

Response from Viridian Power and Energy

To

**Fixed Cost of a New Entrant Peaking Plant for the
Capacity Payment Mechanism**

Decision and Further consultation Paper

13th March 2007



Executive Summary

Viridian Power and Energy (VPE) has fundamental concerns about the mechanism for BNE OCGT price setting in the SEM.

Our primary concern relates to the inherent volatility in the capacity price and the fact that gas transportation capacity is not remunerated under current proposals. Significant capacity price volatility will undermine the confidence of investors seeking to build peaking or mid-merit plant with the capacity value as the source of stable income for such an investment and is not consistent with the WACC assumptions used. The volatility in capacity income emanates from a number of sources:

1. Technology.

A future change in technology could strand the investment in a mid-merit or peaking unit that is made today. This risk needs to be priced by a prospective investor.

This risk could also include the risk of the regulatory authorities changing their technical assumptions, for example assumptions on fuel type or fuel transportation (eg. whether gas capacity is a fixed or variable cost)

2. EPC prices

The global market for power plants has a significant cyclical nature. The recent increase in EPC prices is an example of this – the prices quoted in the consultation are already 20-30% less than the current market prices as recently quoted to VPE from manufacturers.

3. Infra marginal rent

The insistence of the regulatory authorities to value this as part of a BNE OCGT annual price setting introduces new variables to an investment decision over which a generator investor has no control, eg: other generator availabilities, projected fuel and carbon prices, system demand.

4. Volume of generation capacity required

This annual target is set on a security standard which could change¹ and even if it remains constant the generation requirement will be based on assumptions of forecast demand, forced outage rate assumptions and scheduled outages. Generator capacity in excess of the standard requirement will reduce the capacity payment below the BNE OCGT value (caused by say failure of an old plant to close).

¹ The security standard in the related decision (9.4 hrs LOLE) is lower than the current standards in both current markets on the island (8 and 4.9 hrs LOLE respectively). The RA response to VPE's comments on a previous consultation notes that this point is worth further consideration.

In order to reduce the volatility set out above, VPE suggests that a number of mechanisms could be investigated, namely:

- i) Calculate the capacity pot on a 5 year rolling average
- ii) Limit the changes in any year to 2%
- iii) Pay a new generator to the scheme on a fixed basis while allowing existing generators to experience the underlying volatility.

VPE contend that changes suggested in the above would reduce the returns needed by a new entrant and avoid the need for special contracts to attract new entrants. VPE contend that this will benefit customers by making power prices lower and more stable.

Areas of Regulatory Inconsistency

The BNE OCGT decision paper manifests a number of areas of regulatory and market design inconsistency. The primary examples of this are:

1. Treatment of gas capacity

The treatment of gas capacity in the decision/consultation is inconsistent with other parts of the SEM design.

The decision argues that these costs can be considered as variable and thus excluded from the capacity payment mechanism whereas the SMP modelling review by KEMA assumes that the costs are fixed and thus excluded from the SMP. Gas transportation costs must be recovered somewhere in the market if power plant owners are to receive a reasonable return on their investments.

VPE is not convinced by the argument that a liquid market for fixed gas transportation capacity exists and that any flexible products are sufficiently firm to provide an robust alternative. We note however that fixed gas transportation costs are significant and would significantly increase the capacity price by over 50%. This is reasonable for a dual fuel peaker that incurs these real costs, but is not justifiable for a distillate only plant that does not incur fixed gas capacity costs. It is worth noting that these costs are borne by all gas fired generators in the system and this fixed cost needs to be recovered.

VPE suggest is that a separate component of the capacity cost, based on the fixed gas transportation costs, should be paid only to those generators who have a dual fuel capability. This would insure that dual fuel generators can recover their costs without over remunerating single fuel generators. We estimate this addition capacity price to be around €65/kW p.a.

The effect of this inconsistent regulatory treatment of gas capacity is that the fixed component of gas capacity, as currently proposed, will not be remunerated for any player in the market. This has the following adverse effects:

- Current and future generator investments will not be able to recover gas transportation costs.
- Generators may seek to purchase gas transportation capacity in a manner that will damage the gas transporters ability to plan
- Regulation of gas transporters revenues will be challenging
- Directed contract prices may diverge from pool prices

2. Distribution of capacity payments

In the VPE response to the T&SC, v1.2, we set out our concerns that the complicated formula for capacity pot distribution result in a baseload plant mathematically always receiving a higher payment than an equivalent peaking plant (with the same capacity and availability). VPE suggest that the solution to this is not to increase the BNE OCGT price but to alter the distribution formula in the T&SC. The former approach would increase the cost to customers and still result in a bias in favour of baseload over peaking plant.

3. Cross jurisdictional distortions

There at least two areas where the RAs have presumed that the BNE OCGT must be sited in Ireland rather than Northern Ireland, namely:

- a. The WACC is based on a corporation tax of 12.5% rather than the 30% that would apply to a plant that was sited in Northern Ireland, or to any company that was based outside Ireland but investing in Ireland.
- b. The ancillary service income in Northern Ireland could be as much as [40%] lower by comparison to Ireland. This lower ancillary service income would result in a higher capacity price.²

The above factors appear undermine the all-island nature of the Single Electricity Market in that they presume that all new peaking generators must be built in Ireland to make a reasonable return.

² We also note that ancillary service income, particularly income reserve, is being revised as a result of the proposed capacity price mechanism in the SEM. It would be important that any changes to ancillary service income is captured in a final capacity price setting to ensure consistency.

Detailed Comments

EPC Prices

The EPC cost assumption used by CER is that the overall cost of the chosen Alstom GT13E2 plant, including gas and electrical connections and a 3% construction contingency provision, is €69.6m.

VPE have received up to date prices from manufacturers that indicate new prices of:

- | | |
|--------------------------|-------|
| □ 13E2 | €75m |
| □ gas connection | €3m |
| □ electrical connection | €3m |
| □ 5 day oil storage tank | €1m |
| □ oil working capital | €1.5m |
| □ contingency | 3% |

This gives an overall figure of €86/kW p.a

Capacity needs to be calculated on available basis

VPE note that the decision/consultation document uses the above figure on an installed basis, but this must be calculated on an available basis. No power plant is available 100% on a sustained basis and thus the income per available MW must be higher. The RAs recognised this in their original consultation but this factor has been lost in the most recent decision/consultation

VPE do not disagree with the availability assumptions in the paper, but note that they must be applied to the income stream.

Technical considerations

Please note the issues as set out in our response to the original consultation.

WACC

The assumption on WACC looks low when measured against the risks set out in the executive summary. VPE favour an approach of reducing the primary risks rather than seeking to significantly increasing the WACC to reflect these risks.