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24 September 2004

Dear Jonas,

### **Transmission Investment for Renewable Generation**

I am writing in response to the above consultation.

#### **Summary**

We welcome Ofgem's conclusions that some investment can be justified now and that work should proceed on these projects. We also agree that part of the justification for network investment should be the economic test. However, we are concerned that some of the economic values of constrained energy used by Ofgem's consultants to justify the potential deferral of some projects, particularly the interconnector, do not reflect the reality of the current market arrangements. These values reflect a "central planning" view of incremental costs rather than the prevailing market arrangements. The market will have to bear the costs of the current market arrangements for constraining energy, and we believe that on this basis, the interconnector upgrade should also be classed as Baseline Capacity.

We believe that the general approach to funding proposed by Ofgem for baseline capacity has some merits, but that it is not clear at present how this would be codified into a licence condition. We look forward to further discussions in this area.

It is also clear that there is a greater risk associated with transmission links to the islands. In these circumstances it may be necessary to consider more novel funding mechanisms and we look forward to bringing forward proposals to Ofgem in due course.

## **Detailed comments**

### **Analysis**

SKM's analysis of the levels of generation likely to connect and the constraint volumes is consistent with SSE's own analysis based on applications received and network studies.

However, we believe the analysis of the costs involved in constraining generation are understated.

Firstly, the "economic" valuation of alternative conventional generation assumes "that the initial "unconstrained" despatch was efficient for the level of demand". However, this model also implicitly assumes that all fixed and semi-variable costs of conventional plant are recovered elsewhere. This could only apply under central planning where a short term decision can be made to run one station rather than another. In this case the only differential cost is the difference in marginal fuel costs.

The market based valuation is a more realistic approach, because this reflects the design of the market and the actual operating regimes of plant. It is this real world behaviour that drives the difference between System Buy Price (SBP) and System Sell Price (SSP). Crucially, it also reflects what the system operator will actually have to pay out to balance the system and manage constraints and is recovered from users through BSUOS. It therefore also reflects the values that the transmission owners will use in making further investment decisions. However, even this analysis understates the cost of constraints, since these are specifically excluded from the SBP and SSP calculations.

It is clear from existing SO incentive schemes, and it will no doubt become even clearer when the SO incentive scheme for the first year of BETTA is developed, that the actual constraint cost for the interconnector circuits will be well above £1/MWh. Even if it is only £10/MWh (which we believe still understates the costs that the GBSO will face) upgrading the interconnector will be justified with 1700MW of generation. This level of generation is likely to be connected before Beauly/Denny is completed.

We remain of the view that £25/MWh is more indicative of the differential under the NETA market mechanism. In this case the interconnector will be justified with only 900MW of generation connected in Scotland. This is also closer to the figure used in the analysis carried out by Ofgem in setting NGC's System operator incentive scheme from April 2004.

In our view, it is therefore clear that the interconnector circuits also fall within a “Baseline Capacity” requirement.

## **Project Categorisation**

We agree with the general approach of Baseline, Incremental and Additional categories. However as discussed above, we believe the economics of a project should be tested against the actual market conditions. We also believe that “Additional Capacity” needs to be defined in terms of the circumstances under which it would become economical to pursue the project in this category. Under Ofgem’s definition of such projects where the estimated capitalised constraint costs are less than 50% of the investment costs the projects simply would not be built. Also, we do not believe that this is the correct term for island links, since the capitalised constraint costs are likely to exceed the investment cost.

We also believe that some pre-investment expenditure also needs to be allowed for projects identified as “additional investment”. This is because the transmission operator is obliged to make connection offers to applicants making detailed provision regarding any works required in connection with the extension or reinforcement of the GB transmission system. We do not believe it will be possible to comply with this requirement without carrying out substantial pre engineering works. In the case of mainland infrastructure, the works could be driven by a large number of applicants (as has been the case with the Beaulieu-Denny line). In which case it is unreasonable to expect the first generator to underwrite or enter into long term commitments for such upgrade works. We believe that the Beaulieu-Keith and Kendon area reinforcements are such projects. We also believe that as time goes by and more generators connect, these projects could move through the stage of incremental investment and into baseline investment. Indeed, because of the generation connection enquiries being received, we would expect to be in a position to request funding of pre engineering studies for Beaulieu-Keith later this year.

The potential island connections also pose a further problem. The absence of existing transmission infrastructure means that, unlike the mainland, we cannot simply connect the generators until sufficient have connected to make the economic case for an upgrade. If any were to connect, they would be unable to generate because of a total lack of infrastructure rather than a capacity shortage on existing infrastructure. Ofgem have identified a possible way forward by establishing long term commercial arrangements with generators to ensure there are no stranded costs. In the case of the islands we have now entered into underwriting agreements to carry out design, consents and pre-construction work. We therefore believe these costs should be funded through allowed revenue, since the costs are recoverable from the generators should the projects not come to fruition.

## **Revenue Adjustment Mechanism**

We agree that the basis of revenue adjustment for baseline investments should be broadly along the lines of normal price control structures, with incentives to retain any benefits from efficiency savings for a number of years. Given the uncertainty surrounding the costs and planning delays that accompany major transmission projects, it is right that they should be treated differently from the regular price control investment. It is also appropriate since the projects were unforeseen at the last price control and, in SSE's case, is an order of magnitude greater than the normal transmission capital expenditure.

Ofgem's proposals appear to allow interest during construction, followed by rate of return plus depreciation on the forecast cost for a number of years (5-10) before the expenditure is added to the RAV at actual cost less depreciation. This general approach appears to have some merits but it is unclear at this stage how this would be codified into a licence condition, or the interaction (if any) with the periodic price controls for the remainder of the transmission business. We would welcome further discussions with Ofgem to clarify this.

However, we do not agree that the return allowed during construction should be based on the cost of debt and can see no justification for this proposal. It will also be necessary for a revised forecast of capital expenditure to be set before construction commences, taking into account any planning conditions that might have been stipulated. Only at that time would a licensee be able to commit to delivering the project.

We believe it will be difficult to estimate capacity outputs from a particular project since this will depend on factors outside a particular licensee's control, such as reinforcements in other areas and stability criteria. These major projects to provide additional capacity for renewable generators are quite distinct and separate from normal price controlled expenditures. We therefore believe it would be appropriate simply to specify the project parameters in terms of its key design features, e.g. a circuit from A to B with a rating of x MVA. This is more easily measured than any assessment of increased network capability.

For incremental investments, we agree that it is appropriate to allow funding for studies to identify whether a project should be classed as baseline or incremental investment. However, we believe that there needs to be more flexibility in "promoting" projects to baseline status more rapidly than waiting for the next price control review. The interconnector is a case in point here, since we firmly believe that the constraint costs are underestimated and there is a need to progress with this upgrade as soon as possible.

Also, in some cases there may not even be a need for planning permission, if the project is within existing consents. This reinforces the need for a fast track to promote projects into the baseline category.

Ofgem's classification of "additional network investment" are those where the estimated capitalised constraint costs are less than 50% of the investment costs. It is unlikely that a transmission licensee would undertake such a project on a "revenue driver" basis since there is no way for the licensee, particularly the Scottish licensees, to influence the connection of new generation.

The projects listed in this category fall into two sub categories. The first is mainland projects where at present, there is insufficient contracted generation to justify the project. However, like the Beaulieu-Denny project, a large number of generators could sooner or later make the projects economical. Also the number of generators in the "queue" is such that, even if some do not come to fruition, there is still sufficient demand to avoid the risk of stranded investment. In SSE, we expect soon to be at the stage of making offers conditional on the Beaulieu-Keith reinforcement, since the demand for the additional capacity will exceed that provided by the Beaulieu-Denny project. We will therefore need an allowance for doing the necessary studies to identify the most economical project.

The second category is the islands, where a small number of large generators are interested in securing capacity. However, to carry out the detailed studies will involve considerable investment, and there is a risk of stranded investment if the generators do not complete, or if they complete but only run for a few years. In these circumstances we agree that it may be necessary to consider more novel funding mechanisms and we look forward to bringing forward proposals to Ofgem in due course.

If you require any clarification on the above points, please give me a call.

Yours sincerely,

Rob McDonald  
Director of Regulation