



AIP/SEM/08/083

**Fixed Cost of a Best New Entrant Peaking
Plant for 2009**

ESBI RESPONSE TO CONSULTATION PAPER

Introduction

ESB International (ESBI) appreciates the opportunity to comment on these important regulatory parameters and has no objection to all or part of its response being published by the Regulatory Authorities (RAs).

Response to Consultation Paper Questions

ESBI's responses to the five questions in section XI of the Regulatory Authorities' (RAs) paper are set out below.

1. *Does the proposed Siemens 2000E adequately meet the criteria expected for a Best New Entrant peaking plant in the SEM?*

ESBI does not agree with the selection of the Siemens SGT5 2000E heavy duty open cycle gas turbine as the BNE 2009 peaking plant and is of the view that an aero-derivative should have been selected.

ESBI's modelling indicates that the system actually requires extremely flexible aero-derivatives to meet peaking requirements and that this flexibility will become increasingly important with the future proliferation of renewable energy plants. New build aero-derivative developments in the SEM are being explored by a number of parties but we are not aware of any entity developing green-field new build heavy duty open cycle project.

The RAs' technology selection is also at odds with the technology proposed by Eirgrid in the 2007 "fast build" consultation process which they conducted on behalf of CER. The fast build consultation suggested that the All Island Market (AIM) required multi-site aero-derivative engine installations for peaking purposes (ideally 3 x 60MW sites).

ESBI has concluded that a new peaking plant is not economically viable in the SEM as currently designed. ESBI recognises that the annual BNE Peaker cost consultation is part of the determination of the Capacity Payment Mechanism (CPM) rather than a consultation on how to attract the entry of peaking plant into the SEM. Nonetheless the philosophy of the CPM is to value capacity at the cost of providing it and the current valuation is too low to reimburse the cost of provisions and therefore to incentivise market entry.

Our analysis indicates that the market engine does not automatically schedule peaking plants even when their bid prices are lower than the SMP. This is evident in Plexos modelling and also in the results to date in the SEM, which has seen very little scheduled dispatch of peaking plant. Even if a plant occasionally gets dispatched at the peak when it is the marginal plant, or gets constrained on at its bid price, the bidding rules mean that it will only earn enough to reimburse its marginal costs and therefore cannot rely on revenue contribution from infra-marginal rent. The fixed costs of a BNE peaker are under-stated (as described below) and therefore the capacity payment mechanism would not reimburse the cost of a new entrant peaker. Our analysis indicates that ancillary services revenues are insufficient to make up the deficit required to earn a return on investment on a peaker in the SEM.

Potential developers of peaking plant are also at risk of depressing the capacity payment themselves by entering the market.

2. Are the assumptions and estimates contained herein pertaining to the BNE peaking plant reasonable?

ESBI does not regard the assumptions and estimates for the 2009 BNE peaking plant as reasonable as they under-state the costs significantly and would be insufficient to ensure the entry into the SEM of an actual best new entrant plant. This is based on ESBI's extensive domestic and international experience in designing, building, operating and maintaining power plants, as well as on developing power plant investment projects.

The total investment cost of €71.465m is underestimated, in our view, particularly in the current volatile EPC market. We estimate the EPC cost of a Siemens 2000E industrial GT as closer to €78m than the €59.6m stated in the paper, increasing the total investment cost to €88m. The aero-derivative peaking plant indicated by ESBI's modelling would have a higher EPC cost than this.

A significant element of the investment cost associated with the BNE Peaking Plant is interconnection to the electrical transmission system. We would question the viability of connecting a nominal 168MW plant to the existing 110KV system. We would be of the view that a 220KV connection would be more realistic and would result in significant cost increases above and beyond the assumed capex value of €2.55M. Finding a site close to an existing 220KV sub-station which is appropriately zoned is extremely unlikely and the land costs associated with such a site would be excessive. The 4,800m² site area as suggested is extremely tight when you consider the footprint of the SGT5 200E. Bearing in mind noise levels at the site boundary and visual impact we would suggest that a larger site and additional cost would be required to develop the suggested BNE.

ESBI would question the assumptions behind the Operation and Maintenance costs. Is it assumed that the Operation and Maintenance costs vary year on year depending on the operating regime and the plants maintenance cycle? The running regime of the plant will have a significant impact upon the operations costs, in this regard what cost is assumed to be linked with start-up's, shut-downs and ramping which will incur equivalent operating hour (EOH) impacts/costs with the SGT5 2000E technology.

ESBI do not agree with the concept of deducting potential energy and ancillary services revenues from the estimated fixed costs. The current mechanism proposed for compensating the BNE Peaking Plant in the market will not attract new entry and offers developers an unacceptable level of regulatory risk.

3. What horizon of historical data should be used in evaluating the EPC costs for the BNE Plant?

Possible options suggested by the Regulator include

- Spot values
- Arithmetic mean
- Weighted arithmetic mean
- Other means/weighted means such as geometric, harmonic

ESBI has tested all of the above suggestions on a number of different cost series and considers the most important factor to be whether costs are rising or falling. The RAs analysis presumes that the party analysing this question is interested in, or, has already invested in peaking technology.

If costs are rising, then the most beneficial measure of cost to use is the most recent cost price – the spot price. However, if costs are falling and the investor is still subject to

the previous years higher EPC costs, then taking some sort of average of the last 3/5 years will raise costs above the current low spot price.

Taking into consideration the current upward trend in EPC costs and investors aversion to risk, it seems that the spot price option would be the most appropriate. The transparency and simplicity of this option also makes it attractive.

To capture a small amount of the past trends in the EPC calculation, a Weighted Average (arithmetic) approach could be selected. In this option it would be recommended that no more than the three years data (year x, x-1, x-2) would be used, where Year X has a much higher weighting than Year x-1 or Year x-2. This will ensure that the weighted average is closer to the current EPC cost than the previous years.

Given the importance of the EPC costs and preferred spot price option, the question asked by the RAs should be how the true EPC costs could be better evaluated?

One possibility would be to standardise the methodology for calculating the EPC costs, and/or publish the amount for each individual element. For example, the GTPro package used by ESBI for the estimates above, incorporates a capital cost database which is regularly updated. The GTPro estimate of both EPC and total investment costs are considerably higher than those prepared by the RAs' consultants - it would be helpful to understand why this difference arises.

ESBI is of the view that the most important issue is that it is more important to get the original calculation of the EPC cost correct, and that more attention should be paid to standardising the methodology of the calculation of EPC costs and making it more transparent.

Also as large infrastructural projects have a development lead time and there is a large degree of uncertainty associated with EPC price forecasting therefore adequate contingency should be built into the estimate.

4. *In the light of more recent precedents on Equity Risk Premium values such as that set by the Competition Commission, which recently quoted a range of 2.5% to 4.5% in its decision regarding Heathrow and Gatwick airports, should 5.5% value used in last years calculation be revised?*

ESBI believes that the RAs should use the 5.5% value used in last year's calculation to maintain a consistent regulatory approach.

5. *What horizon of historical data should be used in determining the WACC for the BNE Peaker?*

The figures mentioned in the Consultation are for treasury bonds, BBB-spreads and inflation. For these inputs to the WACC formula it would seem most appropriate to used forward looking figure if at all possible (using historic data doesn't seem to make sense for what is essentially an investment decision). Of the three alternatives mentioned either option a) or b) would appear to be the most appropriate as these are the most recent, however if there was other reliable forward looking/future projections available these would be better.