

d-cyphaTrade

Australian Energy Markets Commission

Futures Offset Arrangements

March 2008

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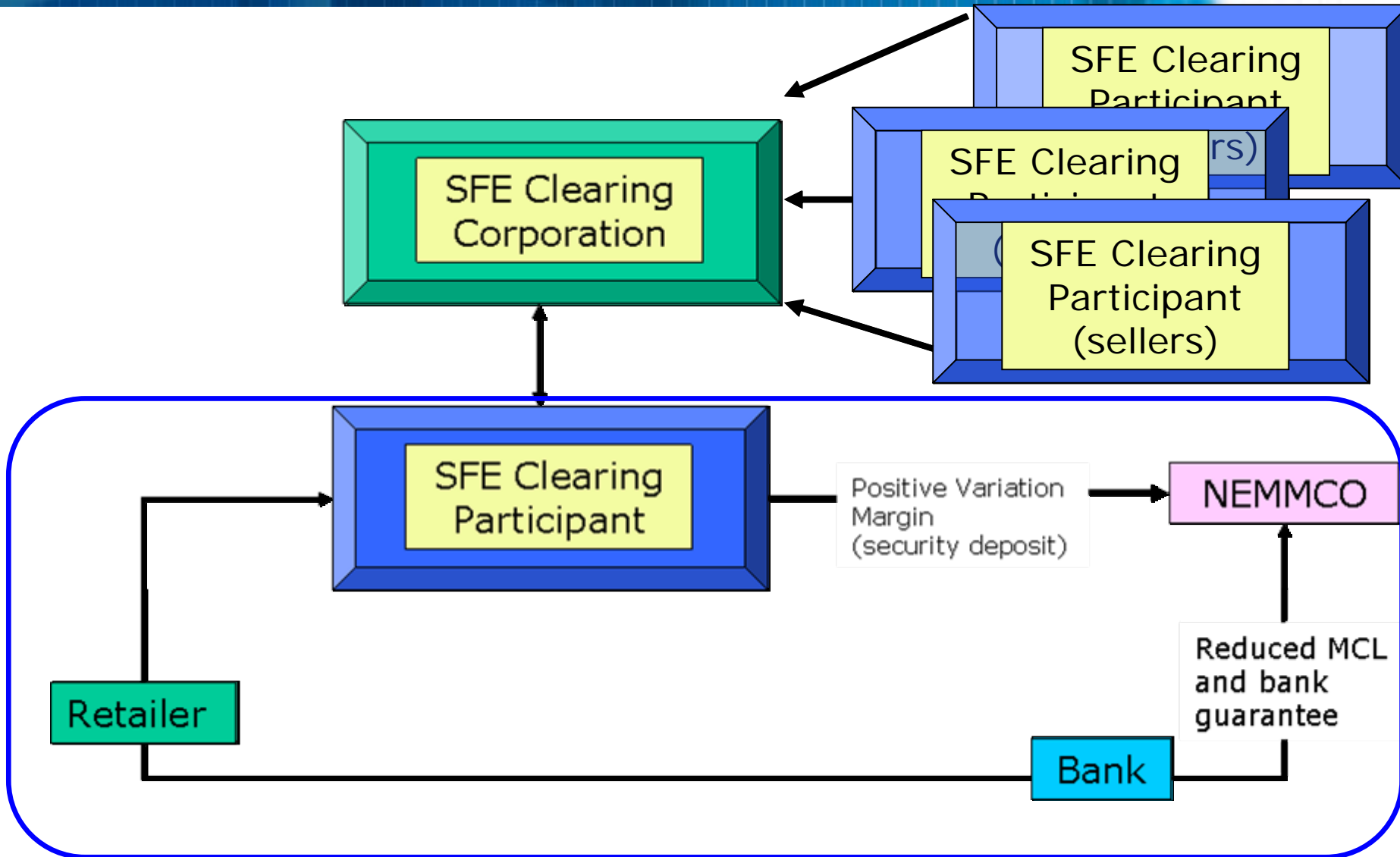
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1. Permit retailer's futures hedges to offset Spot Market MCL
 - > Efficiency: 71% reduction in MCL bank guarantee burden (Q2 2008)
 - i.e. \$4.2 billion MCL would be reduced to \$1.2 billion.
 - > Complementary credit support mechanism to bank guarantees (MCL guarantees were \$1.9 billion deficient for June 2007).

2. Replace backward looking MCL "historical" price prediction with market consensus forward-view (i.e. transparent futures prices)

1. Under a FOA:
 1. The retailer retains bank guarantees up to the Futures Lodgement Price (FLP)
 2. The retailer's SFE Clearing Participant redirects cash flows from positive (upward) futures price moves to NEMMCO
 3. NEMMCO holds the futures cash receipts in the retailer's Security Deposit
 4. Retailer maintains SDA minimum balance of:
 - > Current Futures Price *minus* FLP
 5. Retailer continues to pay spot market invoices as normal
 6. If the retailer defaults, NEMMCO applies the SDA deposit + the retained bank guarantees.

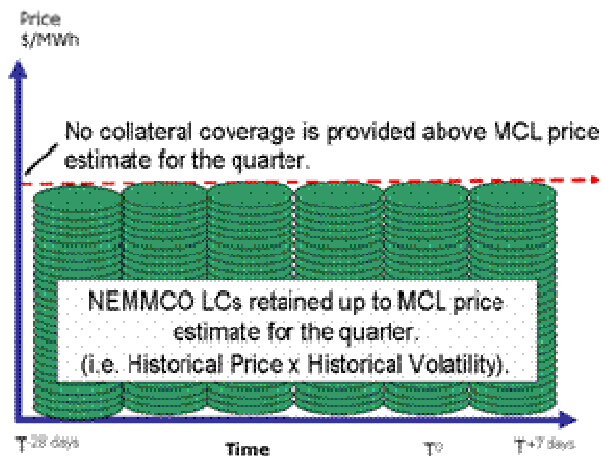
SFE Clearer pays NEMMCO if futures price > FLP



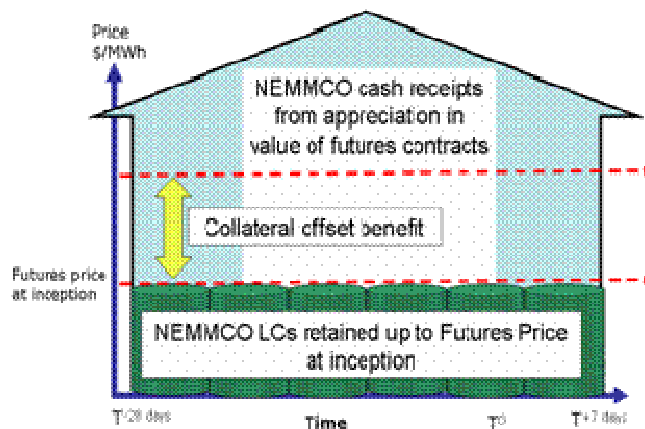
FOAs compared to Current MCL and Reallocation Derivatives

1. FOA price protection not limited to set and forget "price guess" as per current MCL
2. FOA integrity is immune from generator plant outages/constraints
3. FOAs use daily mark-to-market to ensure market consensus level of retailer prudential support.

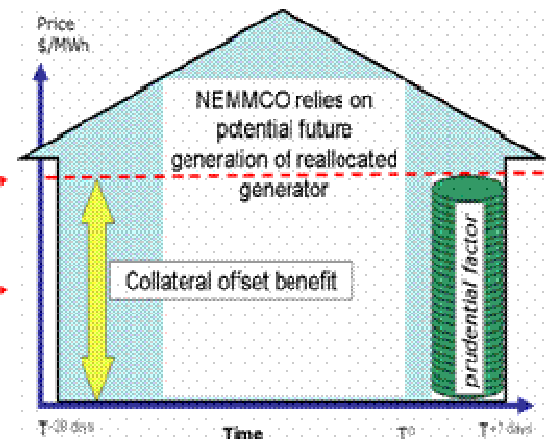
Guarantees based on price guess



Futures Offsets



Reallocations secured by potential generation

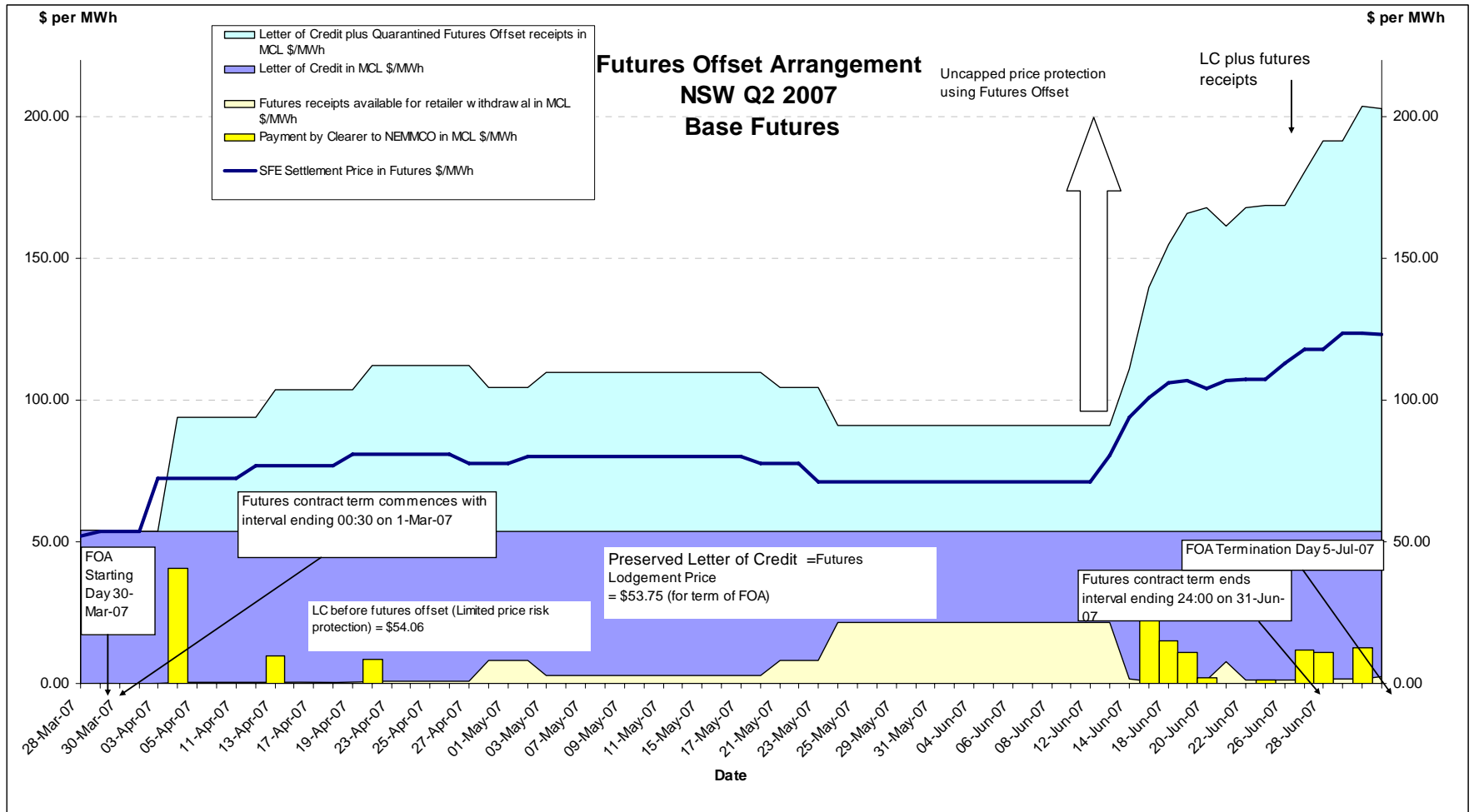


Electricity Futures are daily margined

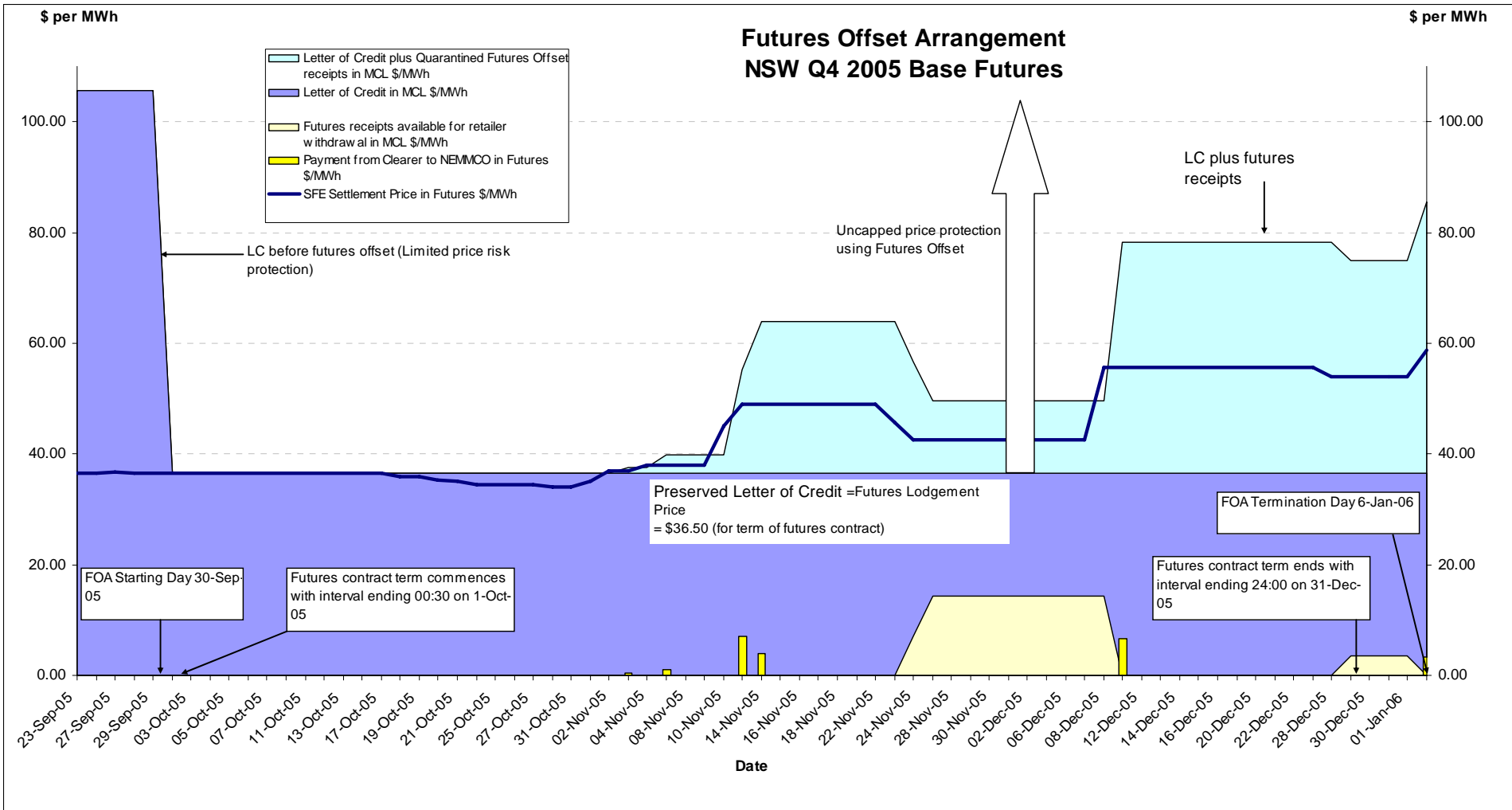
If futures price increases above FLP:

1. Seller's Clearing Participant collects \$ from seller
 2. Seller's Clearing Participant pays \$ to SFE Clearing House (SFECC)
 3. SFECC pays Retailer's Clearing Participant
 4. Retailer's (buyer's) Clearing Participant pays NEMMCO
- Note: Seller's Clearing Participant must pay SFECC regardless if seller defaults (or can't generate)
 - Retailer with FOA doesn't know or care if generator suffers outage (reallocations require energy commitment and are non-firm during plant outage)

Example of FOA. NSW Q2 2007

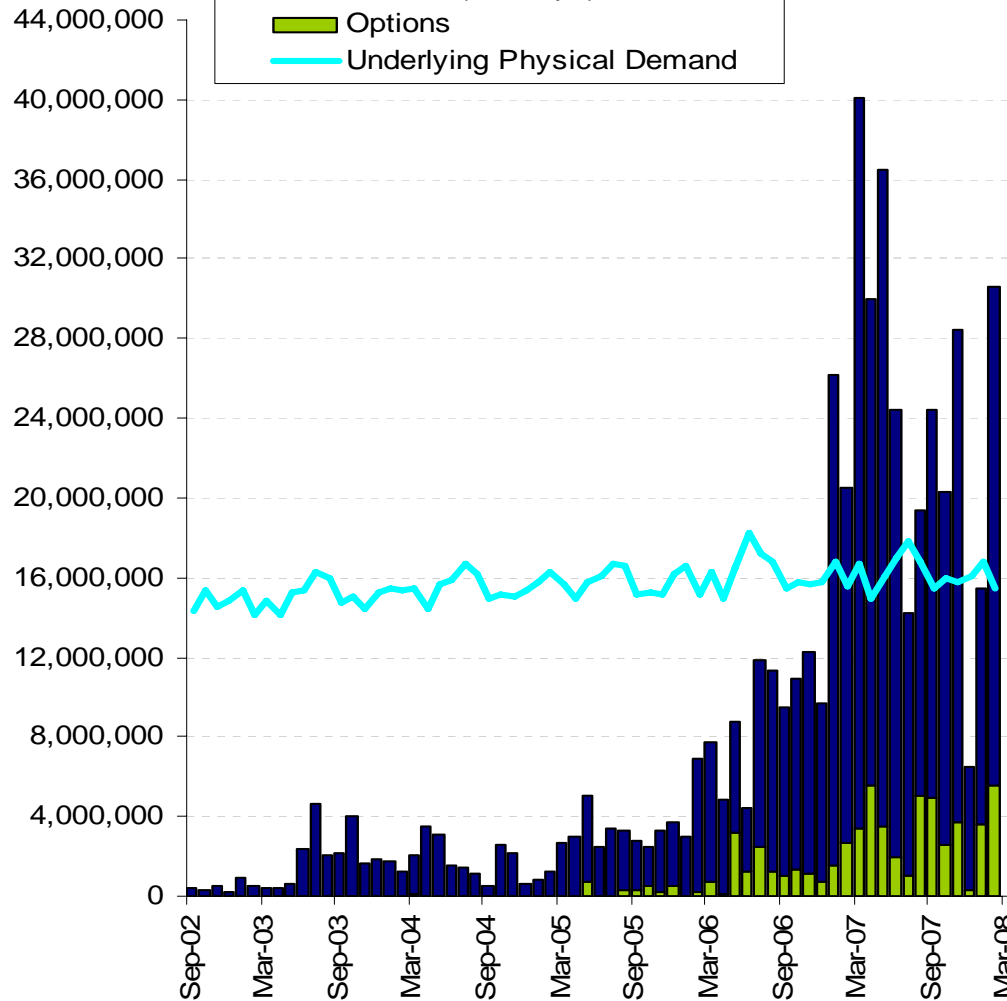


Example of FOA. NSW Q4 2005



Futures Market Background

Traded MWh



Futures market
~ 149%
of underlying NEM
physical demand
Calendar 2007

Electricity Futures are daily margined

- Daily margining limits the credit default exposure to 1 day's worst case futures price move
- Initial margin deposit (calculated by SFECC and held by SFE Clearer) protects against default of client to SFE Clearer
- Final futures cash settlement value = pool price average of quarter (NEMMCO informs SFE)
- Forward value of OTC (e.g. reallocation) derivatives are not daily margined and credit default exposure (contract replacement costs) can accumulate without limit

Futures Market Background











The benefits for NEM Participants and Electricity Consumers arising from FOAs stem from the Electricity Futures market being:

1. Fully transparent
2. Traded heavily by domestic and international traders
3. Licensed under Corporations Law
4. Supported by SFECC and SFE Clearing Participants
5. Supported by prudential integrity of daily margining
6. Not limited by generation reliability
7. Providing equal access (and pricing) to new entrants, independent participants and large incumbents

The shortcomings of the existing NE Rules arise due to an absence of one or all of the above, in the existing MCL methodology and/or reallocation arrangements









Summary of FOA competition and efficiency improvements



Economic benefits	Futures Offset Arrangements	Current MCL methodology and/or reallocation market
1. Counterparty credit risk	 reduced	 reallocation transfers default risk from NEMMCO to generator
2. Generators allowed to short sell without Clearing Participant support	 Clearing Participants facilitate all futures via SFECC	 poorly rated generators can sell short. Other gens at risk
3. Diversity of credit support providers	 7 SFE Clearing Participants additional to existing MCL guarantee providers	 Limited to existing MCL guarantee providers
4. Prudential support coverage during high pool prices	 Futures cash flows are price-following and not "price capped"	 Current MCL guarantees limit protection to backward-looking "price history" (e.g. Q2 2007)









Summary of FOA competition and efficiency improvements



Economic benefits	Futures Offset Arrangements	Current MCL methodology and/or reallocation market
5. Ability for NEM Participants to “free-ride” of other gens and retailers	 <p>limited due to quarantining of financial hedge profit in SDA</p>	 <p>Incentive for deliberate default and suspension due to absence of Mark to Market compensation</p>
6. Regulatory Risks to participants	 <p>SFE and SFECC licensed under Corps Law and supervised</p>	 <p>reallocation market ?</p>
7. Efficiency for new entrant retailers	 <p>Improved due to precise MCL guarantee requirement, efficiency of daily margining and seamless access to futures market liquidity</p>	 <p>Poor, due to inefficiency of MCL methodology (e.g. guarantee burden too high during shoulder quarters) and inefficiency/cost of OTC reallocation trading</p>
8. Interstate Trading	 <p>Extensive interstate and international futures trading. Could immediately provide competition in supply of retailer FOAs</p>	 <p>Only same region base load generators can sell – regionalising reallocation markets and protecting market power of incumbent gens</p>







Summary of FOA competition and efficiency improvements



Economic benefits	Futures Offset Arrangements	Current MCL methodology and/or reallocation market
9. Offset supply/competition from non-bank financial traders	 Strong. Non-bank financial traders provide substantial futures liquidity	 excluded
10. <i>Effective</i> size of offset market	 Unlimited due to Exchange for Physical prudential switches and futures volume not limited to energy commitment. Futures have been excluded from offsets	 minimal due to cost, credit risk and unavailability of reallocations
11. Encouragement of uncompetitive Vertical Integration (VI)	 Nil	 Total. VI retailers and gens can reallocate internally and "shut down" offset supplies to competitors
12. Financial market transparency	 Total	 Nil

Summary of FOA competition and efficiency improvements



Economic benefits	Futures Offset Arrangements	Current MCL methodology and/or reallocation market
13. Discrimination against peaking generation technology	 Nil. Peakers can sell futures due to absence of "must run" commitment	 Peakers excluded – cannot commit to run at uneconomical pool prices
14. Anonymity of counterparty	 Total. Retailers can buy futures anonymously and lodge FOAs anonymously	 Reallocators must reveal counterparties to NEMMCO and to other NEM Participant
15. Retailer requires generator permission	 no. Retailer can make unilateral decision to enter into or unwind FOA	 Yes. Retailer must have permission from (i.e. pay) generator to enter into or unwind reallocation

- > Base Load Generators retain absolute market power – unless Futures Offsets incorporated
 - > New entrant retailers forced to buy reallocations from base load generators
 - > New entrant retailers cannot buy from interstate or financial traders

- > Vertically Integrated entities (Base Load) are preferentially treated by NEMMCO reallocations
 - > To the detriment of New Entrant and independent retailers and generators

NEM Objective – new entrant perspective



➤ Lack of popularity of NEMMCO reallocations limits potential efficiency gains

➤ SFE Exchange for Physical = Unlimited supply of MCL Offsets for New Entrants

1.EFP enables Retailers to create unlimited futures positions to achieve MCL cost reductions (i.e. buy futures + sell swap)

2.EFP Market Size is independent of retailer hedge positions - **the entire NEM demand load could be EFP'd just to create market-wide Offset benefits**