Transmission Investment for Renewable Generation
Response by SP Transmission

INTRODUCTION

1. SP Transmission ('SPT') welcomes the opportunity to respond to Ofgem's Initial Proposals on Transmission Investment for Renewable Generation. We acknowledge the progress that has been made in developing a framework for the assessment of this category of investment since 2002. It is important that a robust structure is now put in place in order that timely and efficient investment to accommodate renewable generation takes place.

2. We welcome much that is in the proposals and the accompanying report by SKM. We are glad to see that SKM accepts that cost estimates for the proposed projects are reasonable. We agree with the means for classifying projects in terms of the balance of costs and benefits and degree of demonstrated need. We also agree with Ofgem's proposed classification scheme for projects, in particular the distinction between "baseline" and "incremental" projects, and in broad terms, we accept the approach proposed for each category.

3. However, we do not agree with the analysis that leads to the initial allocation of projects between these categories. We set out below and in the attached report detailed arguments as to why we believe certain economic arguments and assumptions in the associated SKM report are seriously flawed.

4. In particular, SKM's treatment of constraint costs for both fossil fuelled and renewable generation employs a number of assumptions for which there is no strong basis. The assumption that capacity costs can be ignored in considering net constraint costs for fossil generation is a case in point. We believe that insufficient account is taken of market data in assessing the costs of generation plant to replace constrained-off plant. We also question the assumption that the buyout price for RO generation rather than market data for ROCs represents an appropriate value in assessing constraint costs for renewable generation.

5. We do not agree with the use of a capacity factor for wind of 20% in the SKM report. This is derived on the basis of the amount of wind capacity that can be relied on to meet demand, and does not take adequate account of system security considerations or the efficient sizing of the transmission network to accommodate wind generation. The 60% factor used by transmission companies addresses these considerations.

6. Unfortunately, these and other shortcomings in the analysis are so serious that the interim proposals that draw on them will in our view fail to deliver suitable infrastructure to support UK renewable targets.

7. SPT is currently undertaking considerable work, which is at various stages, to support the design and early construction activity to deliver an appropriate network to accommodate renewables generation in Scotland. **If these initial**

proposals are implemented in their present form, it will become difficult to sustain the current impetus and meet the tight timescales involved.

8. With the current access rules proposed under BETTA, we expect to see a large number of unconstrained connections offered in both Scotland and England. These will, under NETA rules, result in large constraint payments until the works associated with the interconnecting circuits between NGT and SPT is completed. In fact, the interim proposals have already resulted in a 1 year delay in providing this network, with NGT having cancelled construction outages for next summer. Even if the final proposals are to change, it will be extremely challenging to recover this lost time.

9. For the South West of Scotland, we will within the next few days be submitting details of a revised scheme from that which was described in the SKM report (the 'Kendoon area' scheme). We consider that the revised scheme comfortably meets the criteria for inclusion in the baseline category. This would allow work to progress to remove real physical constraints which would otherwise apply.

10. Our detailed comments on the consultation document are set out below.

CHAPTER 4 – SKM'S ASSESSMENT OF EFFICIENT INVESTMENT

Estimates of renewable generation

11. The central forecast developed by SKM of 4GW of new renewable generation connecting in Scotland by 2010 is consistent with our own view at this time. However, it is important to note that the contracted level of renewable generation in Scotland continues to increase and is now approximately 4GW. At present 1600MW of renewable generation projects are either connected or have accepted offers for connection within the SPT area. A further 1400MW of renewable generation developments have submitted applications for connection.

Constraint costs

12. We have a number of concerns with the methodology used by SKM in this area, which we believe is seriously flawed. For example, we can see no justification for ignoring the evidence from the NETA balancing mechanism in deriving assumptions for the net costs of constraining off existing fossil fuelled generation in Scotland. The arguments used in favour of an 'economic' valuation of such constraint costs in chapter 6 of SKM's report do not take account of the need to maintain a sufficient margin of flexible generation on a sustainable basis to compensate for constrained off plant in Scotland.

13. The attached paper, by Europe Economics, sets out a detailed critique of the economic analysis in SKM's paper, including the assumptions for the

valuation of losses, and the use of the RO buyout price as a proxy for the carbon reducing benefit of renewable generation value of renewable generation.

14. The use of more realistic assumptions for constraint costs and other parameters has a significant impact on the cost/benefit analysis of the schemes under consideration, and moves a number of projects towards 'baseline' status.

The assessment and classification of projects

15. In principle, we agree with a tripartite division of projects as put forward by SKM. However, the flaws in SKM's treatment of constraints feed through to an unduly pessimistic assessment for a number of projects. For example, the Scotland/England interconnector upgrade and the North East Ring scheme are not considered justified at this stage. This is partly on the grounds that 5GW or more of installed wind capacity in Scotland would be required to justify the combined scheme using SKM's low constrained energy cost assumption. However, SKM's own analysis suggests that benefits of the combined scheme meet or exceed costs for installed wind capacity of 4GW or more if constraint cost assumptions other than the unrealistically low 'economic' value are used. This applies even if the closure of Longannet and Cockenzie is assumed.

16. As regards proposals for South West Scotland (the 'Kendoon area' scheme), we will shortly be submitting revised proposals to Ofgem that entail significantly less cost than the scheme envisaged at the time SKM were carrying out their study. When the level of applications and accepted offers of generation connections is taken into account we are confident that these revised proposals qualify for inclusion in the 'baseline' category.

The review of GB wide transmission security standards

17. The paper recommends the use of a 20% capacity factor for wind for planning purposes. This is on the grounds that the available evidence from GB data indicates that this represents the proportion of capacity that can be relied on at times of peak demand. Using this factor, the paper goes on to conclude that a total of 6,000 MW of wind in Scotland would be required before an N-2 secure interconnector capacity of 2200 MW is exceeded.

18. However, the 20% factor does not take account of transmission system security (as opposed to security of demand). The 60% scaling factor used by Transmission licensees represents the estimated correlation of wind output for use in studies of bulk transmission capacity requirements and in the planning of the main interconnected transmission system. For transmission planning purposes, the 60% factor is considered appropriate, and material supporting this conclusion has been presented to SKM.

19. In any review of GB security standards, a departure from the 60% scaling factor for wind should be based on a robust analysis that takes full account of the need to ensure transmission system integrity.

CHAPTER 5 – IMPLEMENTING AN APPROPRIATE ADJUSTMENT MECHANISM

Identification of separate categories for baseline, incremental and additional capacity

20. We agree that baseline projects which have a clear justification in cost/benefit terms should be distinguished from those where costs or benefits are more uncertain. The third category of "additional" network investment, where estimated benefits in terms of constraint costs are less than 50 per cent of capital costs is also helpful. However, for this category we do not agree with an incentive mechanism that would allocate risks to transmission owners that they cannot control.

The initial categorisation of projects set out

21. We agree that the benefits of the Beauly Denny and Sloy area schemes clearly exceed the costs, and that these belong in the baseline category.

22. We disagree with the categorisation of the England-Scotland interconnector upgrade and North East Ring schemes as 'incremental'. This for two main reasons:

    (i) The analysis partly rests on the scenario of closure of Longannet and Cockenzie in place of equally credible situations such as the re-powering of coal fired plant. In addition, there appears to be no detailed consideration of system and other costs that would follow such closure were this to take place;

    (ii) The use of a more realistic range of constraint costs of £10 to £25 per MWh, based on available market data, rather than the £1 to £5 range preferred by SKM leads to a breakeven point for installed wind capacity significantly lower than SKM's assumed total of 4GW of installed wind capacity by 2010;

23. Further, the analysis of network flows across the interconnector is skewed by the use of a 20% capacity credit factor for wind that has the effect of overstating the level of installed capacity corresponding to a given level of transfer.

24. In the case of the Kendoon area scheme, we will shortly be submitting revised proposals for reinforcement in South West Scotland from the scheme considered in the SKM study. We are confident that our revised proposals, developed in response to changes in location and scale of renewable generation activity and SKM's recommendations, justify baseline status. These revised proposals involve lower initial capital investment while facilitating further development to accommodate the needs of users

25. Both the Interconnector and Kendoon area schemes should be baseline projects after taking into account demonstrated need, the true value of constraint costs and an appropriate scaling factor for wind generation capacity.

The incentives associated with each investment category

(i) Baseline

26. We do not agree that interest during construction should be based on the cost of debt finance rather than the overall cost of capital. This would represent a penalty on companies facing the cost of capital however quickly construction were completed. It is unclear why the use of the overall cost of capital should incentivise companies to delay completion.

27. The use of 'output measures' such as network capacity and capability as mentioned in 5.13 would present a number of difficulties. It would require devising measures that were independent of the actions of third parties over which transmission licensees had no control. We would welcome a discussion over measures that would avoid this problem.

28. We agree in principle that once construction has been completed, the licensee should receive a revenue allowance consistent with the full cost of capital and depreciation based on an independent estimate of project costs. The actual investment costs should be added to the regulatory asset base after 5 years (rather than 10), in order to limit the risk to companies and customers of variances in costs against the prior independent estimate.

(ii) Incremental

29. We agree that for projects in this category, an allowance for pre-construction costs should apply pending further assessment of the costs and benefits of the scheme concerned.

(iii) Additional

30. We do not believe that the revenue driver approach proposed for this category is appropriate for transmission infrastructure projects. This would imply a benchmark approach that is out of place in this context. We will not carry out projects that are not expected to meet the cost of capital commensurate with the risk involved. A revenue driver will be extremely difficult to devise that does not pose unacceptable risks to companies.

Process for reviewing projects in future

31. A simplified structure of baseline/incremental projects would imply that as cost or benefits for incremental projects were clarified, such projects would either emerge as 'baseline', and be funded as such, modified, or abandoned.