Review into the role of hedging contracts in the existing NEM prudential framework

Assessment Framework and Issues

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STRUCTURE

- Framework and criteria
- Reallocations
- Futures offset arrangements
- MCL methodology

FRAMEWORK

- National Electricity Objective having regard to:
  - prudential quality of the NEM;
  - cost of capital to trade in the NEM wholesale market; and
  - operational effectiveness
- against current arrangements

CRITERIA

- Improve of at least maintain prudential quality of the NEM
  - the likelihood of shortfall in payment to generators in the NEM for different options;
  - the certainty, and risks of cash flows for different options;
  - the likelihood and consequence of clawback risks; and
  - whether the options incorporate measures to mitigate risks.

  - MCL at an appropriate level

CRITERIA

- Improve of at least maintain cost of capital
  - reduction in the prudential support costs;
  - the change in cash management costs, such as margin calls and counter-party guarantees;
  - the change in operating costs;
  - the fees imposed by relevant service providers;
  - the opportunity costs for NEM Market Participants;
  - the potential cost reduction due to increased diversity of prudential support instruments.

  - Efficient costs of MCL

CRITERIA

- Operational effectiveness
  - the option fits well into the existing NEM prudential framework and the extent of any costs of implementing and administering the option;
  - the option is transparent and enforceable;
  - the option can be understood by stakeholders; and
  - information is adequate to implement the option.

  - MCL exhibits a degree of predictability.

Integrating futures and other types of contracts

Reallocations, Futures Offset Arrangements

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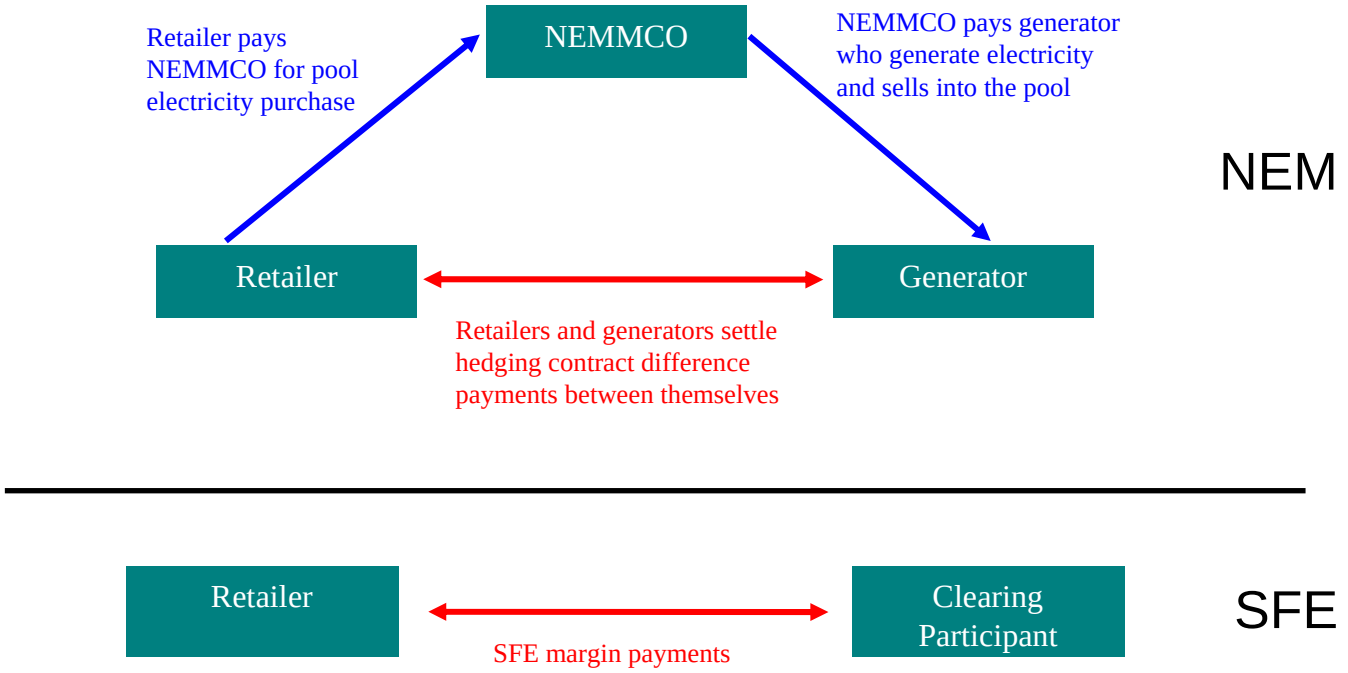
CONSIDERATIONS

- A market participant requires an acceptable credit rating (S&P A-, or Moody's P-1) or provide an unconditional bank guarantee to participate in the NEM
- A reallocation arrangement or a futures offset arrangement could enable a market participant to provide a lower amount of bank guarantee to NEMMCO resulting in lower costs
- It is important to understand the risks to ensure the prudential quality is not diminished

SETTLEMENT



- Credit support requirements ?
- Cash requirements ?
- Risks to participants and the NEM ?

Reallocations

Energy, Dollar and Swaps and Options

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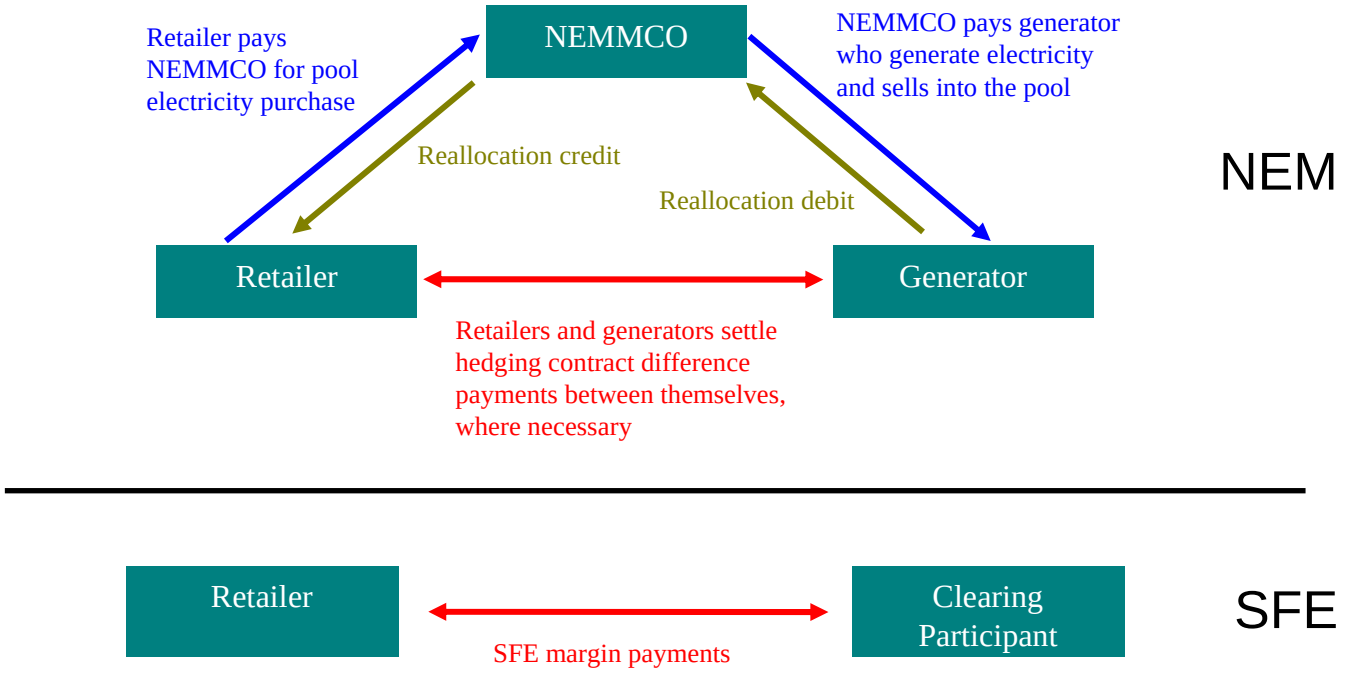
SETTLEMENT with reallocations



- Credit support requirements ?
- Cash requirements ?
- Risks to participants and the NEM ?

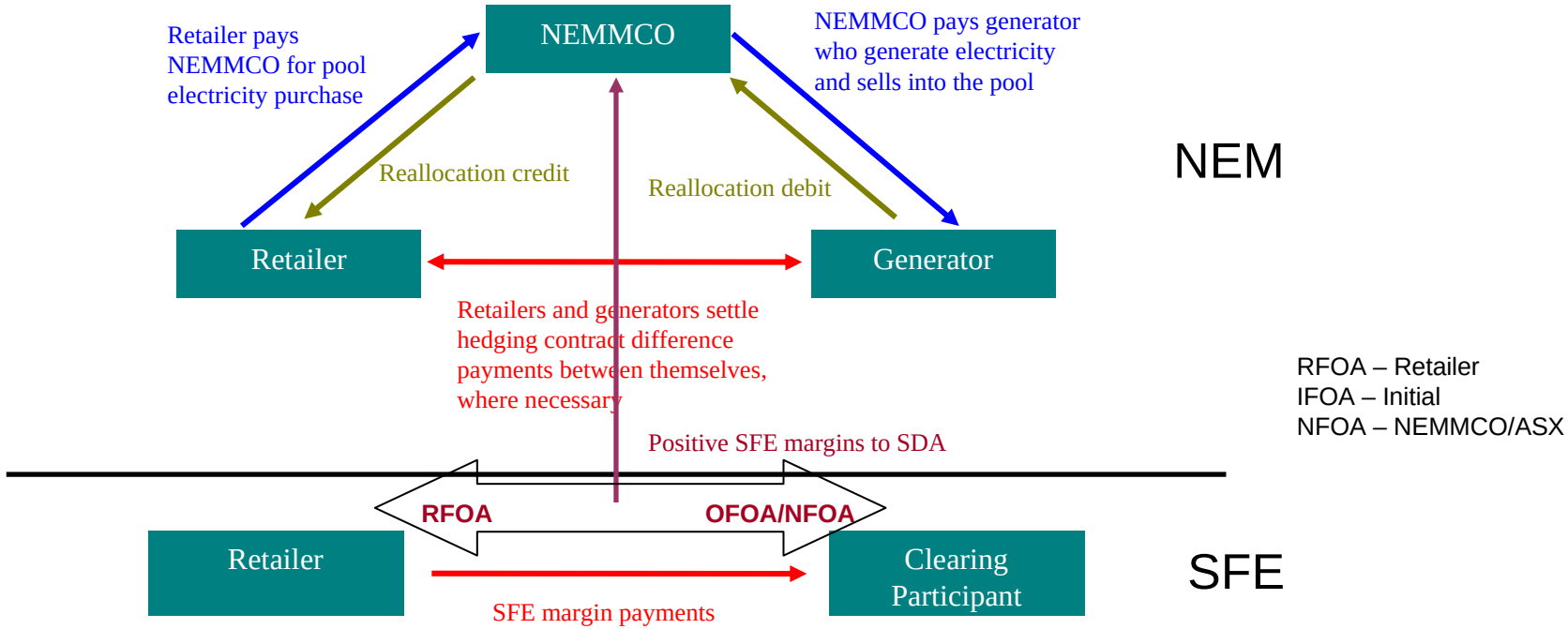
REALLOCATIONS

- Energy, dollar, and swaps and options
  - Ex ante, and ex post reallocations
- Benefits and risks under reallocation arrangements
  - Risks from deregistration of reallocation
- How widely is it used
- Improvements that could be made to reallocation arrangements
- ASIC licensing, if relevant, implications to participants

Futures Offset Arrangements (FOA)

Original FOA (OFOA), Retailer FOA (RFOA), NEMMCO/ASX FOA (NFOA)

SETTLEMENT with reallocations with FOA



- Credit support requirements ?
- Cash requirements ?
- Risks to participants and the NEM ?

INTEGRATING FUTURES CONTRACTS

- Reallocation procedures under current Rules
  - What are the issues
  - Impediments to Clearing Participants becoming Reallocators
  - Options for amending reallocation Rules address issues
- Futures Offset (FOA) models
  - 3 options outlined in the Paper
  - How do FOA models impact on surety of payment
  - How can the risks be mitigated

FEATURES OF A FOA

- Instrument – Rules based, contract based, hybrid
- Parties – Retailer and Clearing Participant, Retailer, other
- Termination – Parties & NEMMCO, NEMMCO
- MCL reduction – Full FOA amount, discounted
- Payment – Security deposit, against outstandings
- Dispute resolution – under the Rules, contract based
- ASIC licensing and FOA design
- Other

CONSIDERATIONS for FEATURES

- Benefits and risks under different features
  - Consider no reallocation, different reallocation options and different FOA models
- Risk mitigation measures
- In submissions, we are looking for guidance on:
  - Features that would make a FOA acceptable taking into account the assessment criteria
  - Matters that need to be investigated and addressed

MCL methodology

Reasonable worst case scenario, MCL methodology

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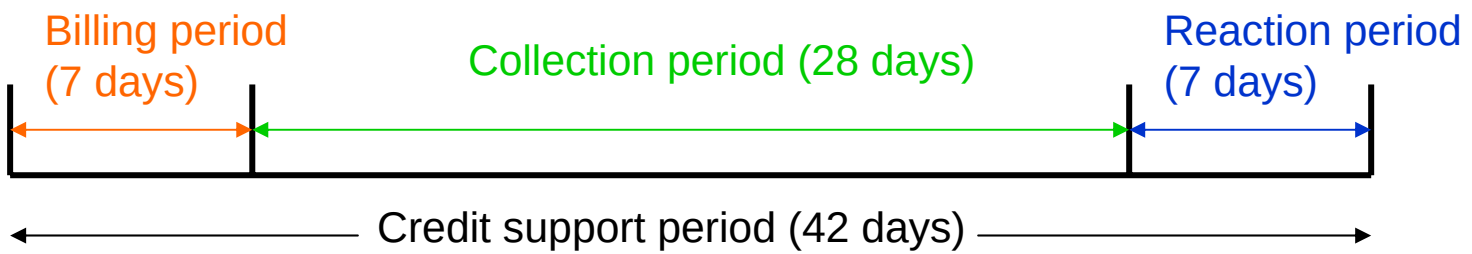
MAXIMUM CREDIT LIMIT

- Definition of “reasonable worst case”
- Approach to determination of the Maximum Credit Limit (MCL)
    - Historical prices with volatility factor
    - Futures prices with or without volatility factor
    - Stress test approach
        - Based on CPT with the remainder at the APC
    - Hybrid?
- Ways to reduce MCL, such as:
    - Reduced MCL
    - Shortened settlement cycle

“reasonable worst case”

- “a position that, while not being impossible, is to a probability level that the estimate would not be exceeded more than once in 48 months”
- Question - In 48 months, is the estimated MCL not to be exceeded for one billing period, collection period, one credit support period or others?



“reasonable worst case”

- Proposition: MCL set to ensure adequate security to meet all settlement liabilities (allowing for reaction time) for all except one 42 day credit support period – in 48 months
  - NEMMCO issues 208 bills in 48 months
    - 208, 42-day “credit support periods” in 48 months
    - The MCL not be exceeded more that once in a 48 month period (207/208 or 99.5% probability that MCL sufficient)
- Is this an appropriate interpretation of MCL?

MCL METHODOLOGY

- Using historical prices with volatility factor (current approach and with amendments)
- Using futures prices at different futures market liquidity level with or without volatility factor
- Stress test approach
  - Assume prices are high to trigger the CPT, and the remaining of the MCL credit period (42 days) at the APC ($300/MWh)
- Hybrid
- Compare the each methodology to a “range of credible scenarios”
  - Comments on proposed approach
  - Views on the range of “credible scenarios” to test each method

CURRENT METHODOLOGY

- Based on historical price and includes a volatility factor
- Performed reasonably well
  - Except that there is no forward looking view
- Commission seeking view:
  - How has the current methodology been performing?
  - How can the methodology be improved?
  - How can the volatility factor calculation be improved?

MCL BASED ON FUTURES PRICES

- Proponents of FOA Rule change submitted that futures prices are a more accurate reflection of market's expectation of prices for calculating a MCL
- Issues:
  - Liquidity of futures market
  - Tasmania has no futures price
- Commission seeking view:
  - Factors that need to be taken into account in using futures prices for MCL calculation
  - Any evidence that futures prices are better than historical pool prices?
  - Would a volatility factor still be needed in this methodology? If so, how should it be calculated?

STRESS TEST APROACH

- What was proposed?
  - Estimating “reasonable worst case” on the basis of CPT being triggered
  - MCL calculated on the scenario where pool prices are sufficiently high to trigger the CPT, and remaining of the 42-day credit period is at the Administered Price Cap (APC, $300/MWh)
- Issues:
  - How does it compared with the reasonable worst case scenario?
- Commission is seeking views on the merits of this approach.

MCL CURRENT V STRESS TEST

Region	Price ($/MWh)	V_F (Volatility Factor)	MCL / Volume x 42 ($/MWh)
SA	$71.28	4.5	$321
QLD	$35.75	3	$107
VIC	$48.43	3.3	$160
NSW	$41.42	1.8	$75
TAS	$52.04	1.4	$73
Stress Test	7 days @ $446.5/MWh 35 days @ $300/WMh	1	$324

Current: Based on MCL calculations for Q2 2009

Stress Test: assumes one CPT event followed by APC for 35 days

Note: Essentially, as an approximation:

$MCL = Price \times V_F \times Volume \times 42$

Ways to reduce MCL

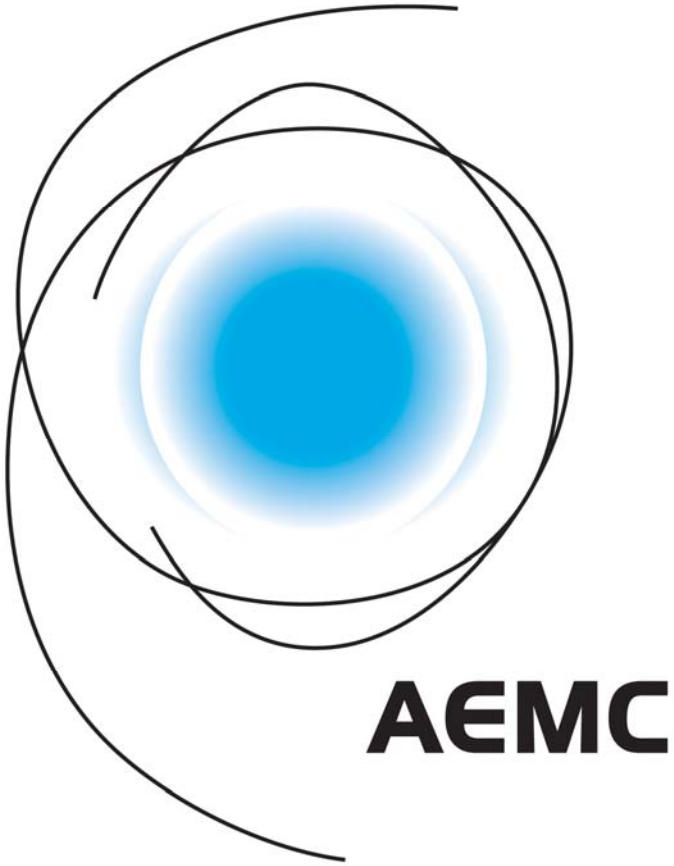
- Reducing MCL => reduce credit support requirements
- Possible ways:
  - Reduced MCL (RMCL) provision in the Rules
  - Shorten settlement cycle
- RMCL
  - Under clause S3.3.1(b)(6)(iii) of the Rules
  - Commission is seeking view: practical impediment in reduce the MCL under this clause.
- Shorten settlement cycle
  - Can potentially reduce the MCL
  - Commission is seeking view on this opportunity to reduce settlement cycle
- Any other ways to reduce the MCL?

Rules versus procedure

- Rules:
  - generally more appropriate for substantive rights and obligations that have material impact on the NEM and NEM Participants
  - address matters that have industry wide application
  - deal with matters that are likely to change relatively infrequently over time

- Procedures:
  - more appropriate for technical and operational matters
  - deal with matters that rely on an assessment of individual market participant conditions or circumstances

- Commission seeks views on the appropriate balance between Rules and procedures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