

**NIE Energy Limited  
Power Procurement Business (PPB)**

**CPM Medium Term Review  
Work Package 7  
BNE Calculation Methodology**

**Discussion Paper**

**SEM-10-068**

**Response by NIE Energy (PPB)**

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## **Introduction**

NIE Energy – Power Procurement Business (“PPB”) welcomes the opportunity to respond to the CPM Medium Term Review discussion paper.

### **BNE Calculation Methodology 2006**

It is clear that a true Value of Lost Load is virtually impossible to determine and would most likely vary for every customer. Hence the value of VOLL is effectively an administered price that is reverse engineered based on a level of generation adequacy that is determined to be appropriate. In SEM this has been set at 8 hours per year. Hence by fixing this standard, the value of VOLL can effectively be determined from the cost of a new peaking plant (i.e. the cost of procuring sufficient capacity to maintain this level of generation security of supply). VOLL therefore represents the level of payment needed over 8 hours to cover the annualised cost of a new entrant peaker (since if it was not at this equilibrium point either the peaking plant would not build, resulting in higher loss of load probability, or too much generation capacity would be constructed).

It is not therefore surprising that the value of MCR and the BNE are relatively close and the difference merely reflects timing differences in the setting of VOLL initially compared to the determination of the BNE price for 2007, and the subsequent indexation of VOLL based on HICP which is different to the actual price movement within the determination of the BNE price.

In conclusion, Option 1 and Option 2 should give the same result and it only varies because the value of VOLL is indexed to consumer prices for simplicity instead of the BNE price. Hence the more appropriate place to seek to stabilise the volatility of the CPM is within the general determination of the BNE price.

### **Review of option 2 – Calculate BNEFC on an annual basis but some components cost remain constant for a number of years**

In the absence of detailed analysis, it is difficult to comment on the impact of freezing the value of some components for a period of years or assess the materiality of any boundary step change that could occur at the end of the period. It would have been useful, for example, to have considered what BNE prices would have resulted in 2009 and 2010 had the values of the relevant components from 2008 been retained (the data shown in figure 7.3 isolates individual components but does not show the affect on any potential group), with further analysis of the step change to 2011 when those values were updated.

If the result of such analysis were to show boundary issues then it may be more appropriate to adopt some form of rolling average approach to deliver a more stable profile, smoothing out step changes.

### **Indexing over several years**

We agree that generic inflation indicators are not capable of reflecting the cost trends of power plants. Hence a specific index that is more closely associated with underlying cost trends would be favourable. However, from experience, we also agree that relying on an index produced by a commercial enterprise is not an ideal inflator since such indices can be skewed, creating suspicion and reason to question

the integrity of the data. There is no obvious index that provides a smoothed proxy and hence as we noted earlier, a rolled average (perhaps combined with some form of indexing to aid predictability) may provide the best solution.

### **Review of option 5 – Calculate the BNEFC and keep it in place for a multiple year period**

While this has the benefit of certainty, it does have the major disadvantage of potentially resulting in significant step changes at the end of the period. There is also an issue with foreign exchange rates since the actual capacity payments to Northern Ireland generators in SEM are paid in Sterling, converted from Euros on the basis of the Annual Capacity Exchange Rate. This rate could vary greatly over the period thereby creating significant revenue volatility for generators in Northern Ireland, unless the rate was also frozen (or somehow reflected in the indexation).

### **Review of option 6 – Fixed price for new entrants – the new entrant scenario**

Adopting this proposal would create significant discrimination in the market and place different value on different types of capacity for no just reason and in effect would appear to represent a return to centralised planning. The Spanish model is also problematic as it requires a determination of what represents a “significant investment” for existing generators to qualify and hence would represent a significant regulatory burden.

If the concern is that new entrants will not enter the market where the capacity revenues may be volatile, the solution is to make the payments less volatile and if this does not solve the problem, then perhaps some form of Capacity Payment “CfD” could be offered in the market (e.g. by the system operator) to provide a firm capacity payment profile for new entrants to aid financing of their investment.

### **Impacts of options on WACC Calculations**

There has been significant volatility in the WACC used in the calculation of the BNE price and it is not apparent that the rates used reflect the actual cost of capital that would be incurred by an investor. In normal price controls, the WACC is generally set for the duration of the period and hence it would not be unreasonable to either fix the WACC for a three year period or alternatively to adopt a rolling average WACC to smooth out fluctuations.

### **Conclusions**

There will inevitably be boundary problems when some components of the BNE price calculation are fixed (and indexed) and this in itself creates risk for investors. A simpler approach to dampen volatility may be to continue to determine annual BNE prices but to then adopt a simple rolling average approach to limit year on year movement, yet which retains some semblance of the direction of underlying movement. If there remains a underlying volatility risk for new investors then consideration should be given to some form of longer term BNE price hedge that could be offered to new entrants.