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**Energy Reform Implementation Group (ERIG) – ASX Response to Issues Paper**

ASX Pty Ltd, the publicly listed holding company of the Sydney Futures Exchange and SFE Clearing Corporation (collectively 'SFE'), welcomes the opportunity to respond to the ERIG's Issues Paper. Please find the ASX's response attached to this letter.

The SFE first introduced electricity futures contracts in 1997. In September 2002, SFE together with d-cyphaTrade introduced a new franchise of electricity futures and option contracts that mirror the specifications of the products that are traded in the over-the-counter (OTC) market. In the three months to 30 September 2006 the notional value of d-cypha SFE contracts traded in the financial market and registered for central counter-party (CCP) clearing at SFE Clearing Corporation (SFECC) was equivalent to 66% of system demand in the underlying National Electricity Market (NEM) regions of NSW, VIC, SA and QLD.

The ASX response provides some quantitative data to illustrate the contribution of the financial markets in energy (predominantly electricity) in Australia to support market participants in managing their risks and making informed investment decisions.

The central thesis of ASX's response is that participants in the NEM would benefit significantly if the same CCP clearing and settlement services currently available for electricity futures and trades negotiated in the OTC markets were used to administer the daily settlement of the spot market operated by NEMMCO.

We welcome the opportunity to discuss our submission in further detail.

Regards

A handwritten signature in cursive script that reads 'Anthony Collins'.

**Anthony Collins**  
**General Manager – Emerging Markets**

## ATTACHMENT

### ENERGY REFORM IMPLEMENTATION GROUP (ERIG) – ASX RESPONSE TO ISSUES PAPER

<b>Are active financial markets relevant in promoting economically efficient energy markets? If so how?</b>
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An economically efficient energy market is one that delivers electricity at the lowest cost to consumers.

Forward markets exist to facilitate risk transfer and price discovery, both of which enable market participants to manage the risks inherent within their businesses and compete with each other to deliver electricity at the lowest possible cost to consumers.

Forward markets take only two types of institutional form – 1. Over the counter markets (OTC), which typically are bilateral and confidential, and 2. Exchange traded markets, which are multilateral and transparent.

Forward markets are essential to ‘informed’ investment decision making, be it in the form of primary market (asset formation) or secondary market (asset allocation) activity. In the absence of accurate forward prices, either form of investment activity can be inefficient. Informed investment decision making uses forward prices to determine the economics of investment. The existence of forward market price discovery underpins capital formation and asset allocation through risk reduction and providing attractive returns for investors.

A significant hurdle to investment is the inability for investors to hedge their risks and in so doing provide a more certain return on their investment. In the absence of transparent forward prices underpinning efficient markets, investors will require far higher rates of return to protect themselves from adverse market events. Often these hurdles prove to be too high for projects to be economically justifiable, with the consequence being that the investment is not made. Futures exchanges therefore play a critical role in reducing the cost of capital that encourages investment, capital management and portfolio efficiency activities.

A futures exchange (such as the Sydney Futures Exchange) facilitates informed investment decision making by providing:

- Transparent forward prices that assist the valuing of future available supply and demand. This price signal stimulates a response from the market to increase future supply to meet the expected shortfall, or to reduce consumption to meet the lack of future supply;
- A forward price curve that enables parties making long term investments to hedge the financial risks associated with such investment;
- Liquidity enabling parties to transfer or share risk at the lowest possible cost across the economy;
- Credit risk novation where security of contracts entered into is guaranteed by a central counterparty clearing corporation.



Vertical integration (a clear trend in the Australian energy market), whilst clearly in the interest of vertically integrated entities because vertical integration reduces the availability of hedge cover for competitors, does not generate the forward price discovery needed for informed investment decisions. Moreover, there comes a point where vertical integration can compromise the competitive market structure and liquidity in the financial markets needed to deliver electricity at the lowest cost to consumers.

The antithesis of an active financial market is a vertically integrated energy sector that needs to be highly regulated or centrally planned. It is broadly accepted that these alternatives to an active financial market do not deliver electricity to consumers at the lowest cost.

**Are financial markets in energy in Australia acting to support participants in managing their risks, supporting investment, promoting competition within and between fuels and providing transparency?**

Attachment 1 illustrates the growth in traded volumes and open interest in electricity futures and options contracts since 2002. This growth mirrors the growth in the OTC electricity market and provides good insight to how the financial markets for electricity in Australia are acting to support participants in managing their risks, supporting investment, promoting competition within and between fuels<sup>1</sup> and providing transparency.

The growth profile to date of the financial markets for electricity in Australia is very similar to that of many other successful financial markets. Liquidity takes time (often 4 to 10 years) to build from a low base to an 'inflection point' where proprietary trading firms, banks, funds and other speculators are attracted *en mass* as is now the case with the financial market for electricity in Australia.

Given the relative infancy of the financial market for electricity in Australia, OTC and exchange traded turnover relative to underlying system demand in the NEM is very healthy. That is not to say that the NEM, in effect a highly regionalised set of markets, does not experience periods of illiquidity from time to time especially in some States where there is a concentration of ownership and/ or vertical integration.

Several energy exchanges such as ICE, NYMEX and the European Energy Exchange (EEX) provide CCP clearing services for OTC trades registered with them<sup>2</sup>. These exchanges typically

<sup>1</sup> Namely, the use of natural gas and coal as inputs to the generation of electricity or natural gas as a substitute for electricity.

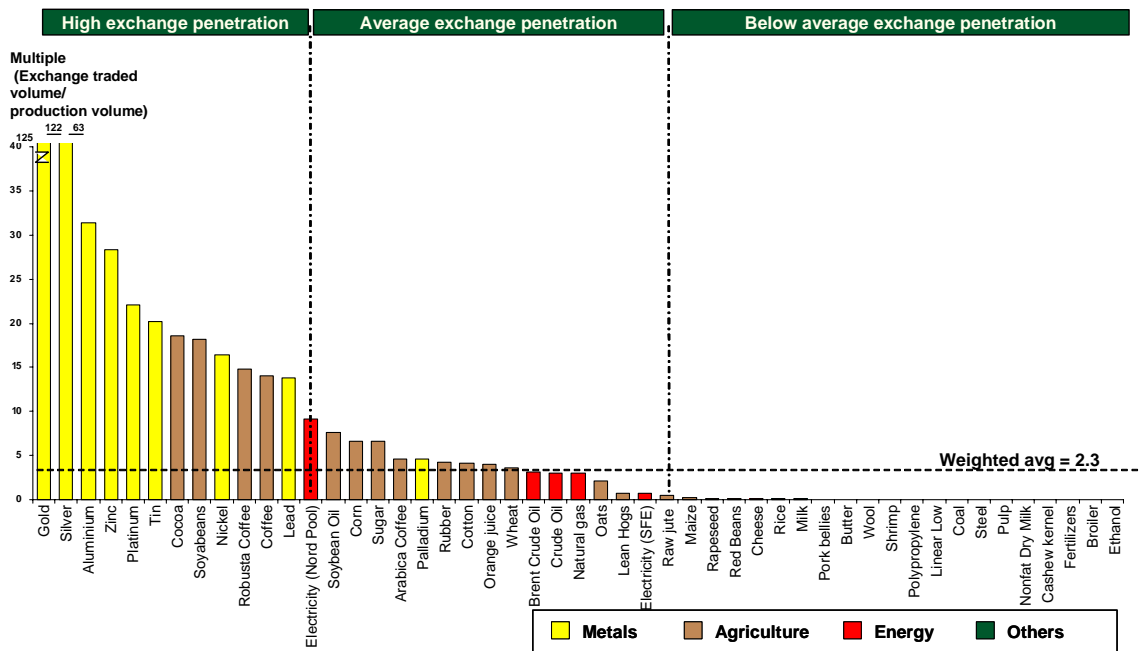
<sup>2</sup> The functionality, procedures and technology underpinning SFE's Block Trade registration mechanism is for all purposes identical to the OTC trade registration mechanisms at other energy exchanges with the exception that SFE publishes details of the OTC trade upon acceptance - all of which is consistent with the Ministerial Council of Energy's (MCE) desire for market transparency to be supported.

introduce a central market for the trading of fungible futures contracts if the OTC market matures and participants want the additional benefits of price discovery and a more robust daily settlement process.

The Australian electricity market is already at the point where it has the luxury of both OTC trade registration mechanisms and a central market for the trading of futures contracts that mirror OTC specifications.

The remainder of this section illustrates some liquidity benchmarks in other financial markets that are widely considered to be successful in fulfilling their objective of facilitating the price transparency and risk transfer needed for market participants to manage their risks and make ‘informed’ investment decisions.

The following table illustrates the ratio of futures liquidity to underlying production in several industries. The more liquid futures markets have developed their liquidity over a very long period of time (often more than 20 years) and these markets are characterised by a lack of vertical integration.

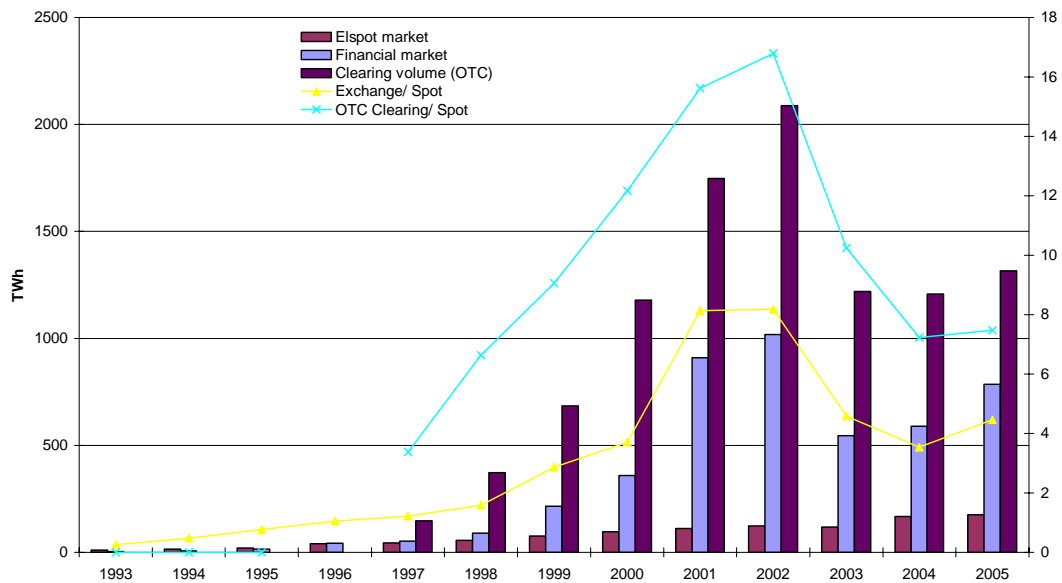


It is worth noting that not all financial markets evolve to the point where trading velocity occurs at multiples of the underlying spot market and neither do they need to for users to accrue the benefits of price discovery and risk transfer<sup>3</sup>.

The following graph illustrates the growth profile of the Nord Pool power market since 1993. The number of participants on both the demand-side and the sell side in Nord Pool’s markets number in the hundreds and are diversified in terms of their size, ownership and activities. There is very little vertical integration such that there is considerable need to re-contract from time to time amongst participants. Of note, Nord Pool is the central counterparty that guarantees settlement to all trades in the spot and financial markets. The importance of this is commented upon later in this response.

<sup>3</sup> By way of example, no-one will argue that the SPI 200 futures and options contracts listed at SFE do not efficiently facilitate risk transfer, arbitrage and price discovery, yet the notional value of S&P/ ASX 200 futures and options contracts in 2004/ 05 represented 71% of the value of shares traded in the underlying stock market.

Nordpool Volumes (1993 - 2005)



### Transparency, Financial Services Reform and Accounting Standards

This section comments upon the appropriateness of the Financial Services Reform Act of 2001 and the harmonisation of Australian Accounting Standards with the International Financial Reporting Standards (IFRS).

The introduction of insider trading prohibitions in the Corporations Act of 2001 and the phase-in of International Financial Reporting Standards are entirely consistent with good corporate governance (investor awareness) and the transparency needed to encourage informed investment within the NEM, broader participation and liquidity in the financial market for electricity and in turn the delivery of electricity at the lowest cost to consumers.

Notwithstanding the overheads associated with trading, accounting, reporting and investor education, the transparency achieved through reporting mark-to-market positions and counterparty exposures provides investors with better insights to how companies are managing the risks inherent within their businesses. Over time this should lead to investors rewarding those companies that manage their risks using the financial markets.

**Are there structures or rules or mechanisms of physical energy markets which impede the development and/ or operation of effective financial markets?**

### Re-Allocation Facilities

The existing settlement re-allocation mechanism administered by NEMMCO does not explicitly recognise or facilitate the value of positive variation margin payments from futures positions held by SFE Clearing Participants on behalf of NEM Participants (Retailers). As open positions and trading volumes in the electricity futures market continue to mature the magnitude of this inefficiency also grows. To overcome this impediment d-cyphaTrade has lodged (with the support of 20 industry participants and associations) proposed amendments to the rules underpinning the settlement re-allocation mechanism administered by NEMMCO and these are currently being reviewed by the Australian Electricity Markets Commission (AMEC).

## **Prudential Requirements and Settlement Risk**

Another inefficiency in the NEM not evident to the same degree in other markets, is the inefficiency of the existing settlement system administered by NEMMCO.

Prudential requirements in the NEM are significant. For example, NEMMCO has stated that the total credit support provided in the first quarter 2005 was \$1.2 billion at a cost to the parties providing it of between 0.25% and 1% of the total value, which reflects an existing cost to the industry of between \$3 million and \$12 million<sup>4</sup>. There is also the very real potential for systemic default in the current settlement model employed by the NEM.

Prudential requirements in the NEM are a direct result of its lengthy settlement cycle, and to a lesser degree the lack of set-off arrangements between the spot and the contract market. The shorter the settlement cycle the lower the prudential requirement and systemic risks to the industry associated with settlement failure.

Market operators and clearing houses in other markets, including Nord Pool, have reduced 'prudential risks' by reducing the length of their settlement cycles and introducing central counter-party clearing services. For example, in Australia:

- the ASX through a subsidiary company, Transfer and Netting Settlement Clearing (TNS Clearing) Pty Ltd, introduced a central counter-party clearing and T+3 settlement service for the Australian stock market in 1994. Prior to this there was no restriction on when settlements should occur;
- the derivatives clearing houses, namely the Australian Clearing House (ACH) and SFECC, 'mark-to-market' derivative positions on a T+1 basis and on occasions (when there is a large price movement) will mark-to-market on an intra-day basis; and,
- settlements in both the Australian stock and futures markets are effectively guaranteed by CCP clearing services.

<b>Would changes to structures or rules or mechanisms support more effective financial markets?</b>
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In submissions to ERIG and more widely in the industry there has been much healthy discussion and debate about the changes to the operation of the spot market, including the introduction of a day ahead market, a net pool and the introduction of central counter-party (CCP) clearing for the spot and forward markets. In all instances these changes should not be considered in isolation of their impact on the existing structure of the financial markets, including both the \$2.6bn of existing value of open positions in the futures market and other derivative positions held in the OTC market.

### **Central Counter-Party (CCP) Clearing and Settlement Services**

This section illustrates how the CCP clearing and settlement services currently used for the financial markets could underpin a more effective settlement model for the electricity spot market operated by NEMMCO.

Central counter-party (CCP) clearing and settlement services already exist for the Australian equity and futures markets. TNS Clearing Pty Ltd, the Australian Clearing House (ACH) and SFECC currently novate \$7 billion in traded value, and \$100 billion in nominal value, daily. In relation to the financial market for electricity in Australia, SFECC provided CCP clearing for

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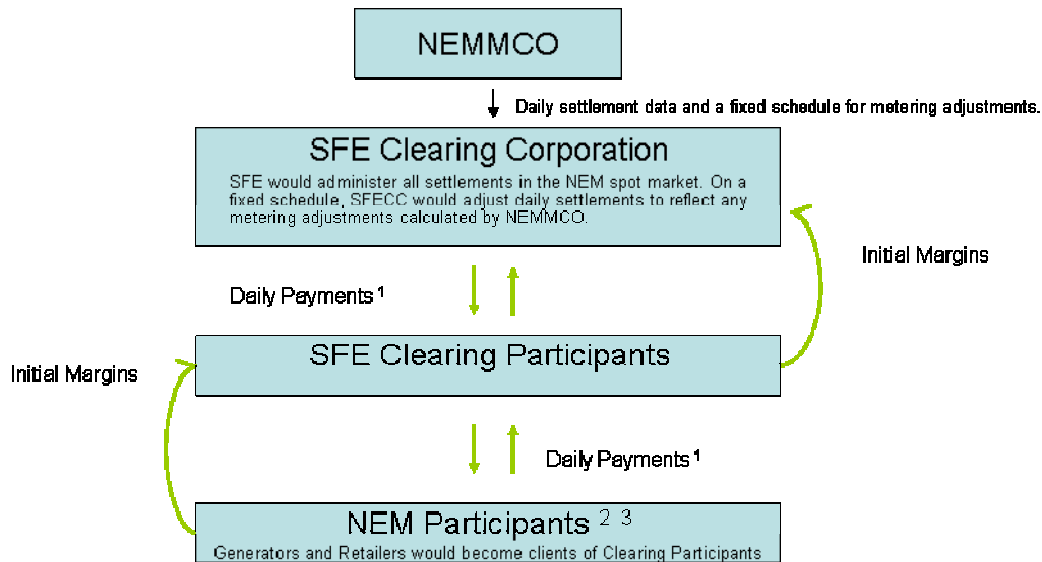
<sup>4</sup> NEMMCO Request for Amendment to National Electricity Rules: Reallocations (2006)

electricity futures and trades negotiated in the over-the-counter (OTC) market to the value of \$2.9 billion for the 12 months to 30 September 2006.

Rather than develop a new energy specific CCP clearing and settlement service for the NEM at the expense of industry participants (no small undertaking), *prima facie* it would make sense to leverage the existing CCP provider for electricity derivatives. The benefit of this approach would be that the risks associated with servicing the spot and forward market would be managed by a single and well established Clearing House. Of relevance, the ASX already uses the same technology platform (OM Secur) used by Nord Pool for the provision of CCP clearing services to their spot and financial markets<sup>5</sup>.

SFE estimates that, with a reduced settlement cycle and central counter-party clearing of the spot and futures market, it would require collateral in the vicinity of \$50m from its Clearing Participants to effectively guarantee daily payments in the NEM spot market operated by NEMMCO. This collateral could be submitted by NEM Participants to SFE Clearing Participants in the form of Letters of Credit or State Government Treasury Guarantees and off-set (to some degree) against initial margins (IM) lodged for financial market positions also lodged with SFECC.

A high-level straw-man for the provision of CCP clearing services to the NEM is as follows:



<sup>1</sup> All daily payments for spot, futures and OTC Positions would be netted.

<sup>2</sup> NEM Participants with both generating and retailing businesses would only pay/ receive their net obligation.

<sup>3</sup> Retailers would likely meet daily payments out of working capital/ bank facilities. It is not suggested that Retailers would have to change the billing cycle with their customers. The advantage of this model is that while Retailers may still need working capital/ bank facilities, in most scenarios they would be utilised far less than for existing credit support arrangements.

The primary benefit of CCP clearing for Generators in the NEM would be the effective elimination of settlement risk in the spot market operated by NEMMCO. Retailers should also benefit from a significant reduction in the cost of their current credit support arrangements. Secondary and still very substantial benefits include the ability for Retailers to: off-set collateral support for their activities in the spot and financial markets; and, make a single 'net' payment to cover their obligations in both the spot and financial markets.

<sup>5</sup> Nord Pool Clearing successfully launched a new clearing system based on OMX's SECUR technology in April 2004.

# Attachment 1

The following graphs illustrates the growth of trading volumes and open interest since the d-cypha SFE futures and options contracts were first introduced in September 2002.

