMCO to register a futures offset arrangement in accordance with clause 3.3.2B.

futures offset arrangement rules

Means clauses 3.3.2B to 3.3.2D and clause 3.15.11B.

SFE Clearing Participant

Means a "Clearing Participant" under the Clearing Rules of the Sydney Futures Exchange Clearing Corporation Pty Limited as made and amended in accordance with the Corporations Act 2001 (Cwth)