



Annexure1 Proposed FOA Model 2 (Incorporating PWC's recommendations – draft risk assessment report)

This is the "Model 2" arrangement. Under this model, the fund in the SDA account is to be held until the end of the quarter to which the futures contract relates. The fund will not be applied against the FPNP's bills. In addition, the fund in the SDA will be returned to the FPNP if the daily average pool price decreases, on the condition that the FPNP's Total Outstanding is less than the Trading Limit.

[Amended for clarity]

Futures Offset Arrangement Request and Registration

Parties

1. Direct Retailer FOA

1.1. Contractual arrangement is between:

- 1.1.1. SFE Clearing Participant (CP); and
- 1.1.2. NEM participant who is a party to a futures contract and uses it to enter into the FOA (FOA Party NEM Participant, or FPNP). A FPNP is registered in the NEM (typically as a Market Customer).

1.2. There is a contractual arrangement between the CP and the FPNP with regards to the futures position. Included in the contract must be clauses relating to the provision of accurate and timely information to AEMO as required under the Rules. Rules or AEMO's Procedures (Procedures) will have to be amended to include AEMO's requirements;

- 1.2.1. The change to contract containing the undertaking to provide accurate and timely AEMO would normally be an addendum to the Clearing Agreement between FPNP and CP;
- 1.2.2. A standard form contract addendum will be developed by AEMO, included in AEMO's Procedures, and given force under the National Electricity Rules (Rules), to include:
 - 1.2.2.1. Undertaking that the cashflows arising from futures contracts under FOA will not be netted against other cashflows relating to positions the FPNP holds with the CP;
 - 1.2.2.2. Obligation that CP provides information on variation of contracts and positions relating to FOA to AEMO in a timeline agreed with AEMO and in a form prescribed by AEMO;
 - 1.2.2.3. Undertaking by CP to provide accurate and up to date information in a timely manner regarding all communications with AEMO;
 - 1.2.2.4. Undertaking by CP to provide notification of updated prices if the SFE published settlement price is incorrect on any day for any reason;
- 1.2.3. If possible, there is to be a side letter from the CP to AEMO, specifying and agreeing to the terms in the addendum;
 - 1.2.3.1. *This options needs to be investigated, we do not know whether CPs will agree to this clause;*

1.3. AEMO will be given the right to perform random audits on contracts and futures positions covered by FOA, and will be able to terminate FOAs that do not comply with Rules and Procedures;

- 1.3.1. Significant penalties would be imposed on FPNP if they are found to be providing inaccurate information and/or not complying with the Rules regarding FOA. A relevant Rule change to enforce this may have to be implemented.
- 1.3.2. AEMO may impose the following penalties:
 - 1.3.2.1. closing out the FPNP's all other FOA positions (and require the FPNP to provide additional security to the AEMO in line with the change in positions);
 - 1.3.2.2. banning the FPNP from registering any further FOA agreements for [how long?];
and
 - 1.3.2.3. a financial penalty of [\$XXX].

[The AEMC could recommend that these requirements be made civil penalty provisions (consideration of whether these should be rebidding civil penalty provisions that carry a higher penalty) by the MCE.]

FOA Registration Timeline

2. Registration Timeline

- 2.1. FOAs can be lodged by the FPNP, up to 90 days before the start of the quarter to which the underlying futures contract relates (*Lodgement Date*);
 - 2.1.1. FOA must be lodged prior to close of the SFE markets (appx 4:30pm) on the *Lodgement Date*;
- 2.2. The end of day *Lodgement Date* Futures Settlement Price is the *Futures Lodgement Price* (FLP);
- 2.3. The following business day is the *FOA Effective Date*;
- 2.4. From the *Effective Date*, AEMO require two business days (*Processing Period*) to calculate the change in MCL, and the updated MCL level is implemented in line with current arrangements under the Rules;
 - 2.4.1. The *Processing Period* will be 2 business days at the start of the quarter;
 - 2.4.2. NOTE: The MCL reduction will occur in the quarter to which the futures contract relates; ie. If a FOA for Q409 is lodged 90 days prior, the MCL reduction will only come into effect on 1/10/09.
- 2.5. FOAs can be lodged any time up to the end of the quarter to which the underlying futures contract relates but will be subject to the *Processing Period* before the MCL can be reduced;
- 2.6. Expiring FOAs will need to be replaced with alternative credit support, or another FOA, in line with the existing Rules for replacement credit support;
 - 2.6.1. Existing arrangements for replacing expiring credit support are 7 days for “same pattern” replacements, and 30 days for a variation (including new Reallocation Arrangements).

Elements of FOA

3. FOA Elements

- 3.1. Term
 - 3.1.1. *Lodgement Date*
 - 3.1.2. *Termination Date*
 - 3.1.2.1. The Termination Date would normally be expected to fall on ~~the Futures contract expiry date~~ the first futures exchange business day after the end of the futures quarter;
 - 3.1.2.2. See point 4 below for more information on the Termination Date;
- 3.2. Futures contract specifications;
 - 3.2.1. Futures contract region;
 - 3.2.2. Product code as referenced by exchange;
 - 3.2.2.1. Contract Term;
 - 3.2.2.2. MWhs per futures contract, such that when combined with loads under other FOA and RA, it does not exceed the FPNP's average load for the period;
 - 3.2.2.3. Load shape –Baseload only permitted;
 - 3.2.3. Quantity of futures contracts;
 - 3.2.4. FLP;
 - 3.2.4.1. FLP will be determined automatically by AEMO as per point-section 2.2 above;
 - 3.2.4.2. AEMO will have the capacity to re-process the FLP if there has been an error in the published Settlement Price;
 - 3.2.4.2.1. To assist with re-processing procedures, AEMO will request to be added to the SFE mailing list regarding price corrections;

- 3.2.4.2.2. Updated prices must be received by 8:00am on the day following the error for the correction to be enacted by AEMO on that day;
- 3.2.4.2.3. If the corrected prices are received after 8:00am, then the correction will be implemented as soon as practically possible by AEMO.

Termination Date

4. The *Termination Date* is the date from which the FOA is no longer in effect. There are four scenarios under which the FOA may become terminated:

- 4.1. Expiry;
- 4.2. Voluntary;
- 4.3. No Margin Payment; or
- 4.4. Involuntary;

These scenarios are covered in more details under the heading “Termination” in s8 below.

Conditions for FOA Registration

5. Conditions:

- 5.1. Existence of underlying futures contract, that has been set up under a separate client sub-account with clear, unencumbered access to cashflows and with no netting of FPNP positions;
- 5.1.1. Details of the futures contract will be forwarded to AEMO in line with the agreement in point 1.2.2 above;

5.1.2. Note: whilst CPs are generally able and willing to set up client sub-accounts, and maintain independent cashflows for the sub-accounts, in times where the counterparty is defaulting on one sub-account, most CPs are likely to close out the positions in all sub-accounts. This results in a lack of certainty around cashflows from FOA when the FPNP is financially distressed; For clarity:

- 5.1.2.1. Under normal operation, The FPNP would have one client sub-account containing the futures positions relating to FOA, and another sub-account relating to futures positions not covered by FOA. When money was owed on the FOA sub-account, that money would be paid without being netted off the non-FOA sub-account, leaving unencumbered cash flows;

5.1.2.2. If, however, the FPNP defaults on the non-FOA sub-account while expecting a margin payment from the FOA sub-account, it is anticipated that the CP would close out *all* positions that the FPNP holds with the CP, and would not make the margin payment expected on the FOA sub-account. As it is anticipated that a FPNP would only default on their futures positions in times of financial distress, this circumstance would result in a distressed NEM Participant having a reduced MCL and no firm cashflows supporting the reduction;

- 5.1.2.3. ~~Alternatively, the FPNP may establish a sole purpose futures clearing account, just for FOA contracts, with a CP that does not clear any other futures contracts for the FPNP. This quarantines the FOA cashflows.~~

~~5.1.3. The FPNP must provide evidence to AEMO that the above with information regarding the CP arrangement is in place, and confirm that CP would provide identical information to both the FPNP and the AEMO simultaneously. i.e. whether they have a separate sub-account with one CP who holds non-FOA positions for the FPNP, or whether they have a CP who holds only FOA-related futures contracts, as the β factor may be affected by the CP agreement;~~

5.1.3.

- 5.2. Subject to the FOA termination procedure in section 8, FPNP commits not to sell or otherwise dispose the futures contract, except on an expiry date specified in the terms of the FOA and with alternative credit support in place prior to closing out of futures position;

5.2.1. ~~Termination on a date that is different to the specified termination date is covered in more detail under the heading “Termination” in S9 below;~~

- 5.3. FPNP undertakes to make futures margin payments relating to the FOA to AEMO;

- 5.3.1. Margin payment amounts are to be determined by AEMO. The calculations are to be processed by AEMO and forwarded to the FPNP ~~and the CP~~;
 - 5.3.2. The FPNP ~~must~~ make the payment ~~themselves, or may nominate their CP to make the margin payment~~ to AEMO, determined in accordance with section 5.3.1 by a one-off nomination at the commencement of the FOA;
 - 5.3.3. The Austraclear counterparty must be notified to AEMO in advance;
 - ~~5.3.4. NOTE: this payment is to be a mirror of SFE margins, not an assignment of SFE margins, a legal distinction which may help reduce the risk of clawback.~~
- 5.4. If, after the futures-FOA margin payment is taken into account, the Participant's Total Outstandings (TO) are greater than the revised TL, then the breach must be rectified in accordance with existing prudential procedures.

Margin Payments and Timeline

6. Margin Payments

- 6.1. Margin Payments to AEMO ~~must be based on~~ need only reflect the increases in the accumulating pool price (AS) or the futures prices (DSPt), whichever is higher, beyond the maximum of the FLP or the DSPh.
- 6.1A Margin Payments are to be calculated by AEMO in accordance with section 6.7 and must be paid by the FPNP in accordance with section 6.6.
- 6.2. DSPh is the higher of the accumulating daily pool price or the price that the futures contract has reached since the FOA is registered, and must be reset in accordance with section 6.10. ~~If, however, DSPh > DSPt (i.e. the previous day's settlement price), then DSPh can be reset to DSPt. The FPNP must instruct AEMO of the reset and request a SDA refund during business hours,~~
- 6.3. AEMO would then process the reset and refund at the first practicable opportunity. The FPNP can then receive a refund from the SDA, to the higher of the FLP or AS, or DSPt (i.e. the previous day's settlement price) if the market falls, on the condition that $TO < TL$;

For Example: If the FLP is \$40/MWh, and the higher of the accumulating pool price or the futures price rises to \$60/MWh, then AEMO will receive a margin payment for the \$20/MWh increase. If the price then drops to \$50/MWh, the FPNP can instruct AEMO to reset DSPh to \$50, and receive a return of the margin of \$10/MWh. This return of funds is conditional on $TO < TL$. If the price then increases to \$55/MWh, AEMO will receive a margin payment of \$5/MWh, which is the price increase above the new DSPh of \$50/MWh.

- 6.4. Margin Payments will be made on *Calculation Days* which are futures exchange business days. The first *Calculation Day* is the day after the *Effective Date* of the FOA; ie.

D1 = *Lodgement Date*

FLP = settlement price on *Lodgement Date*

D2 = *Effective Date*, and there is no margin payment as there is no movement in prices until the end of D2

D3 = first *Calculation Date* where margin payments for change in settlement prices between D2 and D1 are paid

~~Note: Futures Exchange business days are not the same as NEM business days. NEM Business days are Mon-Fri, excluding national public holidays. There may therefore be days when prudential requirements increase and there are no margin payments from the SFE due to differing "business days"~~

- 6.5. Positive margins will be held by AEMO until the expiry of the FOA, and **will not be used to pay bills** as they fall due.

NB. FOA margins are calculated using the higher of the accumulating pool price or the futures price to ensure the amounts held in the SDA and the bank guarantee held by AEMO match the retailers outstandings for energy under the FOA.

6.6. Timeline

- 6.6.1. The first Margin Payment will be made on the first day that has a positive margin after (but not including) the FOA *Effective Date*;
- 6.6.2. AEMO provides a daily clearing statement to the FPNP by 8:00am on the *Calculation Day*; If DSPh>DSPt, then the FPNP may instruct AEMO to reset the DSPh to DSPt by 8:00am on the *Calculation Day*, if TO<TL;
- 6.6.3. The Margin Payment must be transacted and cleared by 11:00am^[i3] on the *same day*;
- 6.6.3.1. Margins must be paid to AEMO's security deposit account (SDA), by either the FPNP or the CP, as nominated in S5.3;
- 6.6.3.2. AEMO pays back margins when margins are negative, to the higher of DSPh or the FLP, and only when TO<TL;
- 6.6.3.3. The final payment is to be made the day after the *Termination Date* for movements on the *Termination Date*;
- 6.6.4. If payment is not cleared by 11:00am on the *Calculation Day* then by 1:00pm on the same day, a call notice will be issued by AEMO;
- 6.6.4.1. Note: under the current Rules, a call notice must be issued by 12:00pm for a default event to be instigated the following day. The Rules may need to be changed to allow default events to be initiated on the day following a 1:00pm call notice;
- 6.6.5. If there is no response to the call notice by 12:00pm on the day following the notice, then AEMO may instigate existing default proceedings.

6.7. Calculation of Margin Payments

- 6.7.1. Margin Payment = $\text{Max}[\text{Max}[(\text{DSPt}, \text{AS}) - \text{Max}(\text{FLP}, \text{DSPh})] \times \text{FQ} \times \text{OP}/\text{DQ}, 0]$
where;

AS = accumulating spot price over the NEM outstanding period

DSPh = previous highest daily settlement price for futures contract since *Effective Date* during the NEM outstanding period, or, ~~if it has been reset, the reset value the~~
previous days accumulating spot price whichever is the greatest

DSPt = official daily futures contract settlement price as at close of business immediately prior to calculation day

FQ = Quantity of futures contracts x energy covered under each FOA futures contract

FLP = Futures Lodgement Price

OP = days in outstanding period (35 or 21 days in the case of an RMCL)

- 6.8. ~~There is a further consideration regarding margin payments, that the value derived from the margin payments, relating to futures price movements, does not reflect the physical market price movements. i.e. There may be circumstances where the margins from the FOA do not cover the increases in TO arising from the spot market. [this has been taken into account in the margin formula]~~
- 6.8.1. ~~A solution is to adjust the margin payments calculated by AEMO by a 'shortfall equation' which would equal zero when sufficient cashflows arise out of the FOA margin payments; [this has been taken into account in the margin formula]~~
- 6.9. When the 42-day MCL period straddles the end of the quarter, the FOA margin payment need only apply to the portion of MCL that is in the quarter to which the FOA relates.
- 6.9A In the event there is an error in the calculation of a margin payment, AEMO reserves the right to retrospectively re-determine the relevant FOA margin. AEMO may require the relevant FPNP to replenish any shortfall in the SDA, or return to the FPNP any excess fund in the SDA^[i4].

[AEMC comment: This formula:

- Is intended to ensure that the combined amount of the FLP and SDA is at least equal to FPNPs outstandings less GST and loss factor under standard MCL;
- Does not achieve the above when used in conjunction with RMCL; and
- Does not accommodate the DSPh reset which will have to be incorporated in the formula based on section 6.10.

This formula may be simplified to the credit and debit arrangements employed by AEMO for reallocation arrangements]

6.10. DSPh resets

- 6.10.1.1. The will be reset upwards when the $\text{Max}(\text{DSpt}, \text{AS}) > \text{DSPh}$.
- 6.10.1.2. DSPh will be reset downwards when $\text{DSPh} > \text{Max}(\text{DSpt}, \text{AS})$, and the FPNP instructs AEMO to reset to DSPh to $\text{Max}(\text{DSpt}, \text{AS})$, and if the FPNP's $\text{TO} < \text{TL}$.

[AEMC comment: Formula in section 6.9 needs to be adjusted to achieve DSPh reset].

6.11. Settlement

- 6.11.1. AEMO uses the amount in the security deposit as a security deposit only, unless otherwise agreed by AEMO and the FPNP;
- 6.11.2. AEMO to ensure it holds accumulated margin payments to cover the difference between the FLP and the greater of accumulating spot price and highest official futures settlement price (i.e. DSPh, taking DSPh resets into account);
- 6.11.3. Additional funds in the SDA will be returned when the period to which they apply have passed, if they have not been used as payment against the Participant's Total Outstandings;
- 6.11.4. All interest accrued by AEMO whilst holding the margin payments will be returned to the Participant as per the usual process for returning interest from security deposits;
- 6.11.5. SDAs for FOAs will be put into overnight cash accounts (instead of in term deposits as SDAs for existing operations are held) as the SDA may be paid back if a DSPh reset occurs.

MCL Reduction

7. MCL calculation:

- 7.1. $\text{MCL} = P \times \text{VF} \times \text{EL} \times \text{Tcp} \times \text{LF} \times (\text{GST}+1)$
For load-only Participant with no reallocations

Where:

P = average historical price used in MCL calculation

VF = volatility factor

EL = load estimate

FL = load under FOA

FLP = futures lodgement price

Tcp = credit time period, which is 42 days unless the Participant has requested a RMCL, in which case Tcp is 28 days

Trp – the reaction time period, which is 7 days

LF = loss factor

- 7.2. $\text{MCL Reduction} = \text{MIN}[\beta, 1] * \text{Max} [(P \times \text{VF} - \text{FLP}) \times \text{FL} \times (\text{Tcp} - \text{Trp}_{[1]^{[5]}}), 0]$

[PwC has recommended that the prudential margin be increased by one day to preserve the prudential quality of the NEM].

Where:

β is a risk adjustment factor between 0 and 2, applied to the MCL reduction to account for the risk impact (positive or negative) to the prudential framework arising due to the introduction of FOAs when compared to:

- 7.2.1. The existing prudential framework including RMCL and reallocations; and
- 7.2.2. An unconditional bank guarantee
- 7.3. When the 42-day MCL period straddles the end of the quarter, the MCL reduction only applies to the period which is covered by the FOA.
- 7.4. The MCL reduction applies only in the period to which the futures contract relates. Ie. If a FOA is lodged in Q409 for a contract that expires in March 2010, the MCL reduction is applicable only from 1 Jan 2010.

[AEMC comment: PwC recommends that beta be set to 1, however to accommodate the fact that FOA will be lodged on base load profile, PwC recommends that AEMO develop Procedures to adjust the reduction in MCL to reflect this fact. This means that the MCL reduction will vary depending on FPNP's load profile.]

Termination of FOA

8. The *Termination Date* is the date from which the FOA is no longer in effect. There are four scenarios under which AEMO may terminate the FOA;

- 8.1. Expiry;
- 8.2. Voluntary;
- 8.3. No Margin Payment; or
- 8.4. Involuntary.

The procedures following termination and the circumstances under which termination is allowed (if any) are outlined below:

8.1. Expiry of FOA

- 8.1.1. Futures contracts stop trading at the end of the quarter to which they relate and expire on the 3rd business day after the end of the relevant quarter (eg, a Q109 futures contract expires on the 3rd business day after close of trading on 31 March 2009). A final Cash Settlement Price (in effect, a final daily Settlement Price) is confirmed by the SFE on the 3rd business day of the relevant quarter, based on the average pool price for the quarter as instructed by AEMO to the SFE on the 1st business day after the end of the quarter;
- 8.1.2. A FOA would ~~normally terminate when the futures contract expires on the first futures exchange business day after the end of the futures quarter. The final FOA margin payment/refund will occur on this day.~~ On or prior to which this point day (or prior to this day), further FOAs will have to be lodged or sufficient bank guarantee will have to be provided;
- 8.1.3. Alternative support must be provided before the expiry of the ~~futures contract~~ FOA, in line with existing Rules for replacement credit support;
 - 8.1.3.1. Existing arrangements for replacing expiring credit support are 7 days for “same pattern” replacements, and 30 days for a variation (including new Reallocation Arrangements)

8.2. Voluntary;

- 8.2.1. Prior to the expiry of the ~~futures contract~~ FOA, a Participant may decide they want to terminate the FOA for any reason;
- 8.2.2. They must provide written/system notice to AEMO of their intention to terminate the FOA;
- 8.2.3. They must provide alternative credit support at least 10 days prior to the intended termination date;

8.3. No Margin Payment;

- 8.3.1. As outlined in ~~the Margin Payments and Timeline~~ section 6.6, AEMO provides a daily clearing statement to the FPNP and CP by 8:00am, and the Margin Payment must be transacted and cleared by 11:00am on the same day;
- 8.3.2. If AEMO does not receive a Margin Payment as expected, ~~they it will~~ issue a call notice on the calculation day at 1:00pm on the same day;
- 8.3.3. If the FPNP does not meet the call notice by 11:00am the following day, a default event will be instigated;
- 8.3.4. For clarity;
 - 8.3.4.1. Between D1 and D2 there is a positive settlement average price movement resulting in a margin payment coming due to AEMO;
 - 8.3.4.2. By 8:00am on D3 AEMO issue a statement to the FPNP relating to the D1-D2 price movement;
 - 8.3.4.3. By 11:00am on D3, the FPNP must make the margin payment;
 - 8.3.4.4. If there is no payment forthcoming, then at 1:00pm on D3 AEMO to issue a call notice;
 - 8.3.4.5. The FPNP must meet the call notice by 11:00am on D4;
 - 8.3.4.6. If the notice is not met, then default proceedings begin at 12:00pm on D4;

8.4. Deemed Margin Payment agreed in advance;

- 8.4.1. If a FPNP has sufficient funds in their SDA to cover a margin payment requirement (eg, in the instance where they have made an advance payment in anticipation of future price movements), and remain within their TL, the FPNP may request AEMO allow a *Deemed Margin Payment* and not be liable for the agreed value;

- 8.4.1.1. This arrangement must be requested in advance, or it will be considered as per S8.3 above, and could lead to a default event;
- 8.4.1.2. The FPNP can request that AEMO agree to take a *Deemed Margin Payment*, but it is at AEMO's discretion whether to accept a *Deemed Margin Payment*;
- 8.4.1.3. If AEMO deny the *Deemed Margin Payment*, then the FPNP will be liable for the margin payment as per usual processes;

8.5. Involuntary

- 8.5.1. There are some instances when the underlying futures contract can be closed out by the CP, and the FPNP is left without a hedge position at short notice (eg, if a distressed FPNP is defaulting on other positions held with the same CP, then the CP may close out all positions, in all sub-accounts);
- 8.5.2. In the instance that this occurs, the CP is bound by contract addendum (see s1.2.2) to inform AEMO of the termination of the position;
- 8.5.3. In the instance where the CP does not provide termination information, they will still have been bound by contract to provide end-of-day position updates, and if that email is not received (due to close-out of position) or contains information indicating that the futures position relating to FOA has changed in any volumetric way, then it will be treated as an involuntary termination of FOA;
 - 8.5.3.1. Note: There may be some cases where the CP does not provide information as requested and agreed. ~~Based on the above criteria, this~~[This circumstance](#) will be treated as an involuntary termination and could lead to a default event. This places heavy obligation on the FPNP to ensure their contract with the CP contains clauses relating to the provision of information, and will prevent AEMO being delayed in their responses to true default events;
- 8.5.4. In any case where the involuntary termination of FOA occurs, an immediate MCL review is issued to the FPNP to provide increased credit support, or a replacement FOA or reallocation if accepted by AEMO, within 23 hours (the call notice would go out by 1pm on day of involuntary termination, and it must be met by 11:00am the following day) of the involuntary termination;
 - 8.5.4.1. Involuntary termination can be indicated by:
 - 8.5.4.1.1. Receipt of information from FPNP [that the FOA is involuntarily terminated](#);
 - 8.5.4.1.2. Receipt of intra-day notification from CP relating to change in futures position relating to FOA;
 - 8.5.4.1.3. Receipt of end of day communication from CP notifying a change in the futures position relating to FOA;
 - 8.5.4.1.4. Lack of receipt of end-of-day communication from CP [under sections 1.2.2.2 and 1.2.2.3](#);
 - 8.5.4.1.5. Lack of margin payment from CP or retailer, in the absence of a pre-agreed waive [by AEMO](#);
- 8.5.5. If increased credit support is not provided within the prescribed timeframes, then a default event is instigated;
 - 8.5.5.1. In the case where involuntary termination has been assumed due to lack of information being received from the CP, the requirement for alternative credit support can be met by an email being received from the Clearing Participant stating that the futures contract position is still in place with no changes to the FPNP's position relating to the FOA;
 - 8.5.5.2. This will allow errors in communication to be corrected prior to the commencement of a default event;

8.5.6. AEMO's right to terminate or not accept FOAs

- 8.5.6.1. AEMO may not register a FOA or terminate a FOA where in AEMO's opinion there is a fundamental change in the structure of the futures market (such as an introduction of the CPRS) where the prudential quality of the NEM may be at risk.