

Electricity Market Outlook

When looking at the bottom line many of us forget to consider energy costs.

Statistically, energy costs are unlikely to account for more than 10% of total cost, so it's not hard to understand why they are overlooked. Moreover, despite ten years of energy deregulation there is still a common misconception that energy costs are largely fixed, but, they are a real cost and cost savings will go straight to your bottom line. A few hours spent carefully reviewing energy costs can bring some very long-term savings.

As part of a landmark study undertaken by Key Energy & Resources for a Manufacturing Group, electricity accounts for 30 major sites were critically reviewed. In total, these accounts represented an annual spend of \$12.3M. More than half of these accounts were either on the wrong network tariff or they had the wrong contract demand. Simple tariff changes or changes to the contract demand generated combined savings of more than \$500K per annum.

An excellent return for a few hours work.

Even more savings were identified when the retail energy rates were critically reviewed. Several of the sites had not rigorously renegotiated their electricity contracts for several years and it was possible to extract a further \$1M per annum. Again, an excellent long-term return.

Many of us will need to renegotiate electricity contracts prior to the end of the current financial year. This provides an ideal opportunity to review network tariffs (which can account for about 40% of total electricity costs). It also provides an ideal opportunity to spend a few hours really looking at where cost savings can be made. On one hand we could look at some energy savings opportunities, but on the other hand it's hard to go past some good, old fashioned, hard-nosed negotiation.

As part of the negotiation process we need a basic understanding of the key drivers in the energy market and significant changes.

- **Price**

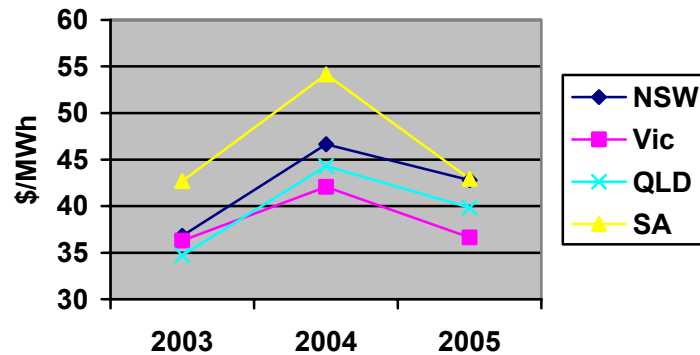
Price is by far the most important factor to most energy users and the most reliable indicator of price is probably the 'forward market curve'. Forward market prices are promulgated for each jurisdiction of the National Electricity Market (NEM). Figures 1 below show the estimated forward prices for a two-year contract, as they were at the end of 2003, 2004 and 2005. Thus, the forward prices provide an estimate of electricity costs for the two coming calendar years. In each case we have assumed that 60% of the load is used in peak periods and 40% of the load is used in off-peak periods¹.

As you can see, electricity prices across the South Eastern seaboard 'bounced up' over 2004. The two-year forward price in 2004 was significantly higher than 2003 or 2005. Fortunately, for those of us in Victoria and SA, forward prices at December 2005 had largely returned to the 2003 level. Forward prices in Queensland and NSW remained at somewhat higher levels.

Figure 1: Two year Forward Price Curves across the NEM

¹ Note, these figures should be used as a very rough guide only. Actual retail prices will depend on load shape, volatility, risk appetite of the selected retailer and profit margins etc.

Forward Price Curve



- Tasmania**

Perhaps the biggest piece of news in the industry is Tasmania’s entry into the National Electricity Market (NEM). Tasmania was recently connected to the NEM by an undersea cable at a cost of \$750M. This cable, known as BassLink will allow Tasmania to export up to 480 MW of electricity to the mainland during periods of high demand, for example on a hot summer day. Conversely, the mainland will be able to export surplus power to Tasmania when demand is low. That should leave us all with less volatile electricity prices, saving Tasmania’s precious water reserves and allow better use of Victoria’s ample brown coal reserves.
- Industry Aggregation**

Where once there were 35 ‘State based’ retailers competing for commercial and industrial business across the NEM there are now probably about 8 national players. Not only have the retailers undergone some very significant ‘horizontal aggregation’ there has been lots of ‘vertical aggregation’ to create large national energy companies. In addition to retailing electricity, most of these companies also retail gas and own significant infrastructure assets such as power stations, gas wells or distribution networks. The horizontal aggregation was not unexpected, but the level of vertical aggregation was a concern that was raised with the ACCC.
- Supply Short Fall**

In the absence of centralised, state based planning the market decides when additional capacity is required. The problem is that electricity cannot be practically stored for a ‘rainy day’. In particular, it can’t be stored for those few very hot hours of the year when air-conditioners force up our electricity demand. On one hand, the market does not want to fund the development of a power station that might be used for a few hours ‘next year’ if it is ‘hot’. On the other hand, the community, and especially the business community, demands a reliable source of power.

The result is that we are continually walking on a tight rope. For example, there was a 500 MW shortfall in reserve capacity over Victoria and South Australia this summer. No reserve shortfall is predicted for next summer (thanks to BassLink and a new gas fired PowerStation in Laverton) but we are back to a reserve shortfall over the summer of 2008/9.

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To make life a little more complex, there is on-going regulatory reform, the added uncertainty of new environmental imposts and the cost of existing environmental imposts, which could be increasing energy costs by 5%. (Refer to break out box)

So what is the best way forward? Firstly, understand that you can only negotiate the raw electricity costs, i.e. the cost of raw electricity free of network fees (delivery costs), losses and government imposed environmental levies. In round figures, the 'raw electricity costs' will account for about 60% of total cost. All electricity is traded through a 'gross pool'. On average the pool price (or 'spot' price) is probably around \$30/MWh and we are probably paying an average retail price for the raw electricity of \$40/MWh depending on our location and energy use pattern.

In theory we could bypass the middleman (i.e. the electricity retailer) and buy straight from the pool. However, that would create a significant 'risk management' problem. While the pool is 'well behaved' most of the time, it can move from \$30/MWh to \$10,000/MWh in the space of half an hour. This potential for huge price swings makes it almost imperative to hold a hedge position. Electricity retailers develop their 'hedge' positions so that they can sell electricity to their customers at a firm price, i.e. a price that does not vary with changes in the 'spot' price. As part of this process the retailers 'build up' a retail price from the cost of their hedges, risk premiums, account service fees and profit margins.

Our objective, when negotiating an electricity supply contract is to get the lowest price possible, (consistent with our required commercial terms etc.) We are most likely to deal with the retailers who offer the 'better' price, because they are in turn the 'better risk managers' who are able to negotiate the 'better hedges'. To some extent we can help the retailers along by;

- Minimising the retailers risk, especially their 'volume risk' (i.e. the risk the retailers face because they do not know exactly how much electricity will be required). Providing the retailers with good information about historical electricity use and factors that are likely to change energy use over the life of your contract will enable the retailers to reduce their risk premium.
- Timing your contract negotiation to coincide with relatively favourable movements in the wholesale electricity market. Typically, these occur in mid-season i.e. March/April or August/September when temperatures are mild and demand is low. However, this is not always the case and it is often a good idea to keep an eye on the wholesale market. There is no need to wait until your current contract is about to expire before negotiating your next contract. A judicious purchaser will often 'forward contract'.
- Listening to what the retailers, and especially your current account managers tell you. They often have their finger on the pulse and are sometimes in the position to offer a very good deal, but, listen carefully and listen critically.
- Critically evaluating offers that allow you to 'dilute the cost' of a high price contract that you may be holding by extending the contract at a blend of your high rate and the current market rate. You will often be better off allowing your existing contract to run its course and then negotiate a new contract.

Remember, the outlook for the medium term is far from certain. The electricity market does not encourage the types of large investment that the government owned utilities used to make in order to ensure supply security over the medium and long term.

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This uncertainty means that it is often not possible to negotiate a contract for more than three years without paying a risk premium.

The outlook across the NEM is as follows:

- **NSW**

Despite the fact that no reserve shortfall is expected until 2008/09, prices in NSW are still relatively high when compared to Victoria and Queensland. Many industry analysts believe this is a consequence of the structure of the NSW electricity market. In particular, government ownership and financial arrangements that have been made to underpin 'standing contract' arrangements for domestic customers.

- **Queensland**

Again, no reserve shortfall is expected until 2008/09 (in part due to the proposed commissioning of several new Power Stations in the medium term. Queensland, with Victoria, shares the distinction of having the lowest prices across the Eastern Seaboard.

- **Victoria / South Australia**

The commissioning of Basslink and the Laverton North power station will provide additional available capacity to the Victoria / South Australia region from 2006/07. Nevertheless, there is still a reserve shortfall expected over 2008/09. Interestingly Victorian Prices are amongst the lowest in the Eastern Seaboard while South Australian prices are the highest.

Not all electricity retailers are the same, and not all electricity contracts are the same. The astute consumer who negotiates the competitive contract will often be the consumer who has their eye on the pulse of the market.

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Environmental Compliance Costs

In an attempt to reduce Australia's emissions of greenhouse gases a number of environmental compliance obligations have been built into the electricity industry.

- **MRET:** The Mandatory Renewable Energy Target, introduced by the Commonwealth Government requires all electricity retailers across Australia to source a minimum amount of renewable electricity. In the main the cost of complying with this program is passed back onto consumers. This is currently adding about \$1/MWh to the cost of our electricity.
- **NGAS:** The NSW Greenhouse Abatement Scheme, which has been extended to the ACT requires all electricity retailers in NSW and the ACT to ensure that the average greenhouse coefficient of the electricity they sell is below a nominated benchmark. This is currently increasing electricity costs in NSW and the ACT by almost \$2/MWh.
- **ESF:** The NSW government has set up their Energy Saving Fund. The fund provides subsidies to help offset the cost of eligible energy efficiency projects. But, the fund is being established through a levy charged to the electricity distribution companies. This is probably adding \$1/MWh to the cost of electricity bills across NSW.
- **GEC:** The Queensland Government has introduced their Gas Energy Scheme that requires a minimum take of electricity generated by gas-fired power stations. This is probably adding almost \$2/MWh to the cost of electricity delivered in Queensland.

As an added complication other state governments, and in particular the Victorian State Government are foreshadowing the introduction of other schemes. Clearly, the benefit of a national scheme over a plethora of state based schemes needs to be considered.

In addition to the direct costs noted above the Commonwealth Government has mandated energy efficiency audits for all corporations who use more than 0.5PJ per annum and the NSW Government requires all sites using more than 10 GWh per annum to develop Energy Savings Actions Plans.

Note: Any advice contained herein is general in nature and not specific to any client's requirements. Further personal advice should be sought from a qualified consultant before making any decisions relating to material contained herein.