

## **Australian Productivity Commission Enquiry into Energy Efficiency**

General comments on "Australia's Enquiry into Energy Efficiency" from a business and energy trading perspective.

### **Introduction and Background**

Deregulation of the Australian and overseas electricity markets has been occurring since the 1990's. Traditionally the Australian electricity market has been dominated by State government monopoly owned retailers and generators within each State's geographic area. Not much has changed since the advent of deregulation with the exception of some Australian States where government retailers and generators have been sold to private companies.

With deregulation the electricity market changed from a price set by local state governments (similar to tax) to a financial futures electricity market theoretically set by supply and demand.

An electricity market consists of a physical infrastructure of networks and generators overlaid with a financial futures market for price discovery. Forward wholesale electricity contract prices are based on the forecast of the underlying variable electricity spot market. The electricity market generally has 3 main groups i.e. generators, retailers and the end users of electricity. Generators generally sell electricity to retailers for a fixed price in order to guarantee cash flows rather than have their cash flows subject to the uncertainty of volatile electricity spot prices, retailers then normally add a margin and on sell to final end users of electricity for a fixed price e.g. households and business.

Part of the theory behind electricity deregulation was to encourage competition and efficiencies and thereby a market price for electricity rather than it being set by the local State. For deregulation to have worked the final end users, especially the larger users of electricity had to have become involved in buying their energy from the wholesale electricity market. If end users did not become involved to any extent in the wholesale electricity market then it would be generally business as normal for the existing generator and retail near monopolies.

### **Australian Business**

Unfortunately Corporate Australia to any major extent did not get involved with electricity trading, they still bought their electricity in the traditional way before deregulation i.e. rolling over fixed 1, 2, 3, 5 and 7 year electricity contracts on the day their old electricity contracts expired, this practice in a number of cases would have cost some Corporates a significant amount of shareholder value. For example if a Queensland company locked itself into a 5 year Queensland retail electricity contract in say the start of 1999 it would have lost a considerable amount of money as contract prices reduced over that period. Companies can easily compare their fixed electricity retail tariff price to wholesale contract market prices and pool prices over the years to assess the cost or profit of their current and historical electricity arrangements.

One of the principal reasons that nothing really changed in the electricity market was that traditionally Corporate Australia used to buy their electricity / energy through their procurement officers because electricity prices used to be fixed by the

government. When the electricity market changed to a financial futures market generally procurement officers were still in charge of purchasing their company's electricity.

When the electricity market became a financial market, companies purchasing of electricity should have been transferred to their corporate treasuries who understood financial futures and the associated financial risks i.e. corporate treasuries normally handle the company's interest rate, foreign currency and commodity risk. Handling their corporate's energy risk would have been an extension of their current function. As Westpac explained in an newspaper article in November 2002 some companies energy risk is as great as their interest rate risk i.e. a company's procurement officer may be in charge of dealing with the same or more financial risk than a company's corporate treasury or board.

### **Australian Business Energy Buying Process**

As business becomes more global, Australian companies' products are competing globally and locally normally on a cost basis. Business processes such as chemical, mining, manufacturing and forestry use considerable amounts of energy. Effective hedging and management by Australian business on one of the major inputs i.e. electricity does not occur in a normal business process. A number of these businesses operate on very small profit margins. An example of this is Paperlinx net profit for six months ending December 2003 was \$53 million based on revenue of \$2.4 billion i.e. 2.2% profitability. Paperlinx's \$2.4 billion turnover to produce \$53 million net profit needed to be actively managed through to the end of the output process. Throughout the business process there is a number of corporate financial risks and costs, product risks, and asset depletion issues involved.

Comparatively electricity is an input i.e. a direct cost; any savings in a company's electricity costs flows through directly to the company's profit.

Corporate Australia especially large users tend to view the process of buying energy as a simplistic one off fixed input cost rather than viewing it as a number of separate issues affecting corporate profit, marketing, funding, image, etc. Australian businesses generally do not have any energy business processes, energy purchasing strategy or the skill mix required for analysing their electricity purchasing requirements. Generally they lack understanding of different physical and financial aspects of the energy market and how it ties into their local state and overseas operations and its impact on their profitability. When companies are evaluating their energy purchasing options they should assess their operations unique electricity requirements as well as their operational ability to curtail electricity, produce electricity or recognise alternatives to producing their product i.e. some companies at certain times of the year find it cheaper to import ingredients than using energy to make them locally. Businesses could reduce and even earn money from their operations by incorporating the following energy efficiencies among other things into their electricity purchasing:

- Demand Side Management (DSM)- writing financial options off the back of their operations ability to curtail to retailers, banks, brokers, etc or even buying this ability from another business;

- Incorporating more energy efficiency into their operations e.g. new electrical efficient motors;
- Recognising the mix of different markets and prices where energy is available e.g. retail, wholesale, pool, futures, government, secondary, etc;
- Tying their operations unique energy usage into their purchasing strategy e.g. Yamasha Seafoods in Victoria taking their energy from the pool, bypassing the retailers and if pool prices spike then they turn off their refrigeration;
- Using operational alternatives to buying energy;
- Co-generation capability and its value to the corporate and tying it into, the corporate's energy purchasing strategy;
- Establishing relationships with other business to reduce energy costs through synergies;
- Establishing corporate energy purchasing strategies for the short, medium and long term;
- Tying the corporate's energy purchasing strategy into its marketing, image and branding;
- Operational costing of energy decisions;
- Energy Trading in wholesale or secondary electricity markets;
- Energy purchasing strategies;
- Aggregating operations purchasing of energy contracts across Australian States and overseas;
- Tying green purchasing into their energy strategy;
- Looking at current and future green laws, Kyoto protocol, possible product tariffs on non-compliance countries, changing consumer and shareholder values towards the environment; and
- Green / Carbon trading.

### **Green Issues**

Every retail piece of electricity sold in Australia has a green cost included in the price of electricity and this cost is increasing. Consumers of companies' products, shareholders and fund managers are increasingly wanting more, companies to be environmentally responsible and show this publicly in their behaviour. Companies should *understand how* their energy purchasing and operational decisions could affect the amount they pay for the green component of their electricity bill and how the

handling of the green component flows into the marketing and profitability of their products, brands and corporate image.

Again most Australian businesses do not have any green energy efficient processes or the skill mix for assessing the current and future. green components of their electricity costs and operational decisions.

### **Energy Market Barriers**

Additional energy efficient barriers not covered in the terms of reference are:

1. Some State governments revenue control of existing generators and retailers within their local markets may affect State electricity. prices. (State government issues among others should be address by the federal government or CoAG i.e. Parer report);
2. A number of organisations outside the traditional market players-have tried to gain access to the wholesale and retail electricity markets to date none have been particularly successful which shows the market strength of the existing players;
3. Level of wholesale energy,/ green trading education in Corporate Australia;
4. Level of Corporate Australia involvement in the wholesale energy / green markets; and
5. Lack of Corporate Australia energy/green trading/risk management business processes, skills and knowledge.

### **Energy Market Efficiency Proposals**

The government if it is looking to encourage energy efficiency: should consider the following:

1. In business large decisions are primarily driven from the top down. Providing the specialised resources to educate the boards of Corporate Australia on energy /-green trading opportunities and how these can add -significant -value -to their bottom lines and therefore Australia;
2. Currently households and business (except those with DSM contracts) have no real incentives to reduce energy consumption especially during peak times. Providing real corporate. incentives-to-reduce energy consumption, green house gases and encourage energy efficiency in the form of financial incentives or tradable. green, house. credits, on par with. the. current schemes set up to encourage efficiency in existing and new green generation i.e. base year energy consumption less current year energy consumption;
3. As the energy market is a financial market any investigations into. market, irregularities should include a financially resourced ASIC and the ACCC i.e. similar to the UK;
4. Levelling of the regulatory and financial market. playing fields between existing market participants and corporate Australia i.e. One option is to specify that each NEM generator must offer 5-10% of their capacity through the SFE and ASX futures contract market; alternatively
5. All NEU generators must offer all their contracts through a market based mechanism such as the SFE or ASX rather than generators and retailers tying up the majority of the wholesale market in non transparent bi-lateral contracts between themselves excluding competition i.e. similar to forcing all NEM generators over a certain size to sell their production into their various State electricity pools to set a transparent spot price.