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Date: 12 December 2007

Dear Stuart

**Balancing and Settlement Code ("BSC") modification proposals on zonal transmission losses - review of Oxera's analysis**

Further to Alistair Buchanan's letter of 5 October 2007, David Gray wrote to you on 3 December 2007 advising that Ofgem has appointed the Brattle Group ("Brattle") to undertake the review of Oxera's analysis<sup>1</sup> on the BSC zonal transmission losses modification proposals<sup>2</sup>. The letter also advised that, subject to our discussions with Brattle, we anticipated contacting you in the near future with a request for information in relation to Oxera's analysis.

Brattle has now initiated its review and provided Ofgem with a list of questions in respect of Oxera's analysis. I enclose with this letter the memo setting out Brattle's questions and request, as provided for under BSC Section C3.6, that Elexon provides Ofgem with the information requested by 21 December 2007.

Yours sincerely,

**Lesley Nugent**  
**Senior Manager, Transmission Networks**

<sup>1</sup> Ofgem set out its intention to undertake this review in the following open letter: "The Authority's decisions on the zonal transmission losses proposals", 14 September 2007, ref 223/07 ([www.ofgem.gov.uk](http://www.ofgem.gov.uk))

<sup>2</sup> P198, P198 Alternative, P200, P200 Alternative, P203 and P204.

## MEMORANDUM

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**TO:** Oxera  
**FROM:** The Brattle Group  
**SUBJECT:** Questions of Zonal Loss Charging Studies  
**DATE:** 12 December 2007

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Below we provide questions we have on your July 2006 report entitled “What are the costs and benefits of zonal loss charging?” and your September 2006 report entitled “What are the costs and benefits of annual and seasonal scaled zonal loss charging?”

### Questions on July 2006 report

1. On page 7 you write “[t]he total level of demand to be met was reduced by the estimated level of losses, allowing the total net benefit of zonal loss charging to be calculated”. We assume that this reduction relates to the impact of zonal losses on demand that you estimate in Chapter 6. Can you confirm this and explain what you did?
2. On page 8 you say that “data ... was taken from the 2005 Seven Year Statement and scaled proportionally to correspond to the three loading snapshots”. Can you explain what you mean by “scaled proportionally”?
3. On page 9 you say that differences between your and PTI TLFs of 0.005 and 0.009 are acceptable. How did you decide whether a difference was acceptable or not? What criteria did you use?
4. On page 9, you show a comparison between the PTI TLFs and the TLFs from the load-flow model based on the despatch from your economic model and this is used as validation of the economic model. Did you perform any other type of validation of your economic model such as whether the model produces reliable simulations of prices or generation despatch across the year?
5. On page 9 you explain that difference between your TLF and the PTI TLF in zone 10 is due to different load factors being used for Aberthaw. When you undertook the more detailed economic modelling what load factor did you find for Aberthaw i.e. did you find it ran at baseload, as in your snapshots, or at mid-merit, as in the Elexon data? Did you confirm that adjusting Aberthaw’s load factor resulted in a TLF for zone 10 that was similar to the PTI one? Did Aberthaw continue to operate at baseload in the snapshot periods throughout the period studied?

6. How did you incorporate the effects of plant maintenance into your snapshot modelling, particularly for the seasonal analysis?
7. On page 9 you say the differences in PTI and Oxera TLFs for the Scottish zones during the summer are “a function of the assumed loadings during a time when net electricity flows in these zones are sensitive to actual loading at the time”. Can you explain this in more detail?
8. In the load flow modelling for future years, what assumptions did you incorporate regarding changes to the network?
9. On page 11 you describe how you modelled the growth in renewable generation. Could you provide us with a table showing the amount of wind (both offshore and onshore) added in each year and the zones in which these wind plants were added?
10. On page 12 you state that “plant that have opted out of the [LCPD] Directive will be limited to 20,000 hours of generation between 2008 and 2015”. How did you apply this limit in your model? Did you assume the same limit on generation in each year or something different?
11. On page 13 you state that “[a]ll other plant closure decisions were based on market outcomes under the different scenarios”. What criteria did you use for deciding whether non-nuclear plants should be closed? Which plants did you assume close under each scenario and when? Were the closures different between the uniform and zonal analyses?
12. On page 13 you show two new generic CCGT plants coming on line in zones 2 and 7 with capacities of 1,000MW and 2,000MW. Why did you choose these zones and plant sizes?
13. On page 30 you say that “[z]onal results were subtracted from uniform results to obtain differences between the charging regimes” but do you mean the other way round as Tables 3.8 to 3.11 suggest that uniform results were subtracted from zonal results? For example, the output in Scotland is shown decreasing in the tables, which would seem more likely to be an outcome of moving from uniform to zonal losses.
14. On page 38 you explain how you have used method 2 to estimate the value of loss savings. Did you test how different the savings would have been if you had used method 1?
15. On pages 45-46 you describe the minimal impact of zonal transmission losses on interconnectors linking the Great Britain with other markets. Could you explain how you modelled the development of flows across the French and Dutch interconnectors?
16. In Tables 5.5 and 5.6 you provide your analysis of the influence of TNUoS and NTS exit charges on locational decisions. It does not appear that you have taken any account of future changes in these charges, is this correct?

17. Tables 5.5 and 5.6 on page 51 show the difference excl. and incl. Scotland. Can you explain what you mean by "Difference"?
18. On page 59, the values quoted above Table 6.2 do not appear to correspond with those in the table, are these simply typos? For example, you state the "[t]he Midlands shows the strongest signs of this behaviour, with an £18,000 reduction in benefits" but the table shows £16,000.
19. On page 67 you show the results of NPV calculations of future benefits. Could you provide us with the data used in these calculations?

Questions on September 2006 report

Many of our above questions about your July 2006 report would also apply to your September 2006 report. We do not repeat the questions here but please provide separate answers for each report if your answers to any of the above questions would be different for each report. Please can you also provide us with the data used in your NPV calculations of future benefits as shown on page 36 of your September 2006 report.