

Contents

Significance of the ETEF on forward projections	1
SA Gas Supply Interruption 25 January 2003	6

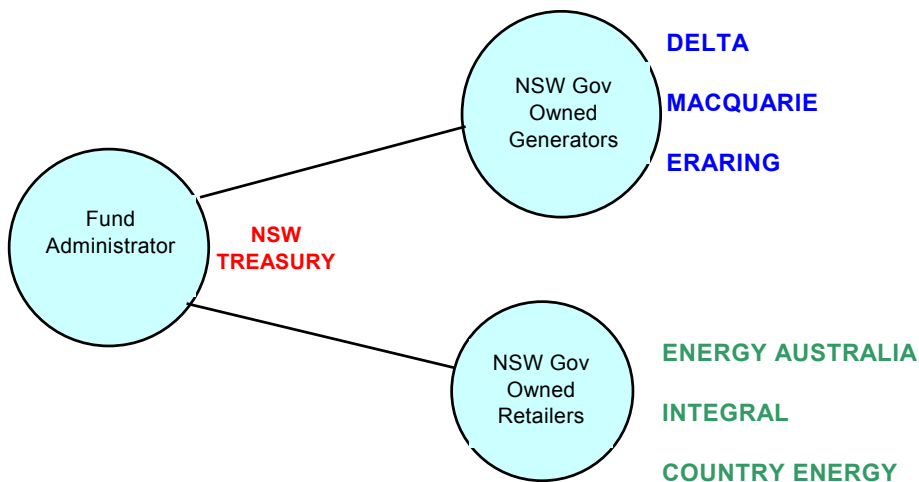
Significance of the ETEF on forward projections

ETEF Overview and Dynamics

The Electricity Tariff Equalisation Fund (ETEF) is a financial arrangement implemented in NSW when the vesting contracts expired on 31 December 2000, to manage retailer risks associated with purchasing electricity for small retail (regulated) customers.

This financial arrangement exists between the NSW state owned generators and retailers, with NSW Treasury acting in the role of the fund administrator.

Figure 1 ETEF Parties

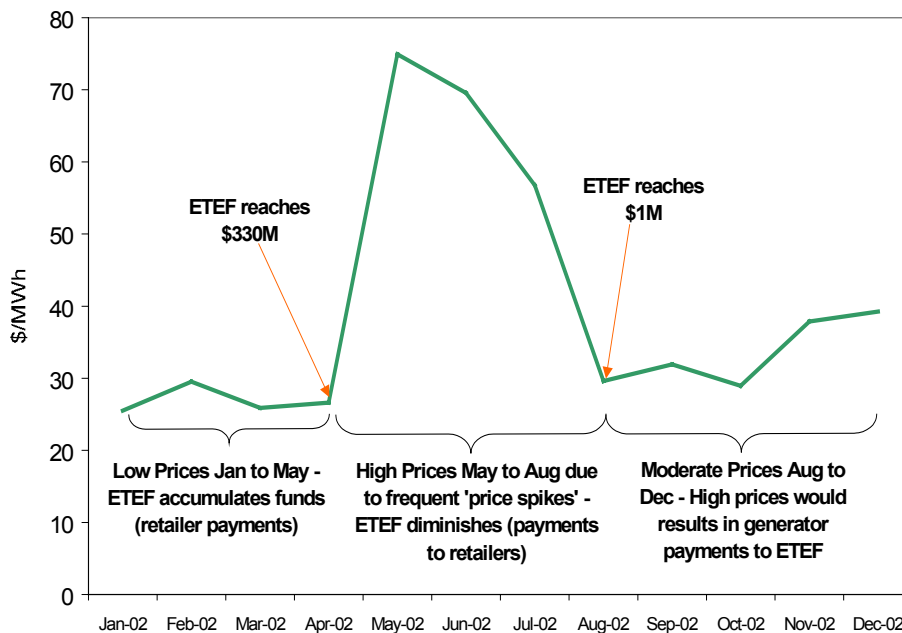


Retailers are required to pay money into the ETEF when the NSW electricity pool price is lower than a specified strike price¹, and retailers are paid when the pool price exceeds the strike price. This is essentially a two-way swing contract between the ETEF and retailers that removes the retailers' wholesale energy risk for their regulated customer demand.

If the fund is in deficit and payments to retailers are required, the NSW generators are obliged to top-up the fund. The ETEF will repay these funds to the generators when the fund goes back into surplus (through payments into the fund by retailers).

The relationship between generator behaviour and fund level observed during 2002 shows some interesting features of the ETEF.

Figure 2 2002 Average Monthly Prices



Pool prices averaged \$27/MWh from 1 January to 1 May, resulting in substantial (approximately \$330 million) accumulation of fund surplus. The period from May to August saw a significant decay in the fund level (through payments to retailers) due to a number of significant price spikes (see Figure 3) resulting in an average pool price of \$67/MWh during this period. Figure 4 shows the NSW pool price for a week during this period.

¹ This strike price is equal to the energy cost component that the retailers recover from regulated customers

Figure 3 Half Hourly NSW Pool Prices May–August 2002

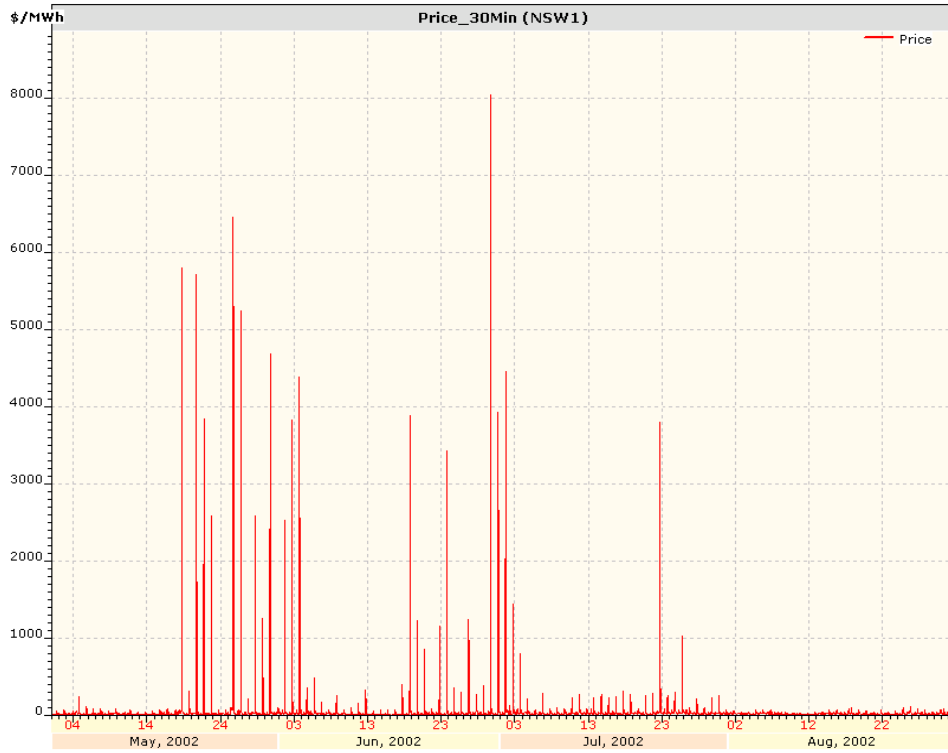
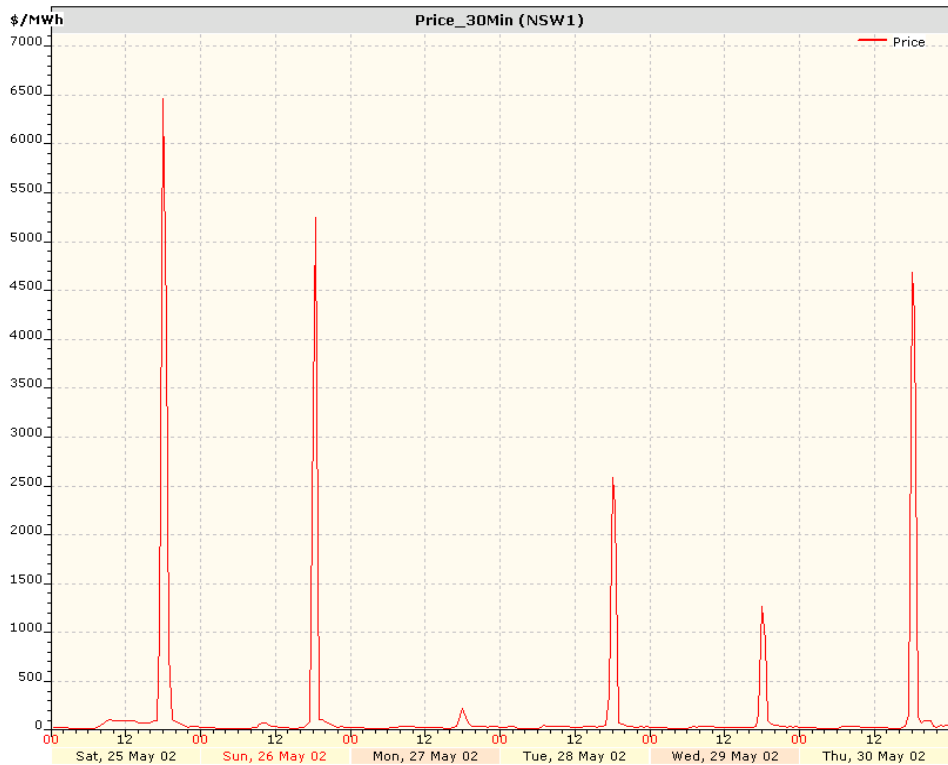


Figure 4 Price Volatility May-August 2002



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It is interesting to note the frequency and timing of the price spikes:

- The consistent occurrence of price spikes during periods of high, but not extraordinary, demand; and
- Weekend (off peak) price spikes which is consistent with more occurrences of high spot market exposure during periods when we would expect generators to be less contracted and able to exercise more market power.

By the end of August the fund was reduced to a slight surplus (approximately \$1 million). The period from September to December saw moderate pool prices resulting in an accumulation of fund surplus to approximately \$35 million by the end of 2002. It is interesting to note that a sustained frequency of price spikes during this period would have seen generators having to make significant payments to the fund.

Modelling the ETEF using Prophet

Prophet models the ETEF using the ETEF Module. The ETEF Module models the dynamics observed in the market by adjusting the generator financial relationship with the fund, based on the balance of the fund (i.e. fund in surplus, zero, or deficit).

Figure 5 below shows the results of a Prophet run using the ETEF module where the fund balance has been captured and plotted against the monthly average price. From Figure 5 we see the same characteristics as those described above for 2002.

- Low prices resulting in accumulation of funds;
- When the fund is in surplus the generator contract levels are reduced, allowing the generators to exercise more market power, and resulting in higher pool prices and diminishing fund balance;
- Sustained higher prices result in a fund deficit (i.e. generators paying to fund).

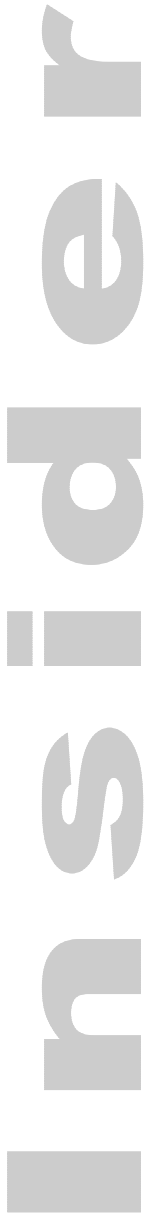
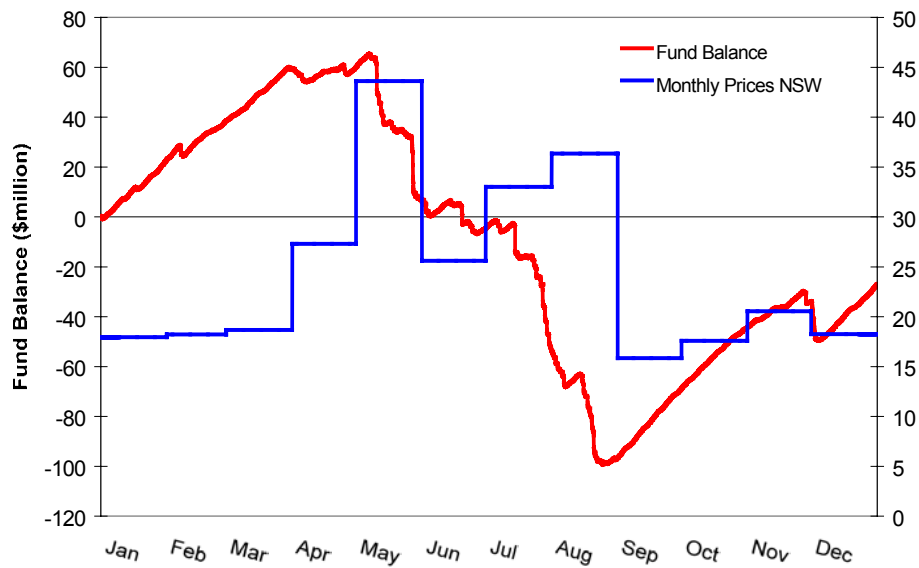
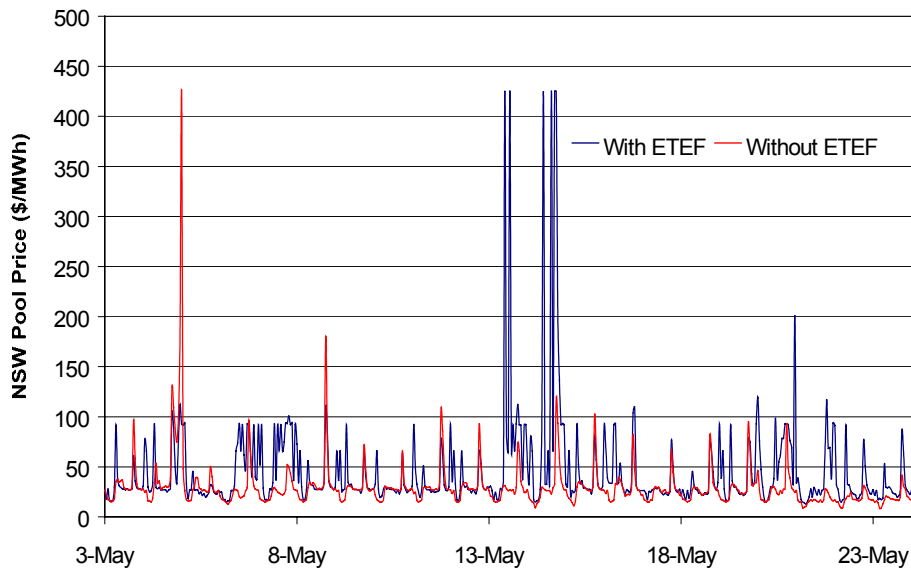


Figure 5 Prophet Modelling of ETEF – Example

Prices become substantially more 'spiky' when the ETEF module is employed in the modeling as seen Figure 6. Prices without ETEF are presented in red and prices with ETEF in blue.

Figure 6 Increased Price Volatility Using ETEF Module

Of particular note is the impact of the ETEF arrangement under future market scenarios that include new transmission, new generation and increasing load. This review has demonstrated the importance of incorporating such arrangements in considering future market dynamics.

For more information about the ETEF module please contact our Melbourne office on (03) 9614 6200.

SA Gas Supply Interruption 25 January 2003

Description of Gas Supply Interruption Event

A number of events occurred on 25 January 2003 that resulted in NECA launching an investigation into the rebidding behaviour seen in South Australia on that day. Events that lead to the investigation were:

- Accidental damage at the Moomba gas plant occurred during routine maintenance and resulted in severely reduced gas supplies to SA for the majority of the weekend;
- Temperatures in the 40's that resulted in SA experiencing record weekend demand;
- VIC-SA interconnection capacity was reduced for some time;
- Withdrawal of capacity bid below \$200/MWh and reoffered above \$9000/MWh

This short review uses reports generated from NEO to understand how the market reacted to the event.

Figures 7 and 8 below show SA price and demand, and VIC-SA flow and flow limits respectively. From these figures we see that prices peaked at \$303.13/MWh on 3:30pm. At this time VIC-SA interconnection was constrained and the interconnector was working at reduced capacity.

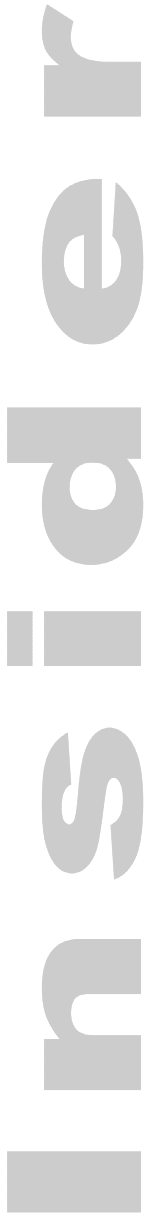


Figure 7 SA pool price (blue) and demand (red) – 25 Jan 2003

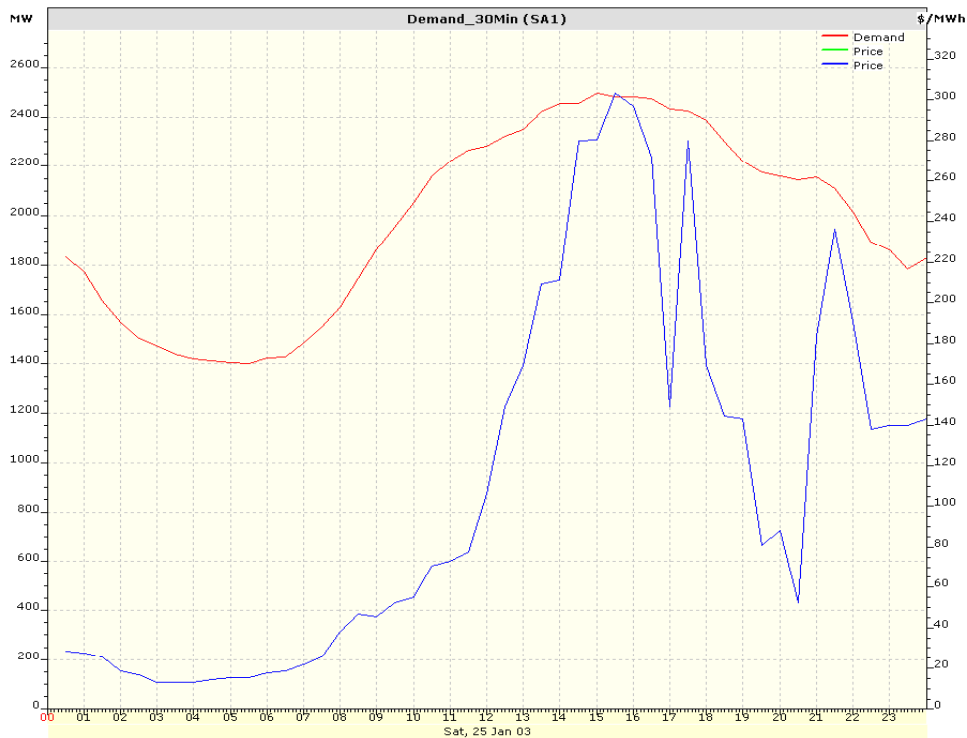


Figure 8 VIC-SA flow and flow limits – 25 Jan 2003

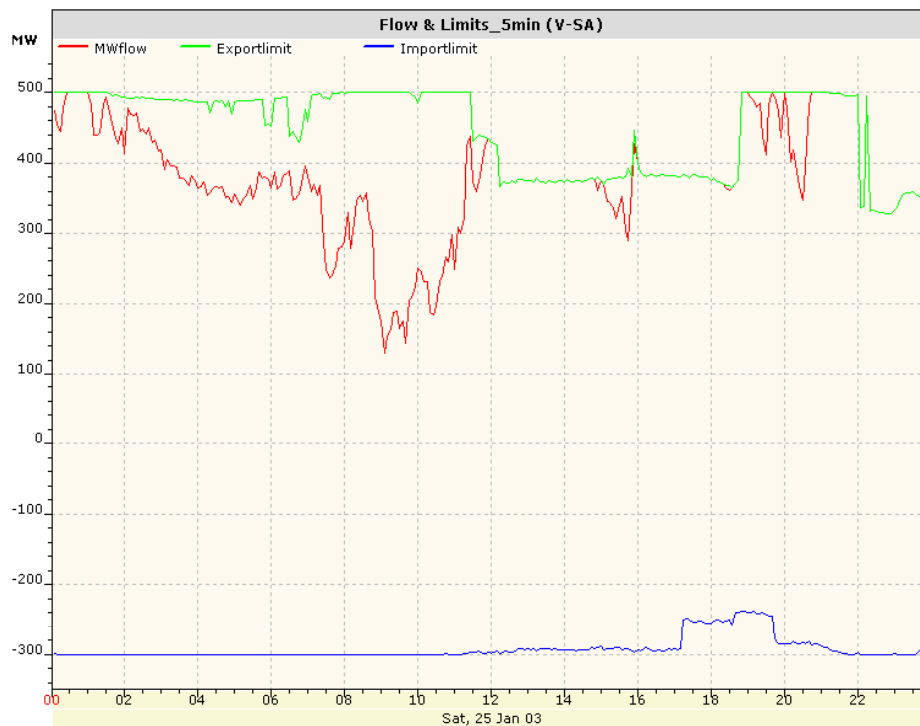
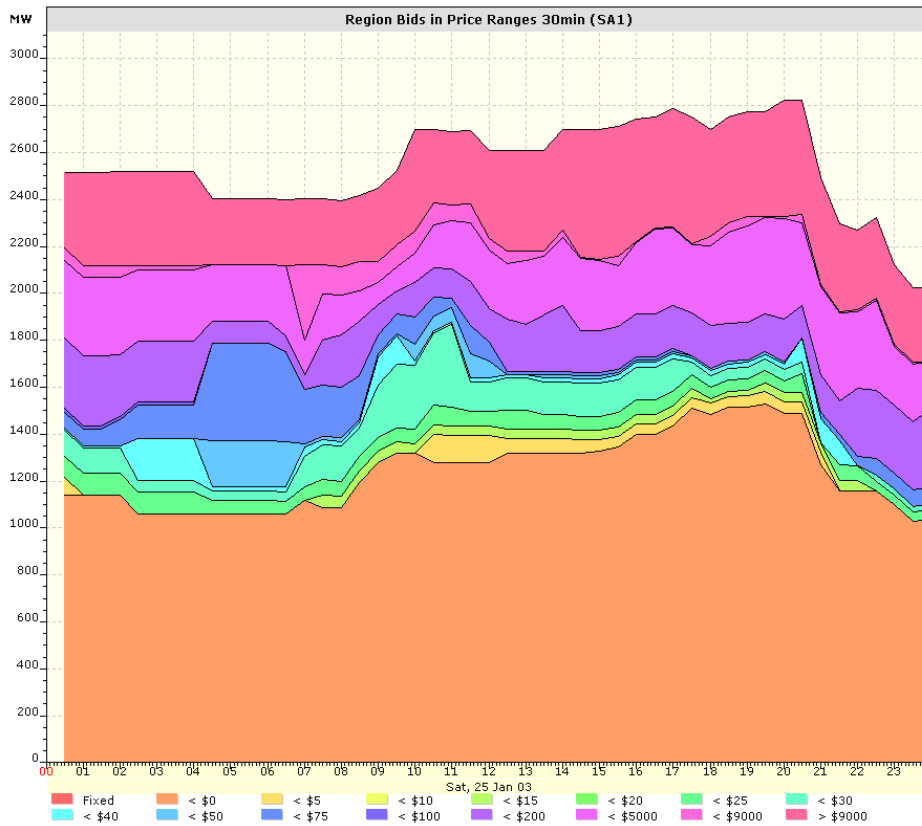


Figure 9 shows the SA merit order bid stack observed on 25 Jan 2003. From this we can see that the >\$9000/MWh bid band increases at approximately 2:00pm. This, and the increase in demand, resulted in the \$300/MWh price spike observed.

Figure 9 SA Merit Order Bid Stack – 25 Jan 2003



Figures 10, 11, 12 and 13 show the rebidding behaviour of NRG Flinders over the course of the day. From this we observe that there was a movement of capacity from the <\$200/MWh bid bands to the >\$9000/MWh bid band throughout the day. This behaviour is currently under investigation by NECA and the ACCC at the request of the SA Treasurer, Mr Kevin Foley.

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Figure 10 NRG Flinders Bids – 25 Jan 2003 as at 09:00

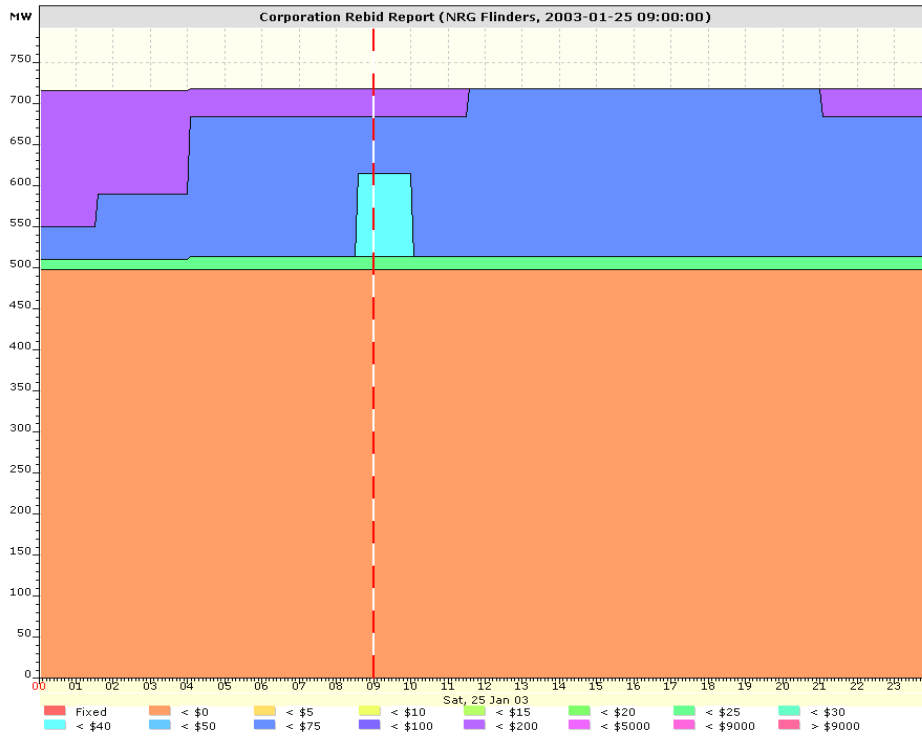
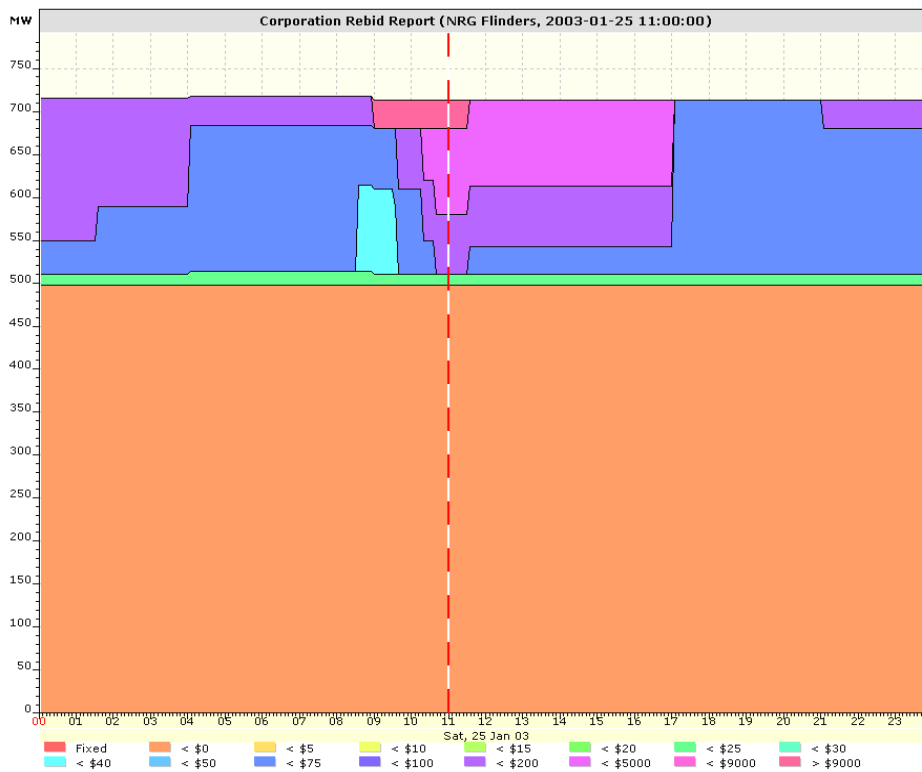


Figure 11 NRG Flinders Bids – 25 Jan 2003 as at 11:00



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Figure 12 NRG Flinders Bids – 25 Jan 2003 as at 12:00

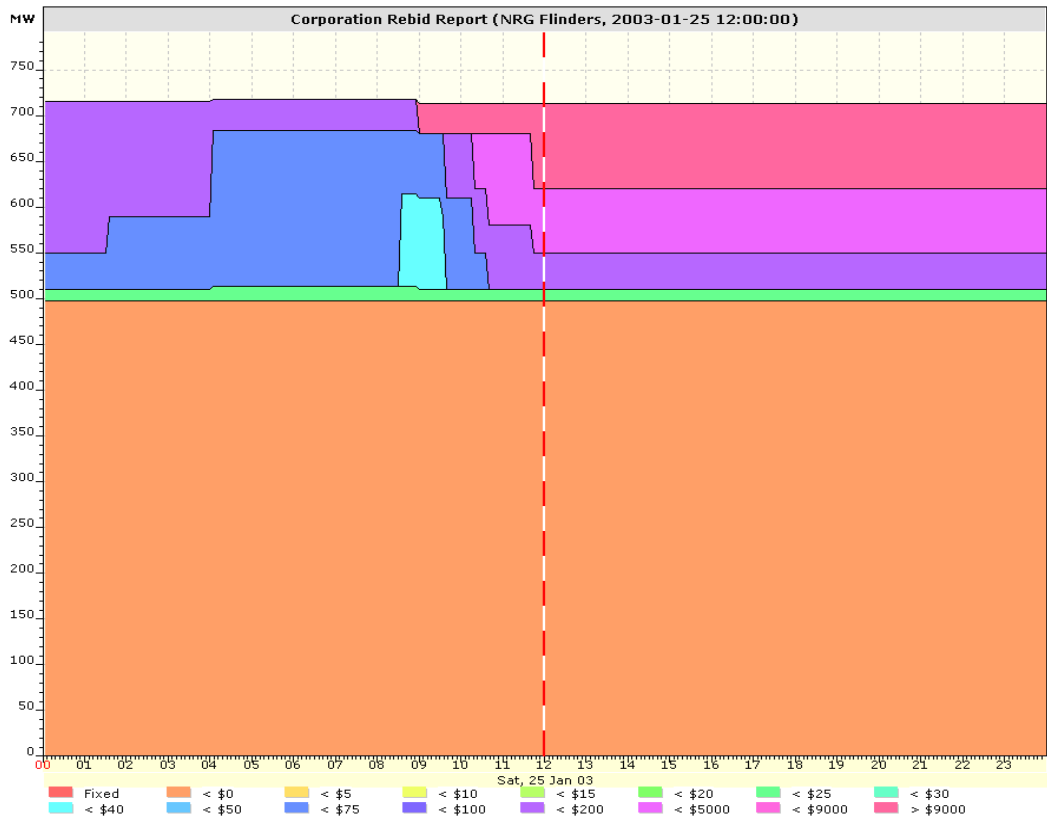
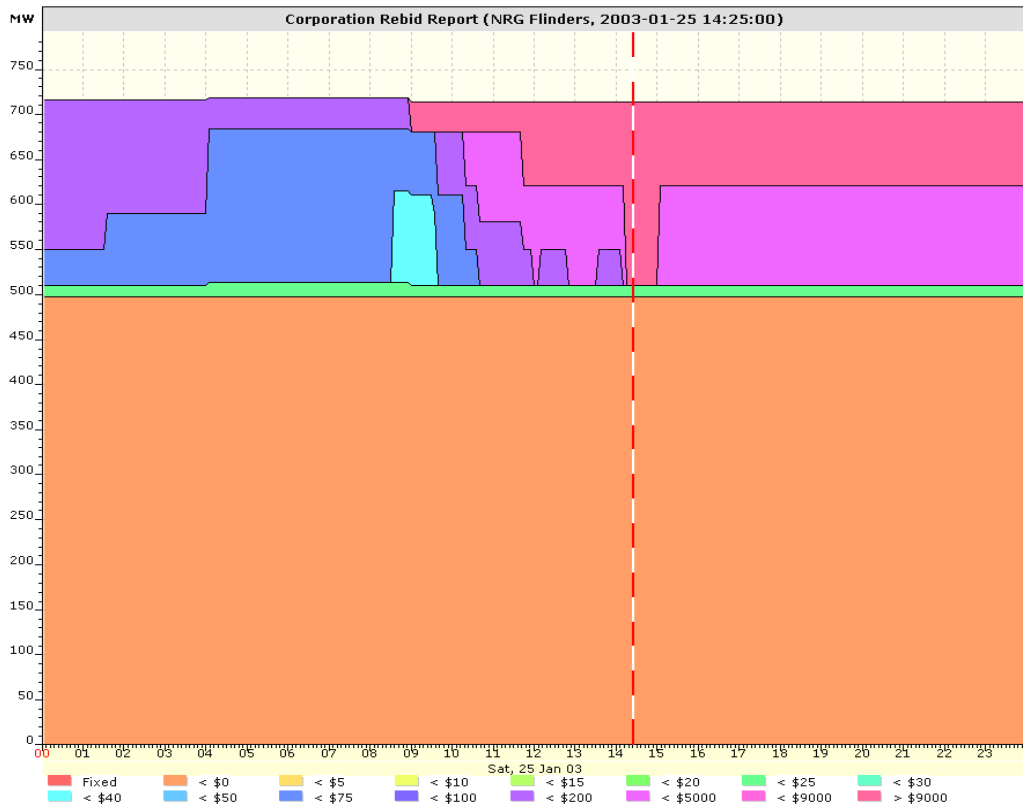


Figure 13 NRG Flinders Bids – 25 Jan 2003 as at 14:25



Flinders