Graphs of Analysis carried out during Assessment of P215

1. Metered Volume Comparison Analysis

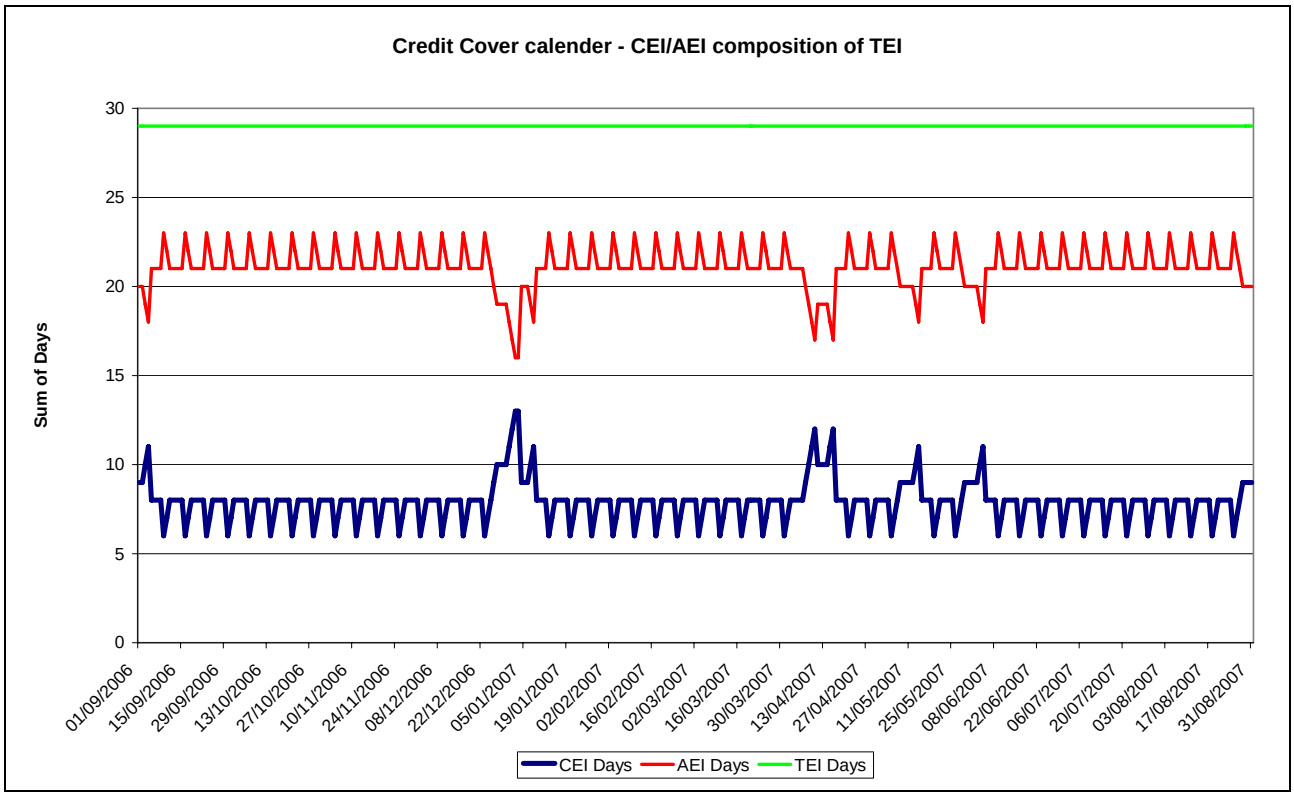

Figure 1(a)

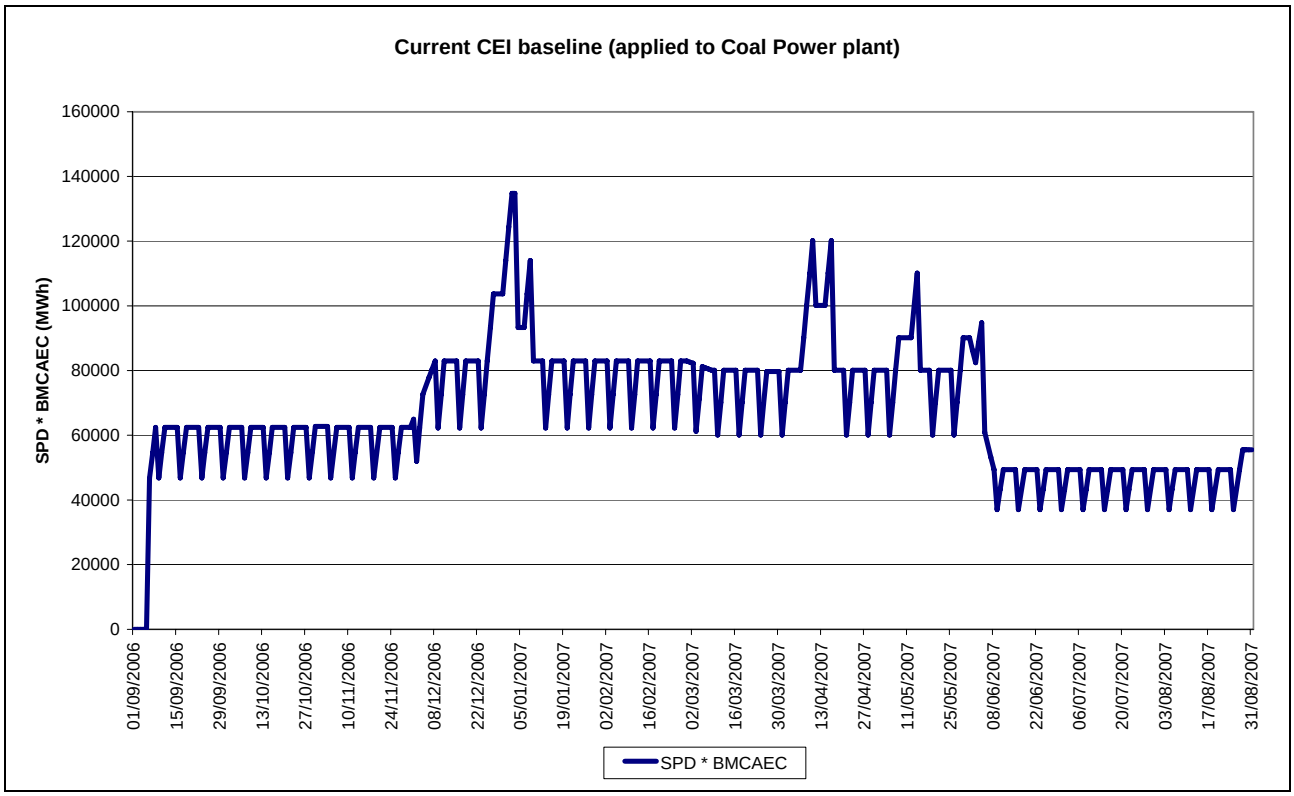

Figure 1(b)

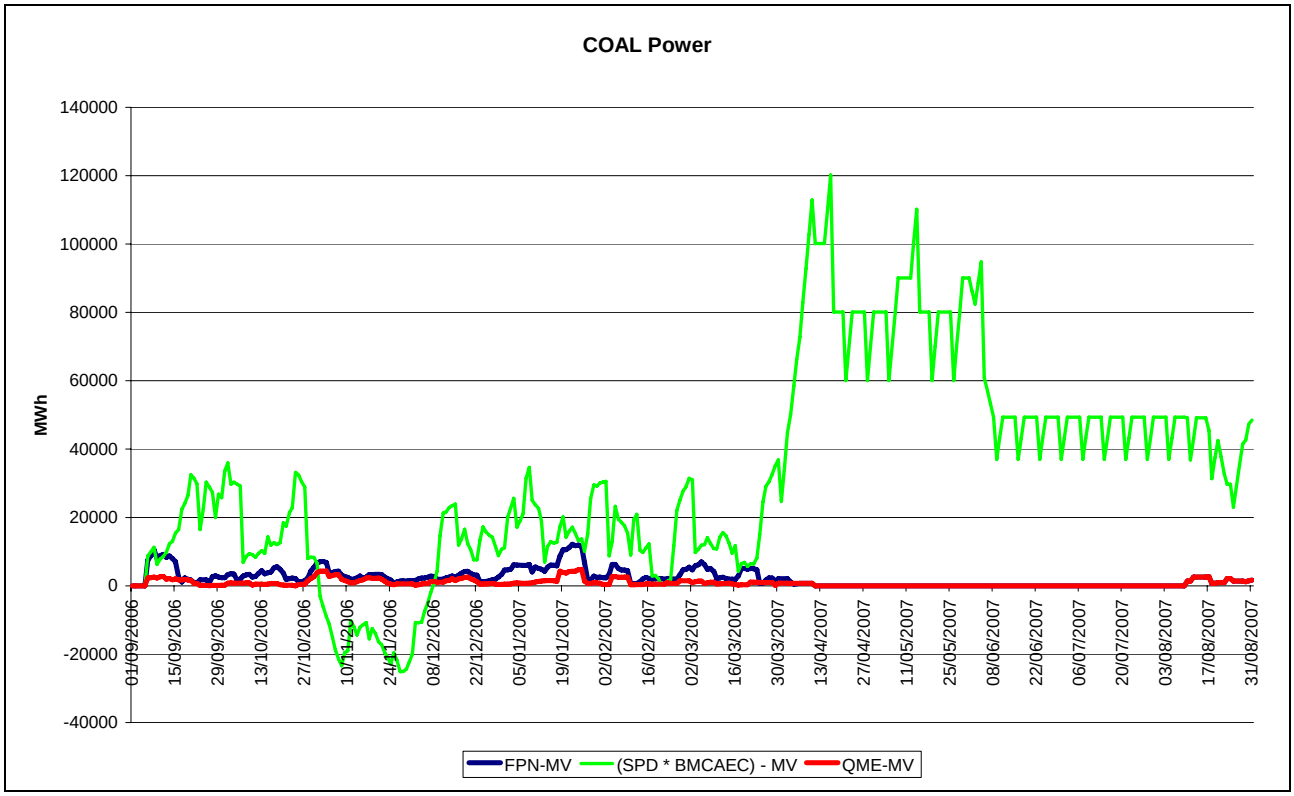

Figure 1(c)

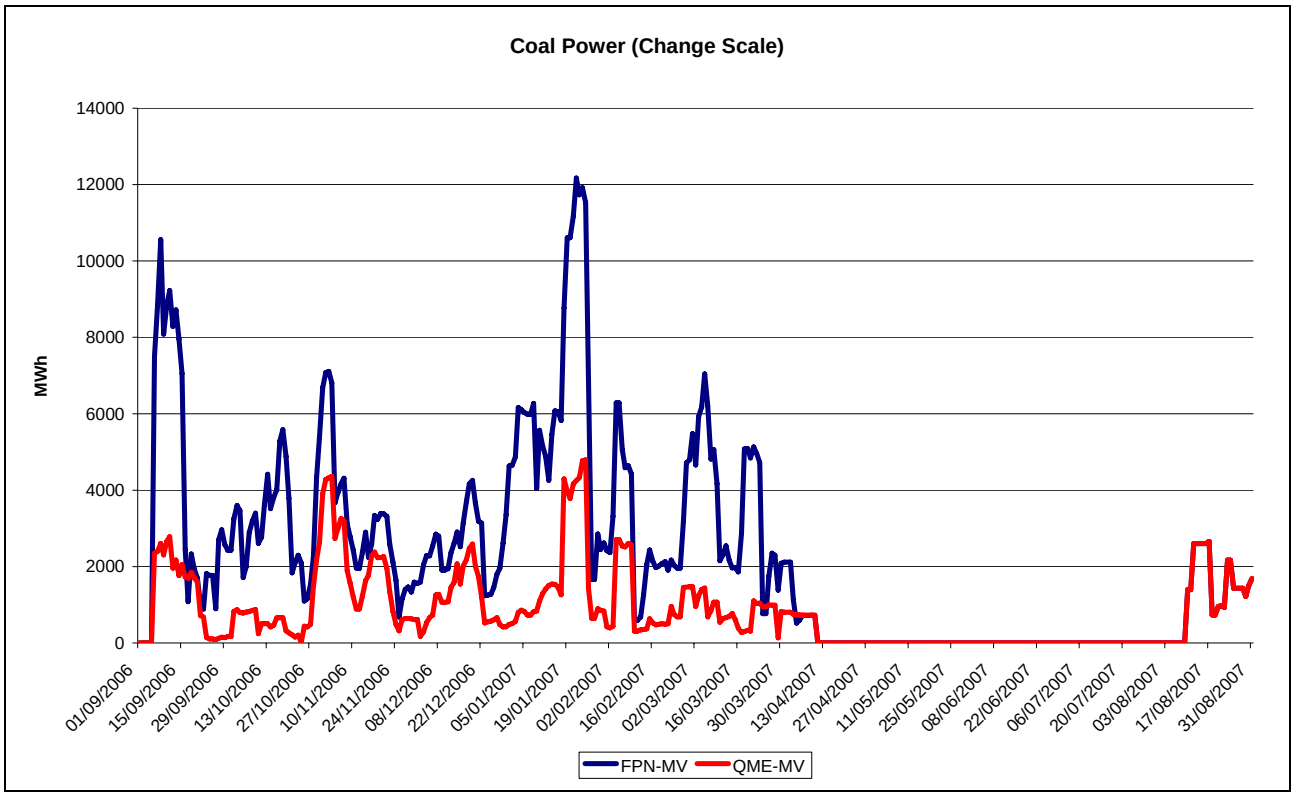

Figure 1(d)

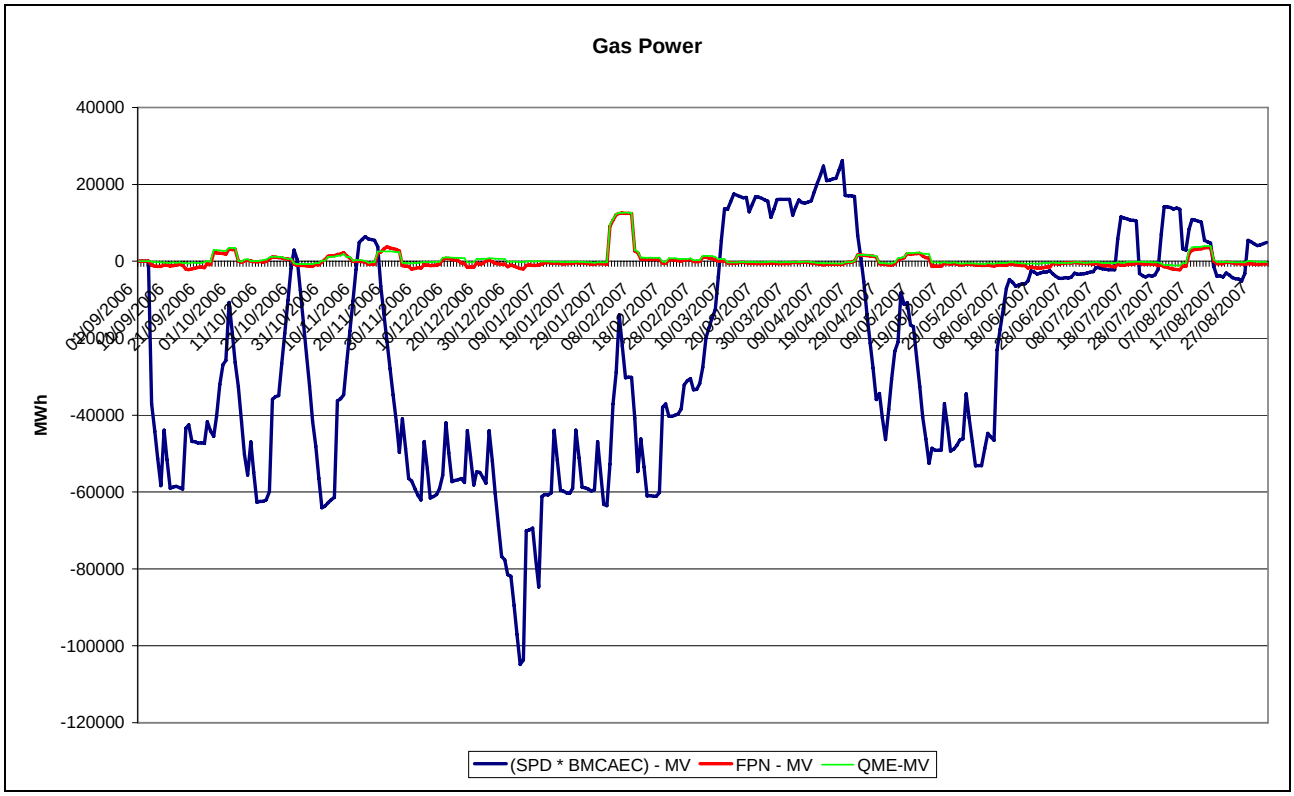

Figure 1(e)

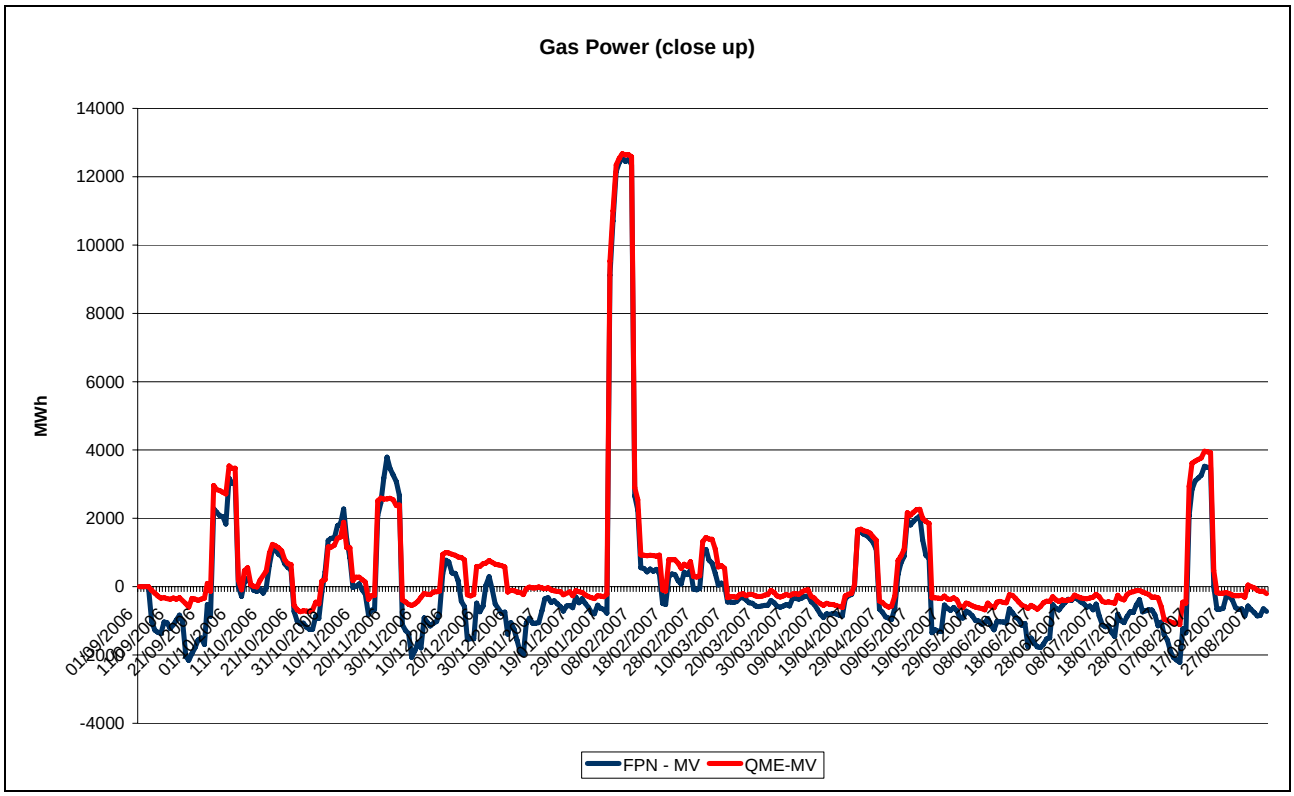

Figure 1(f)

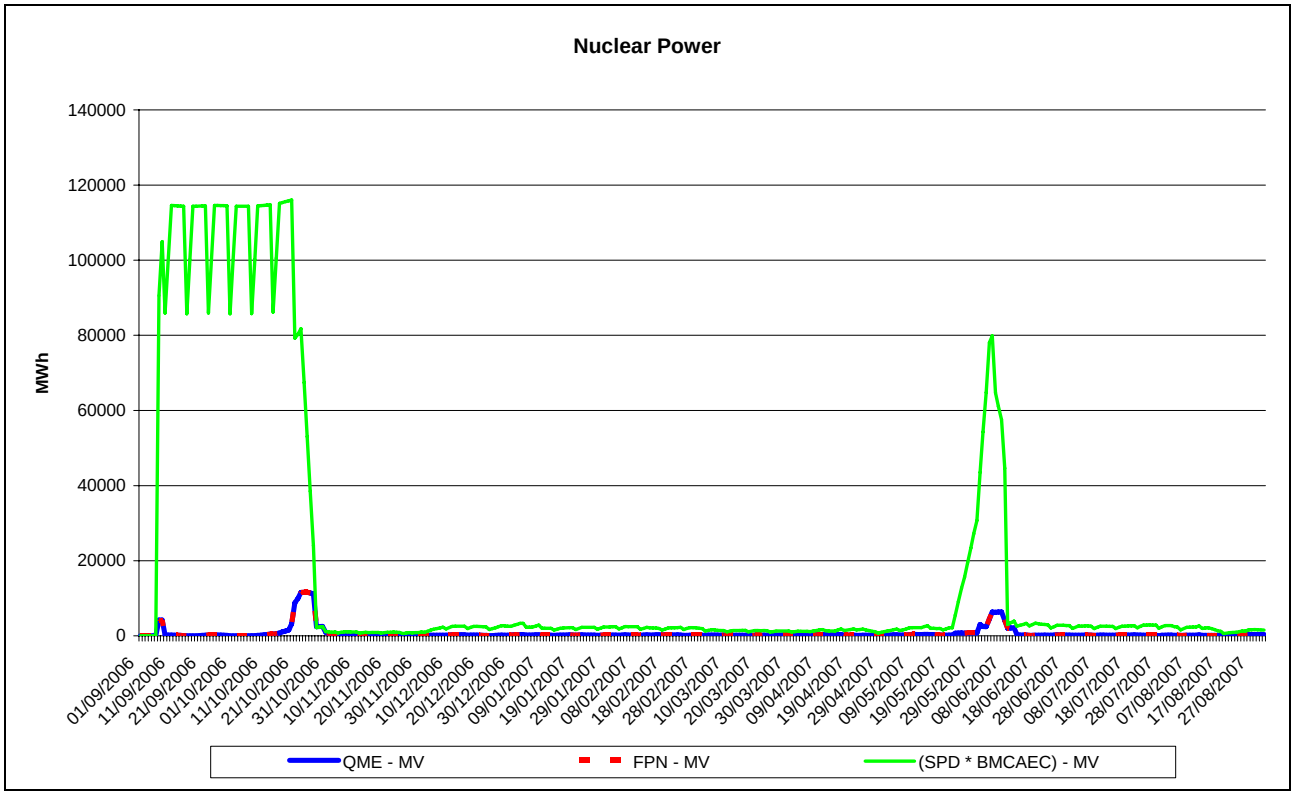

Figure 1(g)

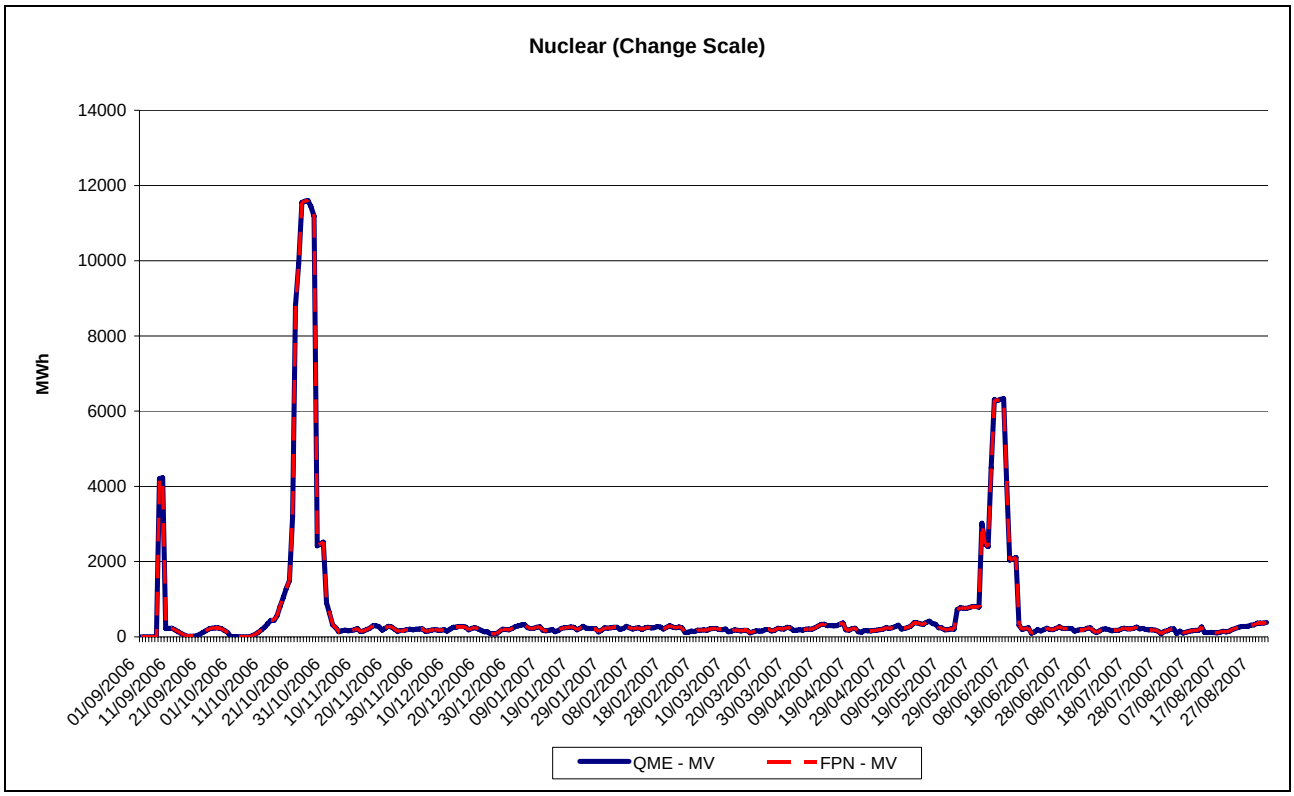

Figure 1(h)

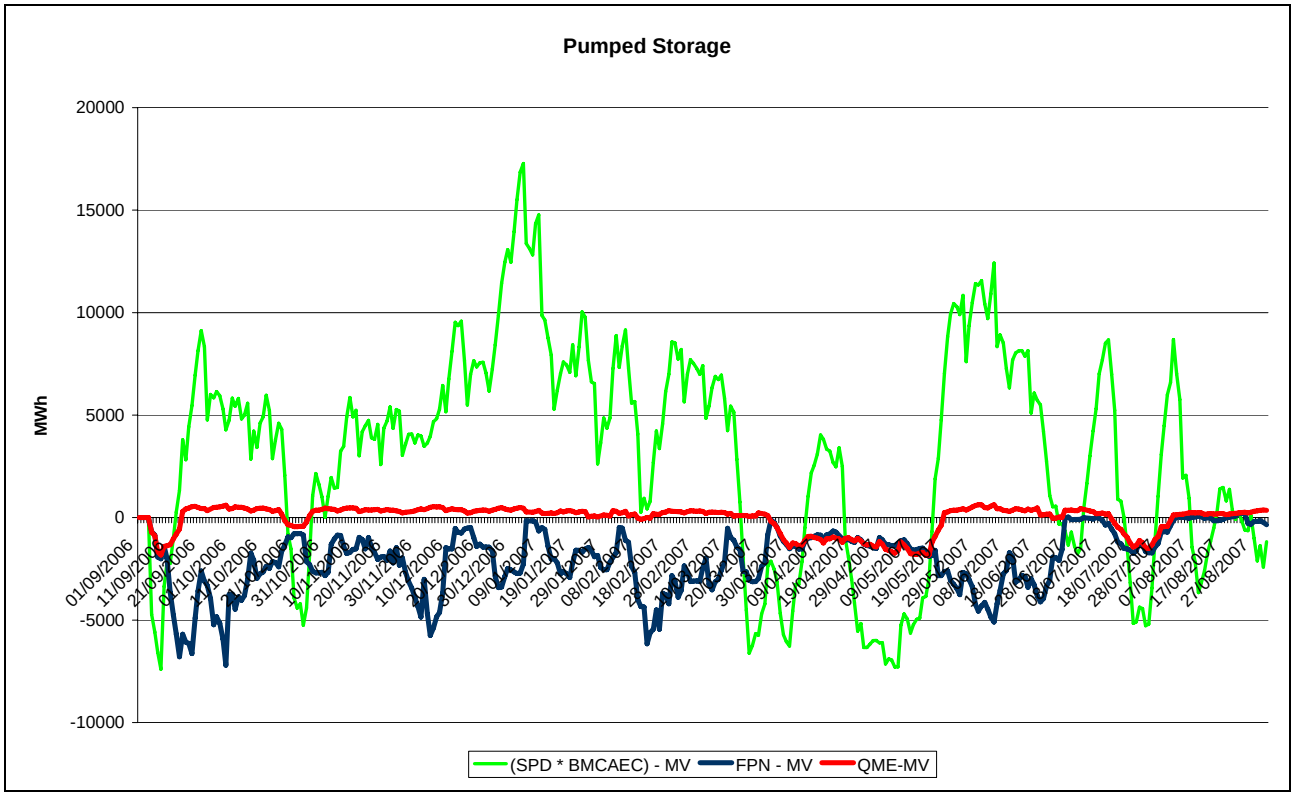

Figure 1(i)

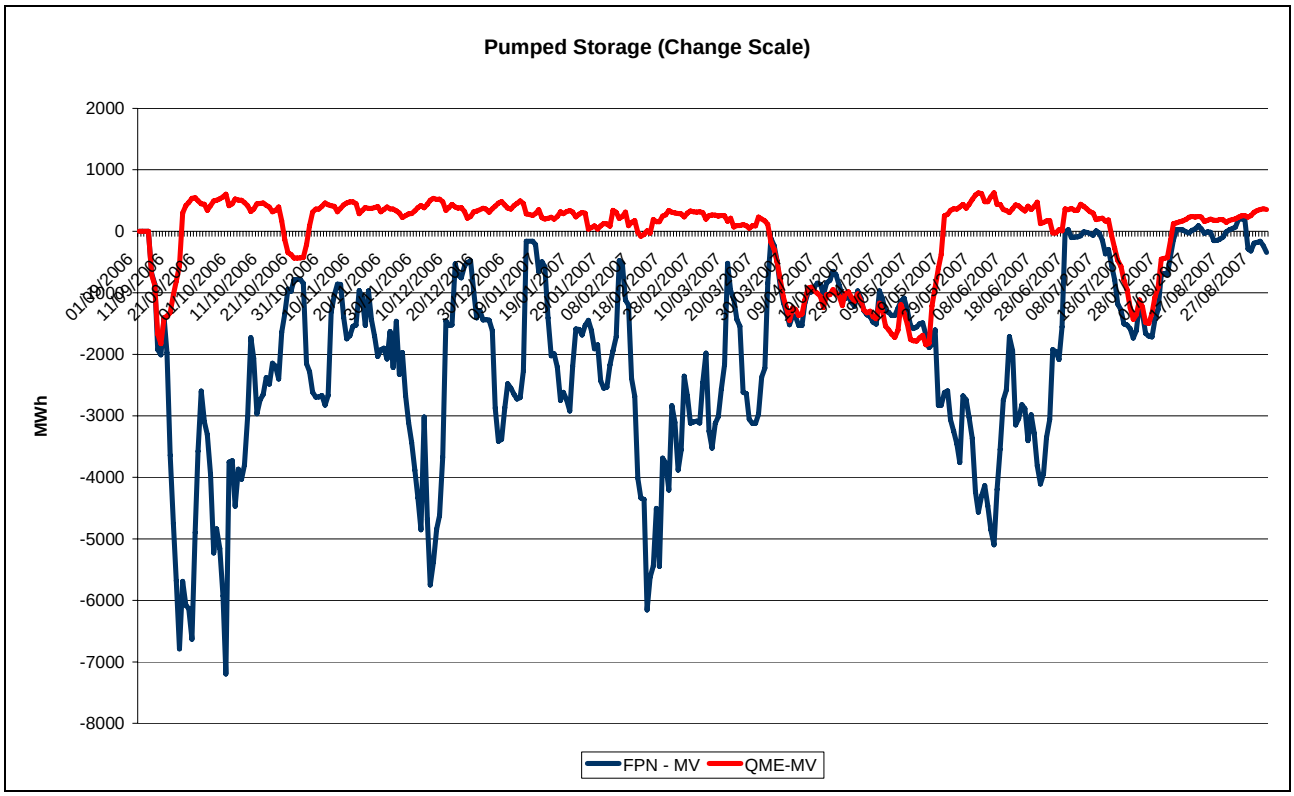

Figure 1(j)

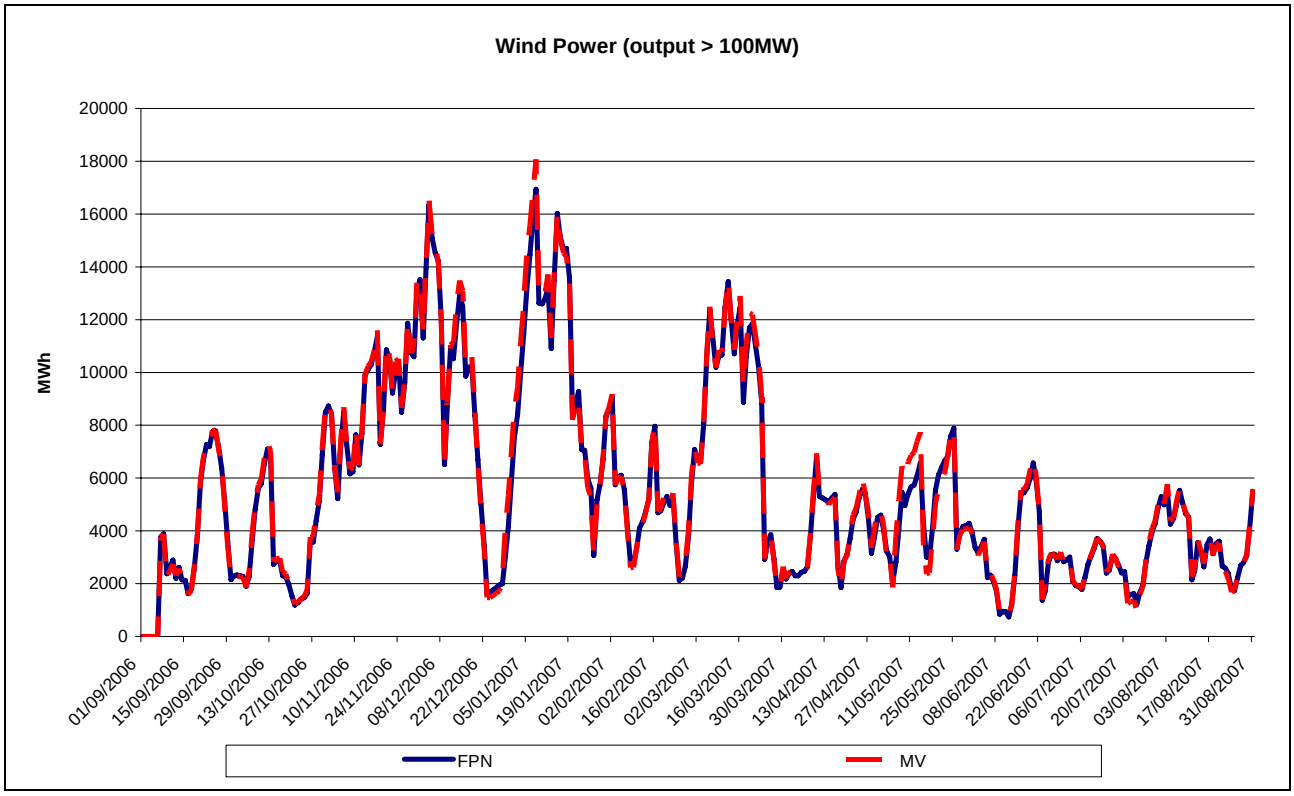

Figure 1(k)

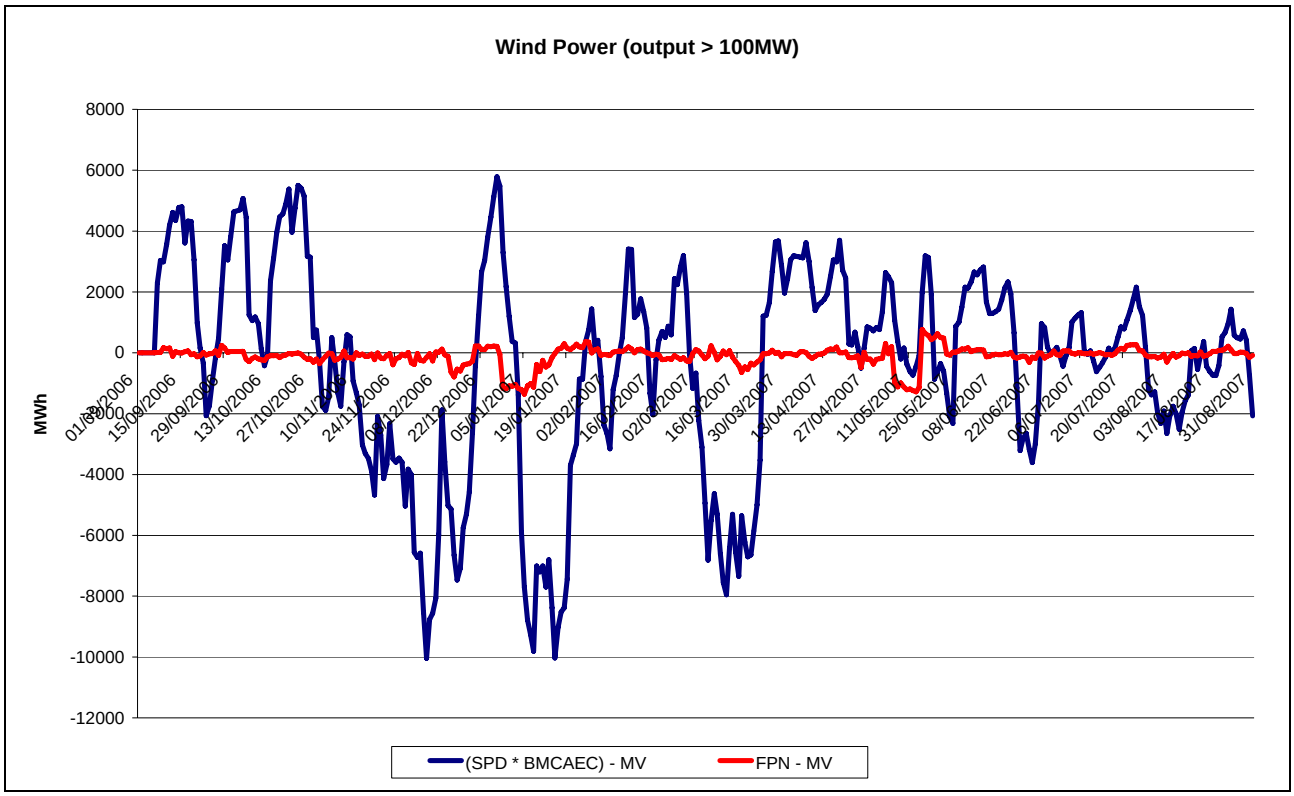

Figure 1(l)

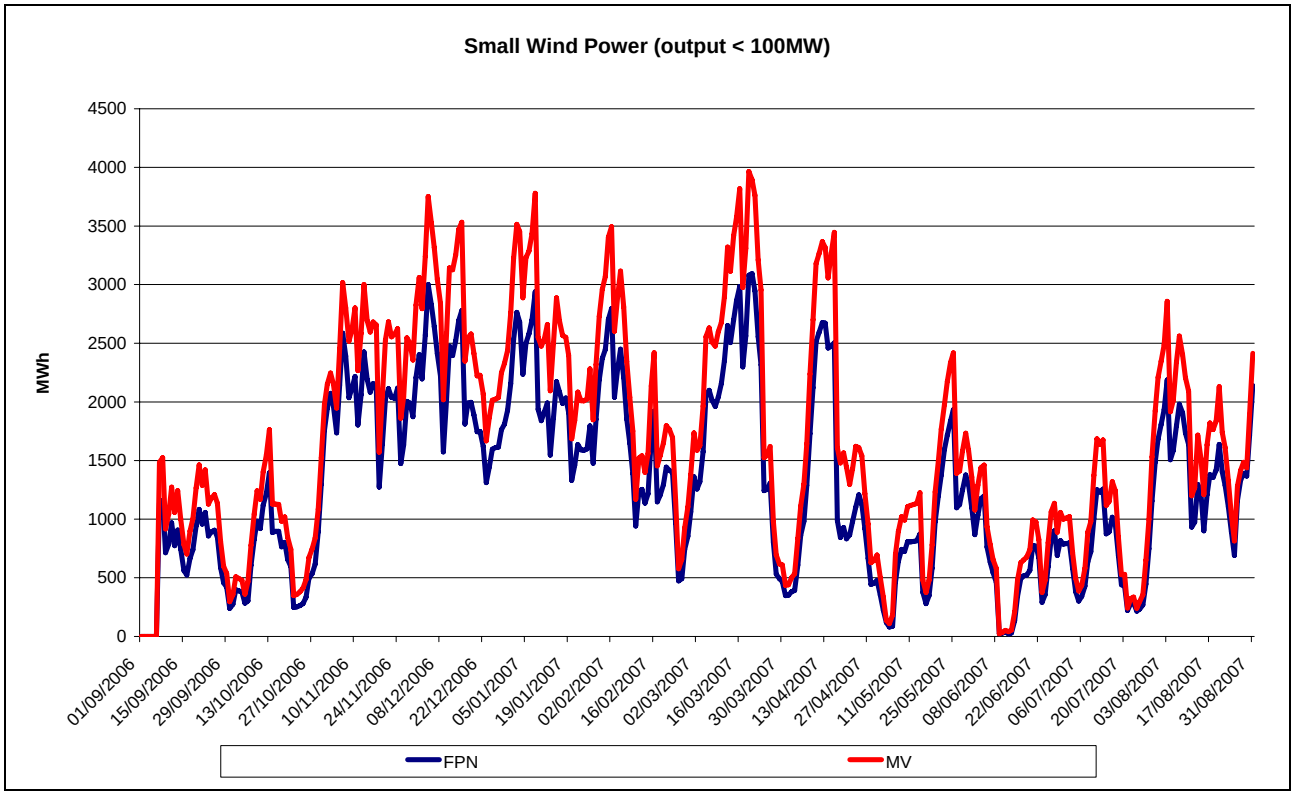

Figure 1(m)

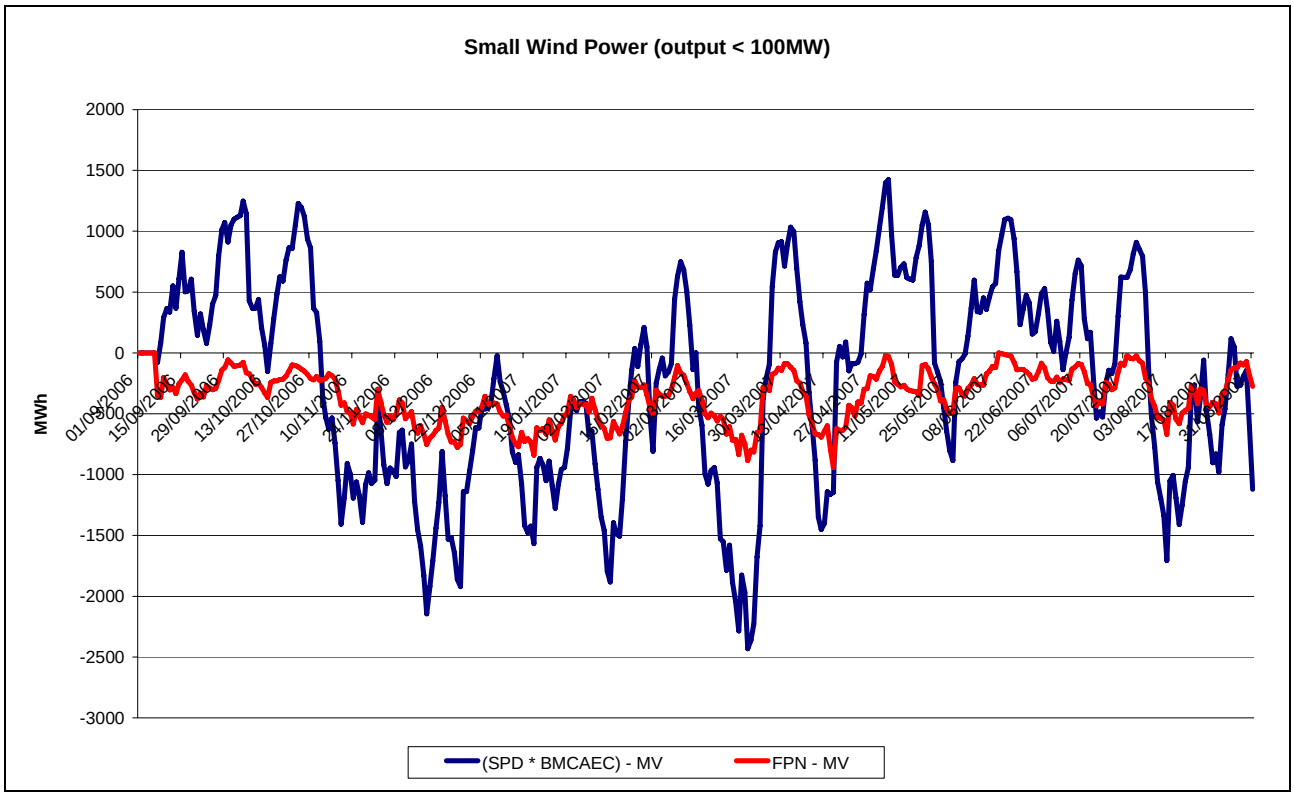

Figure 1(n)

2. Bid Offer Analysis

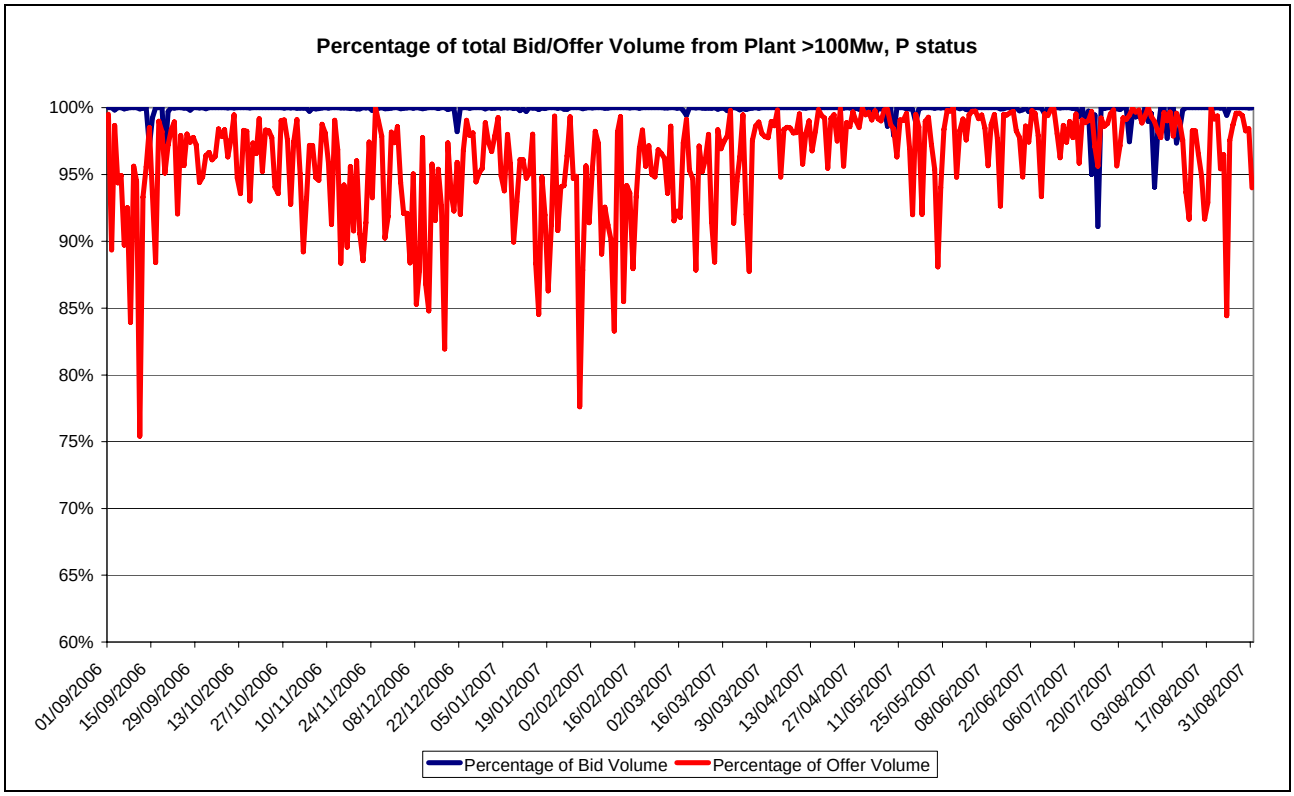

Figure 2(a)

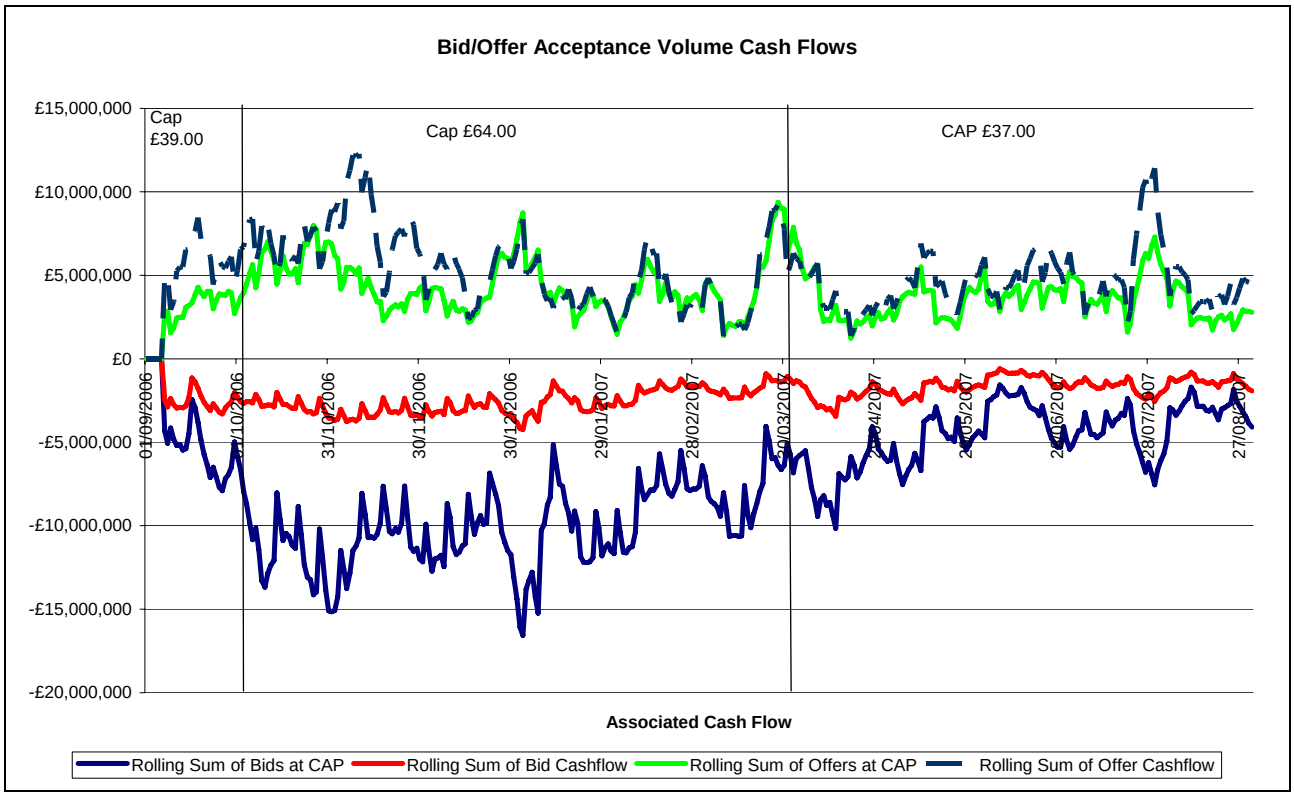

Figure 2(b)

The two Graphs above show that:

- 99.8% of Bid volume is for Plant over 100MW.
- 96.1% of Offer Volume is for Plant over 100MW.

The BOA chart shows that in the Credit Calculation the sum of Bid/Offer cash flow accumulated over the CEI period does not tend to be accurately reflected by the Bid/Offer volume multiplied by CAP.

P215 concerns Bids, rather than Offers, as this is the BOA activity which causes a generating Party to owe money. Parties effectively pay the bid price to reduce their generation (i.e. to save on fuel, etc).

The graph above shows that:

- Across the industry, if Bid Acceptances are not taken into account, then there would be an exposure ranging from £2m-£4m.

Using BID volume data and applying cap does not accurately reflect Party Indebtedness.

3. Plant Trip Analysis

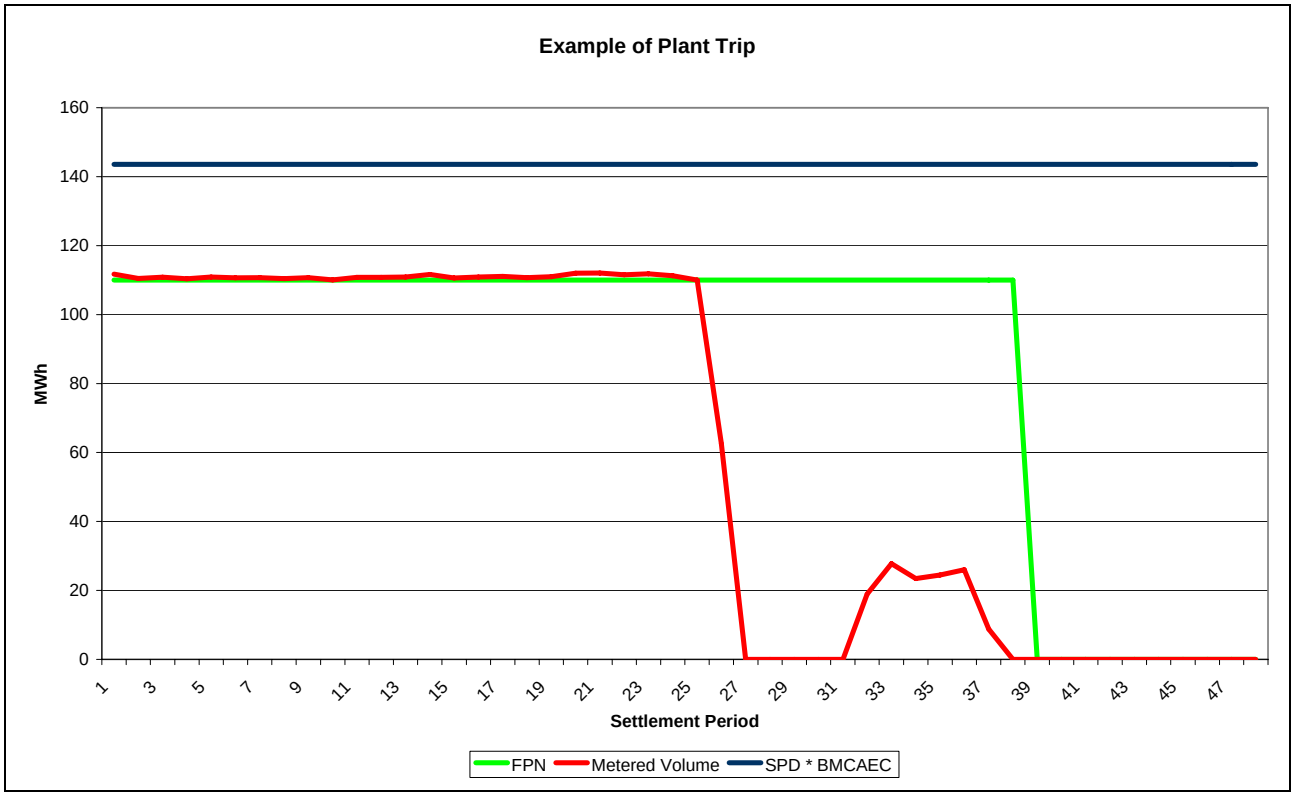

Figure 3(a)

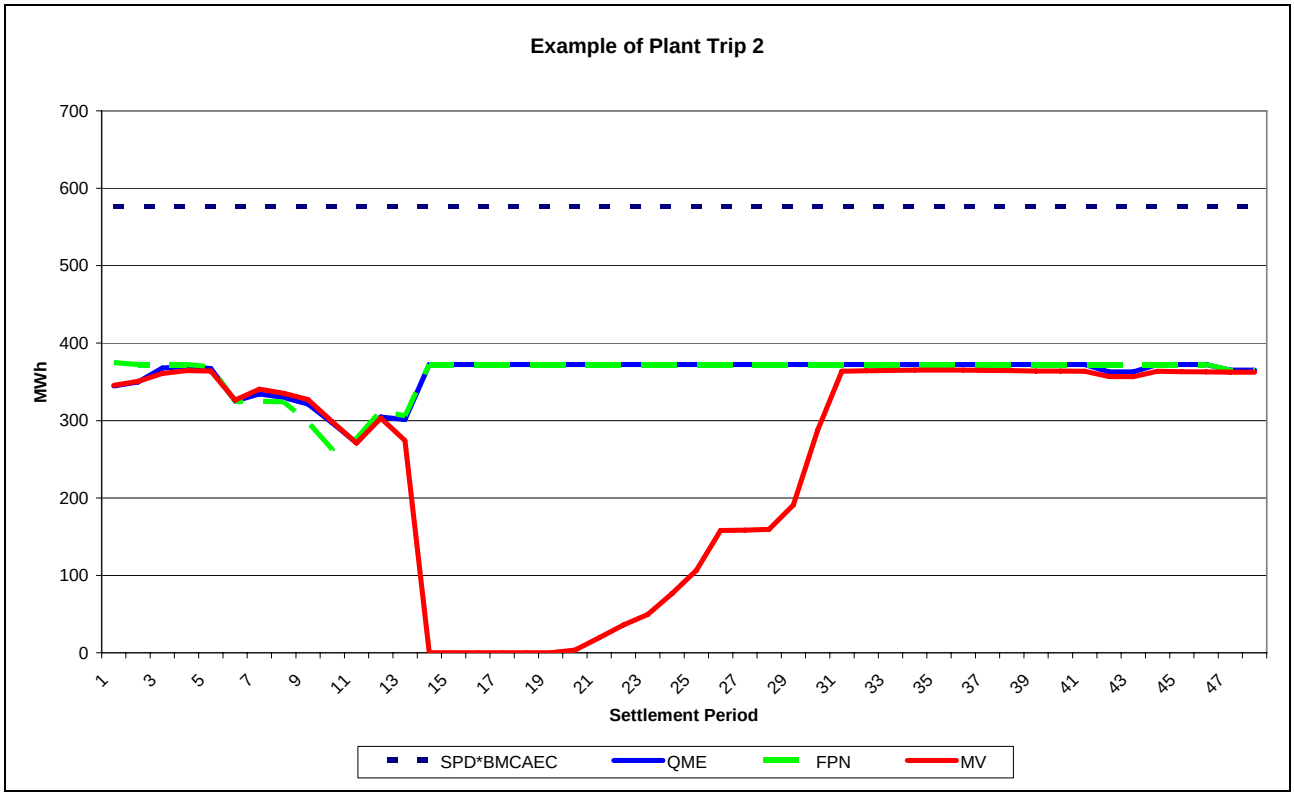

Figure 3(b)

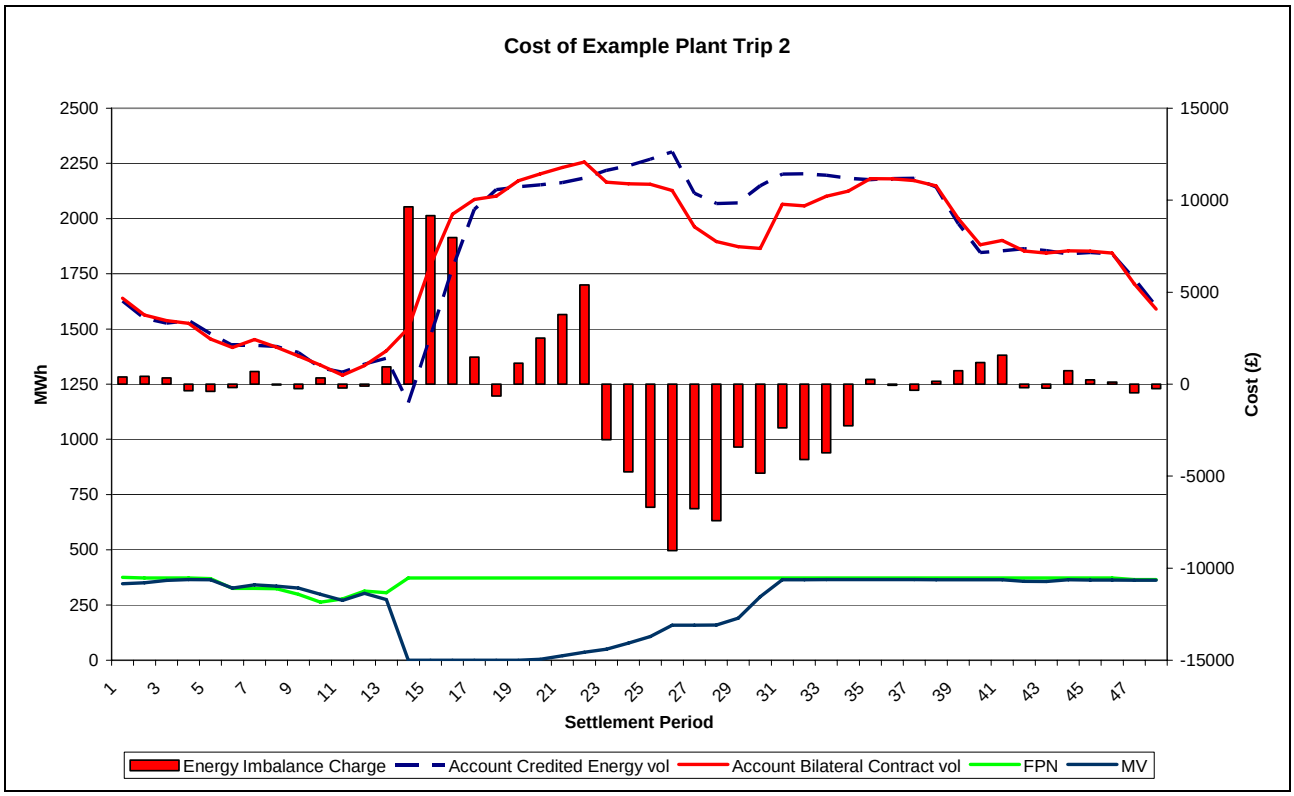

Figure 3(c)

In example 2 the plant has tripped and not re-declared their FPN. Both the FPN methodology and the current baseline would not reflect the trip in terms of estimated Metered Volumes. The Party would have an Energy Imbalance as they can not change their bilateral contracts post Gate Closure.

They would have a large imbalance for at least 2 Settlement Periods and then would have the opportunity to adjust the contract position. They are significantly exposed to the Energy Imbalance Prices. The Energy Imbalance cashflow would then be displayed in the credit calculation when the settlement day is reflected in the AEI once II data is available (after 5 WD).

The Cost of Plant trip diagram displays the trip as described above occurring where the MV drops down to zero. The Party reacts by changing it's Bilateral contracts, as these are submitted at Gate Closure (1 hour ahead of the effective Settlement Period) there is a delay in the reaction and Energy Imbalance charges are incurred.

From Settlement Period 23 the Party has taken a risk averse strategy and started to 'spill' energy to the system whilst the BM Unit comes back to full load. The Party has taken this position as there would be a risk that it could trip again and incur further Energy Imbalance charges. From Settlement Period 35 the Metered Volumes have returned to the FPN and match the planned running profile. Energy Imbalance charges reduce as they are able to balance their position again.

NB - the charges are at account level (they cover the Party portfolio rather than just the individual BMU).

4. Energy Estimation Modelling

Modelling the accuracy of energy estimation for the proposed new methodology is possible for BM Units over 100MW Generation Capacity (GC) as they submit FPN on a mandatory basis. Due to the lack of FPN data for BM Units under 100MW GC the analysis has not been carried out on these BM Units.

The accuracy of both the current and the proposed methodology in predicting the BM Unit Metered Volumes (QM_{ij}) of Generation BM Units with GC above 100MW has been analysed.

For each Generation BM Unit, for each Settlement Period, on each Settlement Date during the review period (1 September 2006 to 31 August 2007), the difference between FPN_{ij} and QM_{ij}, and between SPD * $BMCAEC_i$ (currently based upon CALF and GC) and QM_{ij} was calculated. This data was then aggregated to provide a daily indication of the discrepancy between estimation and outcome for both methods of predicting QM_{ij}

This analysis has been conducted in both MWh and financial terms, with MWh figures converted to £s using the Credit Assessment Price (CAP) prevalent on the respective Settlement Days.

The CEI time period for the indebtedness calculation most typically comprises 8 days of the 29 day window over which Energy Indebtedness is assessed. The analysis was therefore focused upon rolling eight day averages.

In the graph below, the values can be related to the Energy Indebtedness calculation where a negative value would reduce a Party's Energy Indebtedness (the Party is long) and a positive value would increase a Party's Energy Indebtedness (the Party is short).

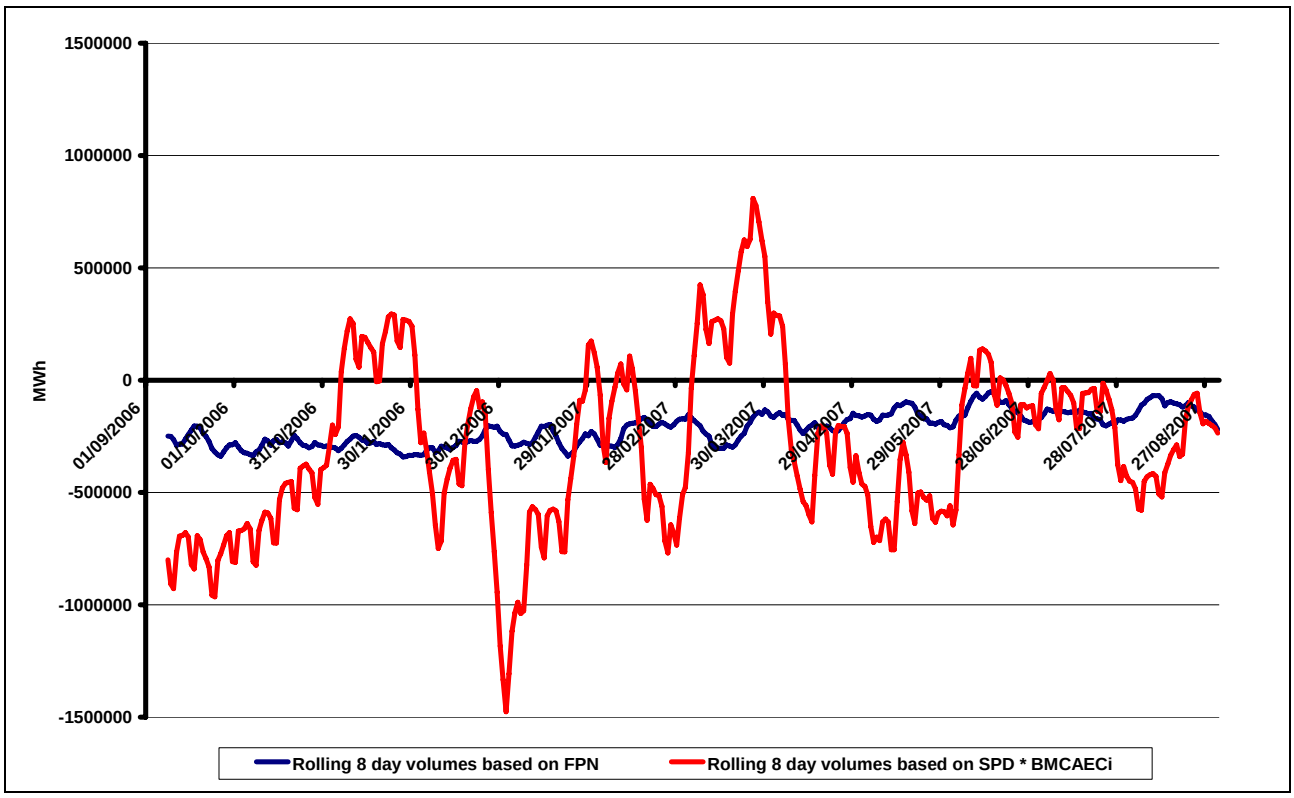

Figure 4(a)

On average the estimation using FPN displays a position that is more accurate than using the current methodology. This is still an overestimate of the Metered Volumes.

The range between the extremes (Max-Min) calculated using the FPN methodology dramatically reduces compared to the current methodology. This suggests a more stable Energy Indebtedness across these BM Units as detailed in the graph below.

The fluctuations are likely to occur from systematic over or under predictions of the CALF methodology over a BSC Season. The stability of the FPN method is expected as FPN is submitted on a Settlement Period basis to reflect the expected volume.

	Rolling 8 day volume based on FPN (MWh)	Rolling 8 day values based on FPN (£)	Rolling 8 day volume based on SPD * BMCAECi (MWh)	Rolling 8 day values based on SPD * BMCAECi (£)
Min	-341,875	-£25,709,005	-1,475,629	-£110,967,276
Max	-50,784	-£2,207,833	808,542	£60,802,345
Avg	-214,854	-£13,543,235	-294,816	-£16,585,980

Figure 4(b)

5. Account Level Indebtedness Modelling Analysis

In the following graphs the difference is the Live values (i.e. calculated using the current method) minus the Model values (calculated using the method of P215 Proposed Modification). A CAP of £37 was assumed in this analysis.

Negative values therefore mean that the Parties modelled Energy Indebtedness is greater than the live Energy Indebtedness and they would need to lodge additional credit, i.e. the current arrangements suggest the CEI is under estimated, if the FPNs are accurate. These results are heavily dependent on the CALF values, and hence the previous years performance in comparison to the current year.

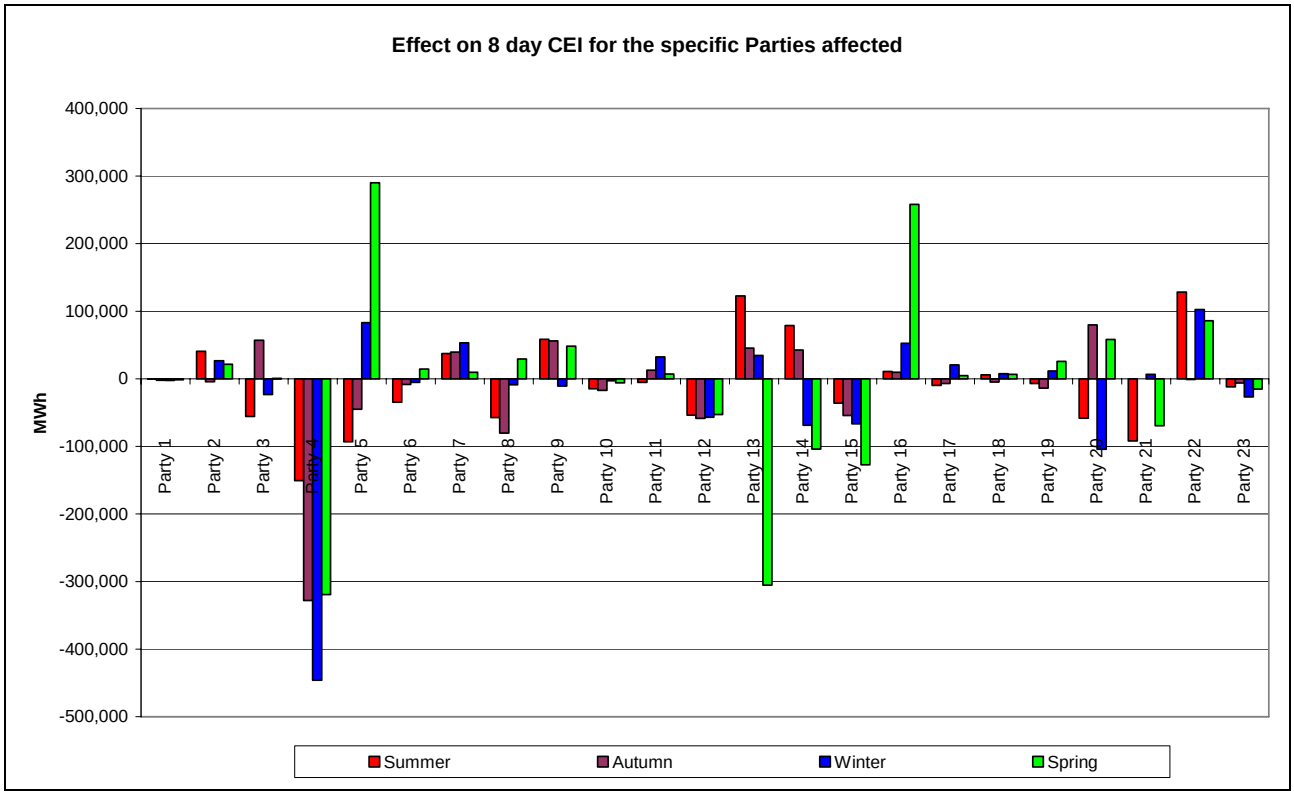

Figure 5(a)

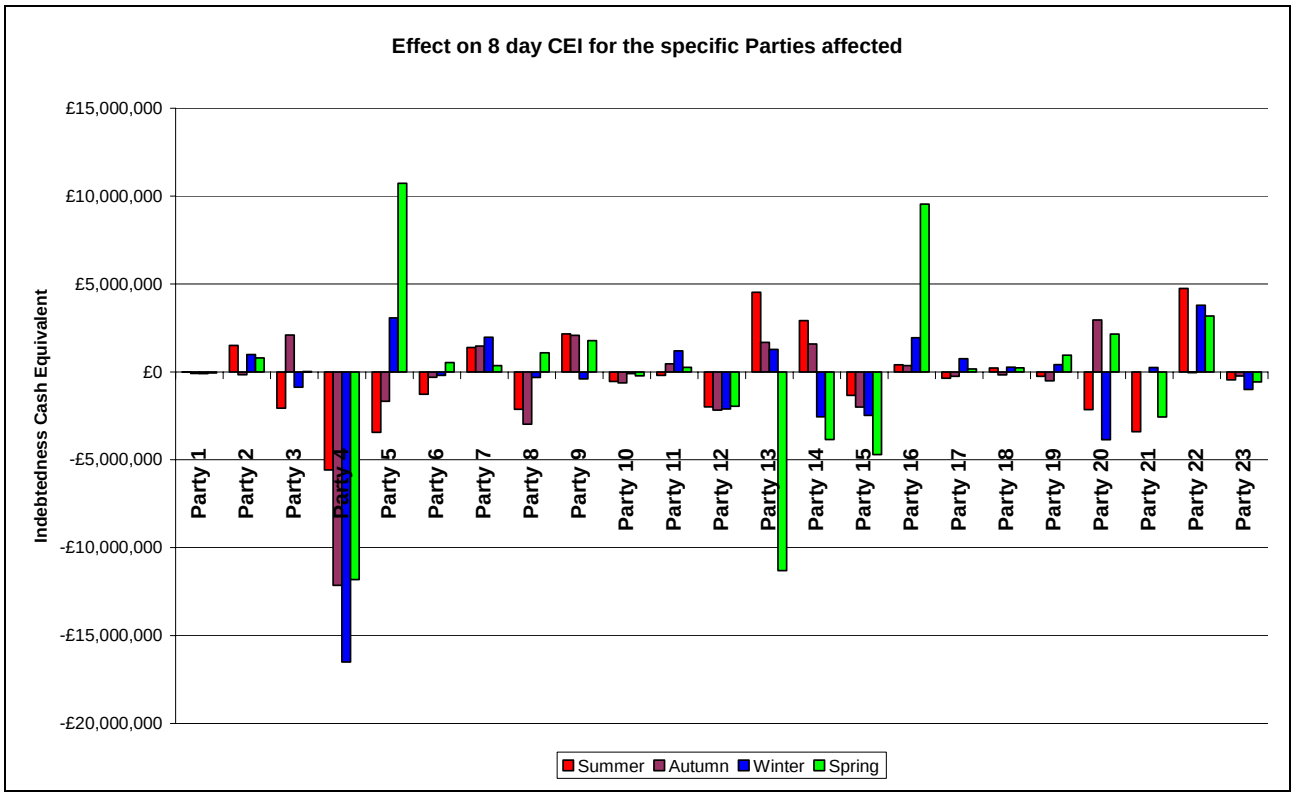

Figure 5(b)

Assuming that the P215 FPN methodology is more accurate than the current methodology, the graph below shows that indebtedness across the market is under estimated.

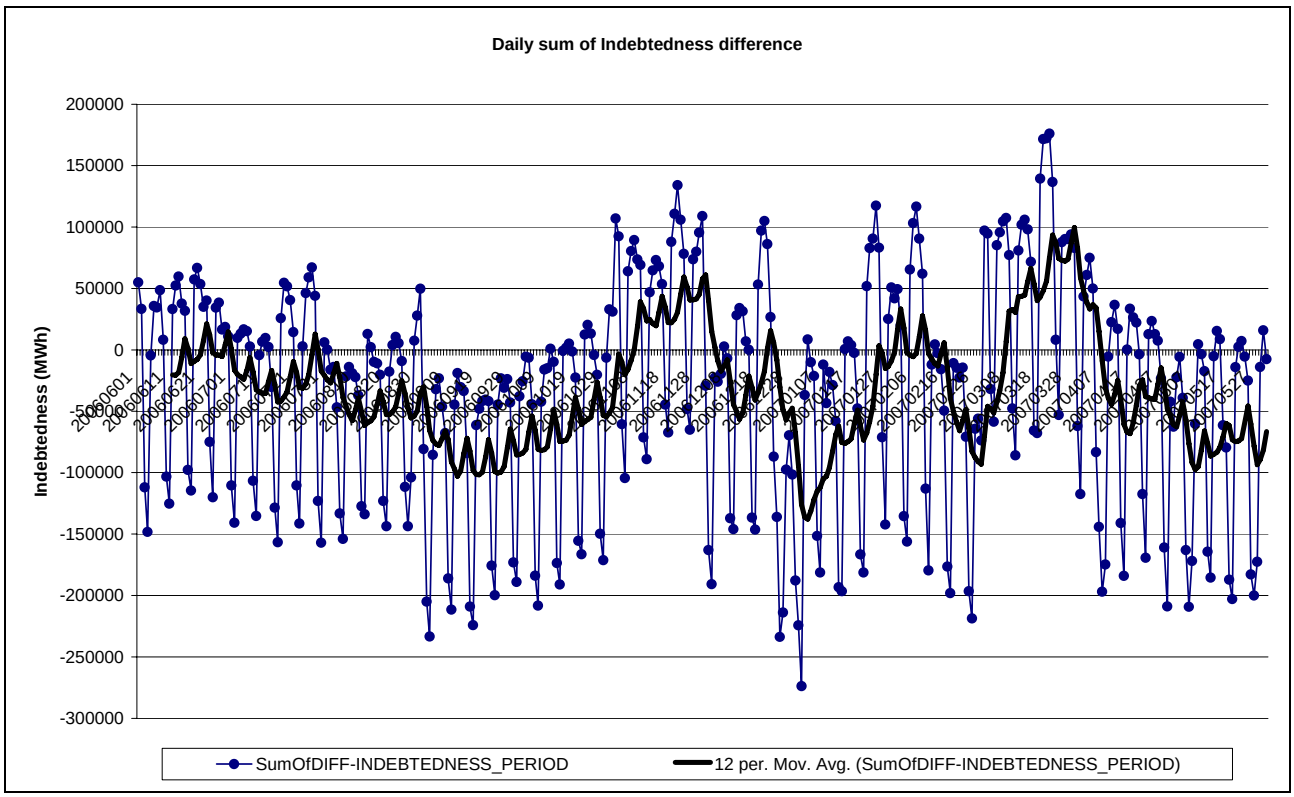

Figure 5(c)