

Submission by Bord na Móna Energy Ltd.

on

**Fixed Cost of a Best New Entrant
Peaking Plant for the Calendar Year 2010**

Response to SEMC Consultation Paper

AIP/SEM/09/072

Fixed Cost of a Best New Entrant Peaking Plant for 2010 Response to Consultation

Introduction

Bord na Móna welcomes the opportunity to respond to the consultation on the cost of a Best New Entrant (BNE) peaking plant for 2010, as part of the development of the Annual Capacity Payment Sum for 2010.

Bord na Móna would also like to recognise the improvement to this process which have been adopted since last year, notably, the appointment of independent consultants to advise on the technical and financial aspects of the project, and the hosting of a pre-consultation workshop for market participants at an early stage in the development of the consultation paper. Bord na Móna have consistently stated the need for a robust and consistent application of the mechanism to determine the BNE cost, and the changes adopted this year have increased the level of transparency and objectivity in the consultation process for market participants. However, there remain elements of the process that seem to be open to subjective changes from year to year, and as such the level of “Regulatory Risk” associated with this process remains high and further improvements in the process are necessary.

This paper discusses aspects of the technology selection process, capital costing and assessment of operational and maintenance costs as developed in the consultation paper. In relation to the financial parameters, Bord na Móna have commissioned a report by NCB Corporate Finance, to give a view on the analysis developed in the consultation paper. It has been acknowledged in the CEPA document that these parameters are somewhat subjective in nature, and that is difficult to develop a satisfactory estimate based on historical data for quantities such as the real cost of equity. On that basis, the NCB gives an independent view, on the basis of their experience of arranging finance for utilities over the past number of years.

Finally, Bord na Móna would like to welcome the planned medium term review of the CPM, which gives the opportunity to make the necessary adjustments to the mechanism which will be required to ensure that the CPM can effectively attract the investment in the appropriate plant mix to meet the RES-E targets for the market. It is particularly important that the review extends the annual consultation process to include the assessment of the deemed capacity requirement, and the parameters that are used in the calculation of that quantity.

(1) Technology selection

The technology selection process is organised in a comprehensive manner, considering a much broader range of units than in previous years. The criteria selected have a logical hierarchy, and act to effectively short list the candidate units through a few iterations of the filter criteria. Given the ultimate result of this process over the last number of years, it would seem sufficient to assess a few candidate gas turbine plants, with a wider review of options every five years. This option can be discussed further as part of the medium term review.

One comment that arises from feedback from the workshop related to the availability of an EPC contract from the GT manufacturer. It is accepted that alternative EPC

contractors could offer a cheaper capital cost for the equipment, but such a contract would certainly increase to some extent the risk profile of the development from the point of view of a rational investor. The additional risks would relate to additional interface issues arising from the use of a non-standard design, more complicated performance and latent defect guarantee arrangements, etc. In this regard, whilst it is not a potential fail criterium for rejecting a particular option, it would be valid to apply a different financial evaluation, e.g. higher return on equity to reflect the additional risk in selecting this type of EPC contract.

One significant issue which does arise in the technology selection process is the significant increase in power out-put from the same machine that was selected as the BNE plant in 2007. The selected technology, the Alstom GT13E2 fired on distillate has an indicative power out-put of 190.1 MW over its lifetime. The same unit was selected in 2007 and had a notional lifetime net plant output of 182 MW. Bord na Mona does not accept the rationale as presented for such a significant increase in out-put from that indicated previously, but rather it seems merely to be another lever by which the ACTUAL BNE price can be adjusted downwards.

(2) Capital costs

The discussion on the state of the EPC market is in line with Bord na Móna's recent experience in procurement of peaking plant. There are still significant lead times for items such as transformers and HV cable. In general, GT manufacturers have enough orders on their books to maintain output for the next couple of years.

Bord na Móna note that the EPC price is significantly higher than that developed for last year's unit, although the per MW price is similar, reflecting the additional output from the Alstom unit. The new approach gives a more realistic estimate of the capital costs of peaking plant, as per Bord na Móna's response to last year's consultation. It is important that this more robust methodology be continued in future years.

The development of the other project costs, to cover items including project development, permitting and licences, contingencies, owners engineers, O&M mobilisation, spares, etc is more comprehensive than has been conducted to date in previous BNE estimations, and reflects the experience of PB in recent peaking projects. This type of experience is invaluable in adding to the independence and objectivity of the BNE estimation process.

Other costs which are treated more thoroughly in this year's process include the costs of financing, interest during construction, construction insurance and the working capital associated with commencing operations on the site. Overall, the estimation of the capital costs of the peaking plant has been significantly improved over last year's process, and the final figures give a reasonable estimate of the capital costs involved.

(3) Unit Output

The output from the unit is assumed as the maximum possible output, with power augmentation achieved by the use of water injection, which also serves to reduce NO_x emissions. As indicated previously this is a significant jump from the out-put determined for the same machine in the 2007 BNE assessment and BNM contends that the rationale for this increase is not justified as it is simply viewed as another

lever by which the actual BNE cost can be reduced. Notwithstanding this fact the figure quoted is the net output, adjusted for a project lifetime degradation factor of 2.5%. Bord na Móna contend that it would also be appropriate to adjust the estimate to the expected value of the capacity that would be available to meet peak demand. This factor would allow for the fact that the unit has a certain forced outage rate, and is not guaranteed to be available during periods of peak demand. A reasonable forced outage rate for this type of machine is in the range of 1-2%. Taking a mid-point of the range, a reasonable expected value for the unit would be 187.2 MW, i.e. equivalent to 98.5% of output.

(4) Recurring Costs

Fixed costs for the plant on aggregate do not vary significantly from the aggregate figure for the 2009 calculation, increasing by only 4%. This small increase belies quite significant changes in the underlying line items, with operation and maintenance costs up over 50%, and insurance costs up over 40%. On the other hand, rates costs fell by approx 56%.

The two main drivers for the changes in the costs structure, was the change in the unit size, and the change in jurisdiction.

The main concern in with the significant swings in the line items is that they could potentially lead to a significant variation in the aggregate recurring costs, which in turn has a very significant effect on the BNE price.

Bord na Móna suggest that these items should be reasonably stable in the shorter term, and that they should be adjusted year to year by an appropriate index or basket of indices. It should be sufficient to review the underlying assumptions into such factors as the technology choice, jurisdiction, etc once every 3-5 years. It would be worth examining the merits of this option further as part of the CPM medium term review process.

(5) Financial Parameters

Bord na Móna commissioned NCB Corporate Finance to do give an independent assessment of the financial parameters in the Consultation paper, based on their recent experience of arranging finance for utility projects in Ireland. This report is attached as an appendix to this response paper.

The main discussion points arising in their analysis is the extension in the period over which the investment is recovered from 15 to 20 years, coupled to the very low level of WACC which has been developed in the paper.

The paper discusses in some details the arguments put forward in the consultation paper to support the change in investment recovery period, and argues that these are not valid in the context of the level of risk associated with the SEM and the current availability of longer term debt.

NCB have indicated that the real cost of debt in current market conditions is in the order of 5.6% and have determined alternative levels for the real cost of equity of 10.00% and 11.38%, respectively for investment recovery periods of 15 and 20 years, with the higher requirement for 20 years reflecting the increase in risk profile. This equates to equivalent values for real post tax WACC of 6.42% and 6.97% for the respective investment recovery periods considered. For comparative purposes with the

pre-tax WACC indicated in the BNE consultation paper (AIP/SEM/09072) of 7.13% (UK) the post tax WACC indicated above equates to 8.92% and 9.68% respectively, for investment recovery periods of 15 and 20 years on a All-Island basis. Please refer to the attached NCB Corporate Finance report for the detail.

(6) Ancillary Services revenues

The estimation of ancillary service revenues are based on the indicative harmonised rates for the SEM which are currently being consulted on. Ancillary services are payable at the prevailing rates for the year for the level of service contracted, providing the operator declares availability for the unit.

There are significant penalty levels envisaged as part of the new AS arrangements, including penalties for non-provision of service (where the service is declared) and additional generator performance incentive penalties, which effectively penalises non-compliance with Grid Code requirements for a number of services.

It is noted that there is no provision for AS penalties or other system charges, even though it is projected to collect a range of revenues across all of the reserve classes. It is untenable that the unit will never trip, require short notice declaration, or possibly not meet its full contracted obligations for a particular level of reserve. For example, the projected penalty cost for a trip of a unit of this size is of the order of €20,000. Bord na Móna contend that some level of contingency should be allowed for this, which might marginally reduce the net AS revenue figure for the BNE plant.

(7) Deemed Capacity Requirement

The deemed capacity requirement has fallen by over 500 MW or over 7% of last year's figure. It is acknowledged that the demand outlook is reduced significantly over the period 2009/2010. However, the scale of the cutback is significantly higher than the forecast weighted average demand reduction for the two years combined, of approx 4.5%. This variance is related to the highly non-linear nature of the deemed capacity requirement assessment process and also to the addition of new generation capacity to the system next year, which adds significantly to generation adequacy. It is interesting to compare this requirement to the forecast peak demand for 2010 as published by the Regulators in the approved market modelling data set on the 3rd June 2009. The forecast peak demand in this data set for 2010 is 6799 MW. The deemed capacity requirement therefore represents a peak of just 33MW over peak demand, or a reserve margin of just less than 0.5%. This is probably less than the margin for error in the demand forecast, before considering the margin required for reserves and management of system constraints.

As discussed in previous responses, one of the principal reasons for the tightness of this capacity calculation, is the completely unrealistic assumptions on the achievable availability for the portfolio. It has been argued by the RAs that their intent is to incentivise improved levels of availability, and there is evidence to show that this has occurred to a small degree over the last year. It is completely implausible to believe that the overall availability of the portfolio can be improved to the levels suggested in the capacity requirement calculations without the addition of significant new capacity into the portfolio, and the closure of older unreliable plant, In this regard, the derivation of such a low figure for 2010 is completely counter-productive, as it will deter further new investment in the market over already

committed build, and continue the reliance on old units that are past their designed operating life.

Bord na Móna welcome the chance to discuss this critical aspect of the CPM as part of the medium term review, but would urge that the review of the deemed capacity assessment mechanism be completed in time for the setting of the 2011 capacity pot, to ensure that a more effective investment signal is available to the market in the shorter term.

For and on behalf of
Bord na Mona Energy Ltd

...John Reilly.....
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