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Dear Andrew

Zonal transmission losses – the Authority's 'minded-to' decisions Consultation

Thank you for the opportunity to comment on the Authority's 'minded-to' decisions and reasons for those decisions on the four modification proposals (P198, P200, P203, P204) and two alternatives (P198 Alternative and P200 Alternative) to the Balancing and Settlement Code (BSC) to alter the rules under which the costs of transmission losses are allocated to users of the electricity transmission system.

Immingham CHP LLP continues to strongly oppose the Authority's "minded to" decision to accept P203. Together with a large majority of the industry we do not believe that Ofgem has shown that the proposals put forward, including P203, better facilitate achievement of the applicable BSC objectives or its wider duties, nor has it sufficiently taken into account a number of detrimental aspects of the proposals.

We do not believe it is appropriate to repeat all the points that we made in response to the impact assessment, but such points are still relevant. However, Immingham CHP LLP wishes to make the following points in relation to the 'minded to' document, which either does not address the points at all or does so but not accurately and/or with sufficient evidence. Responses to the 'minded to' document questions are also attached.

1) Ofgem has not established that generator behaviour will change and as such there must be significant doubt that the losses reductions assumed will occur

Generator behaviour falls into 2 categories – long term plant siting decisions and shorter-term despatch choices.

<u>Plant Siting Decisions</u>

Ofgem quotes the NGC Seven Year Statement in Tables 2 and 3 and its own analysis in Table 4 to support its views that wind generation in the north would remain competitive against CCGT technology in the south and also that more environmentally efficient conventional generation would not be displaced by less efficient generation.

There are conflicts with both of these assertions against Ofgem's other arguments. Ofgem's own analysis shows that under the highest TNUoS and zonal losses charge case, the total cost of wind generation in the north is cheaper than that of CCGT in the south after environmental incentives have been taken into account. As such zonal losses under this analysis are unlikely to change developer behaviour – at least as regards wind - with the result that power from wind generation will continue to flow north to south. It is also interesting to note from Tables 2 and 3 that wind at 6521MW shows the largest increase in capacity in the north between 2007/8 and 2013/14 and shows the second largest increase in capacity of all plant types. The 299MW of offshore wind generation in the south that Ofgem asserts is 'significant' is clearly only a small fraction (~5%) of the 6521MW increase.

What the NGC data also show is that, even faced by very high existing TNUoS charges in the north, wind developers will site there for the obvious reason that that is where the wind predominantly is. This is recognised by Ofgem in 'minded to' paragraph 6.35. This is confirmed by the Oxera report, which states that due to the design of the Renewables Obligation and non-economic difficulties in obtaining significant volumes of onshore new wind build in the early years, the introduction of zonal loss charging will have little if any impact on renewable new build across the period to 2015/16. If anything, a zonal loss regime could in fact lead to a greater incentive being required to stimulate wind generation development to meet UK Government targets and ultimately at greater cost to the consumer.

The above is in conflict with Ofgem's statement at 6.6 of the minded to where it states that the introduction of locational charging "…would be expected to reduce the volumes generated by plant located far from the centres of demand and, in the longer term, it would be expected to inform a plant's locational decisions such that it would be more likely to site closer to areas of significant demand."

Where projects are not reliant critically on customer type or energy source, such as CCGT, they can already react to economic signals as provided by the differential in TNUoS between north and south. Ofgem's 'minded to' document Tables 2 and 3 show that CCGT is expected to show predominant growth in the south compared to the north of England and no development in Scotland. As such probably the only type of generation that can react to signals from zonal losses is CCGT and it shows signs of doing just that already under differential TNUoS charging – by increasingly locating in the south. The Oxera report on p52 makes the point "While the introduction of zonal transmission losses provides a further locational signal for the siting of new power stations, in the medium term (i.e. until the end of the study period) it is unlikely to have a significant impact on any new developments. This is because, of the projects either currently with Section 36 consent, with the Dti for Section 36 approval, or announced in the general media, a significant proportion are in favourable transmission loss charging areas, mainly in the South, South East and South Wales." In fact 80% of the proposed CCGT plant in the Oxera report is

located in the south. Tellingly, the Oxera report on page 41 comments **"These loss savings are generally higher at the start of the period, as the development of new build in the South from 2009/10 or 2010/1 reduces overall transfers in later years. However, these reductions on losses occur *even under the current loss charging regime*."** (italics as per original Oxera report).

The Oxera report also comments on page 53 about the likelihood that existing coal fired power station sites will continue to be used for new or upgraded coal stations in future due to the existence of significant infrastructure – fuel transportation and handling equipment, transmission connections and cooling infrastructure.

Ofgem asserts on the basis of Tables 2 and 3 that there is planned to be significant CHP generation in the south. The tables in fact show no change in CHP capacity and as such Ofgem's argument cannot stand. In addition the lack of CHP development in the south may in fact confirm ConocoPhillips' assertion that industrial scale CHP can only locate where there is an industrial site that requires steam from a CHP and that these are predominantly in the north. For example, on 12 July 2007 ConocoPhillips on behalf of its co-venturers submitted a planning application to build a 800MW CHP at Teesside to supply steam to the nearby Teesside Oil Terminal and a LNG import scheme that may also be constructed. It should also be noted that the proposer of Modification P198 and P203 announced on 30 May 2007 plans to build a gas-fired power station at its former coal-fired station at Staythorpe, Nottinghamshire, due to "…infrastructure already in place."

Ofgem has also ignored the fact that energy intensive industrial users are incentivised to locate in areas that will reduce transmission losses and thus site in the north. With CHP opportunities being increasingly in the north and power plants increasingly being incentivised to locate in the south there is likelihood either that there will be an environmental disbenefit or an increased cost to consumers if the UK Government is to be able to meet its CHP target. A large industrial complex in the north wishing to build a CHP cannot be expected to relocate to the south to enable losses to be reduced and in fact the act of relocation could increase losses by relocating demand as well as generation. The logical response would therefore be to reduce the size of electrical output from CHP to the grid thus undersizing the CHP and reducing the environmental and fuel saving benefits that CHP offers. This is clearly sub-optimal for the UK as a whole.

Ofgem has also not added any detail to two of the 5 factors that Oxera identified but did not work on regarding plant location (p47 of Oxera report) – these are the availability and cost of land and planning consent for new plant build. These are clearly important issues (see Staythorpe comment above) as witnessed by the fact that the Government will this autumn likely propose an Energy Bill that will contain proposals to reform the planning regime, particularly as regards nuclear generation. As such the conclusions drawn as regards reacting to price signals are incomplete. Oxera on p52 make further comment in this area "Finally, while the introduction of zonal loss charging does provide further locational signals to new generation assets, the impact of this on new build decisions is uncertain, especially in relation to other non-cost issues, principally planning permission and land availability."

Ofgem has also not considered the interaction of changes to the electricity regime that could impact major gas consumers such as CCGT power stations. For example, gas in the UK also flows north to south and power stations are the largest point consumers. As such locating gas-fired power stations in the north is advantageous from the point of view of avoiding gas-related transmission investment and operating costs and in fact Ofgem incentivises shippers to land gas close to large gas consumers through the short-haul tariff. The location of power stations proximal to gas landing points is a very good example. It should also be noted that the users of the gas grid in Great Britain pay a uniform charge to cover gas transmission costs to move gas from north to south and there are no plans to change this.

Plant Despatch Choices

Ofgem has not presented any analysis to show the likely behavioural impact on a generator faced with zonal losses, especially those in the north who will see the sharpest signals and an increase in costs. Here, the only choice a generator has is to maintain output or to curtail generation. However, it is likely that a generator will have gas and power contracts in place that will constrain commercial flexibility and hence will influence the ability to turn down. It should also be noted that CHPs supplying steam to an industrial customer cannot easily turn down electricity production without adversely impacting steam output, generation efficiency and consequent environmental benefits. Furthermore Ofgem's own analysis in table 4 shows that under zonal losses a wind generator in the north will still be incentivised to generate power resulting in no reduction in zonal losses from this sector at least.

Ofgem has also not considered the situation of a power generator owning plant located in both the north and south of the country. The Oxera report on page 3 makes a key point on this issue – "An investor holding a balanced portfolio of generator shares would be unaffected by changes to loss charging arrangements since costs are simply transferred between different generation companies." The proposal represents a transfer of revenue from companies owning generating plant in the north to those owning plant in the south (regardless of the reason for siting or the ability of a generator to diversify the risk) for no overall benefit.

2) Financial benefits are overstated and approach is disproportionate

Generators will not respond to zonal losses, at least not to the degree as calculated by Oxera. Oxera themselves on p67 advise "…a significant proportion of such benefits would accrue during the first 5 years of the study period before new entry (which is already expected to be built in the South) reduces the general pattern of North to South transfers." It is also noteworthy that the benefits include 3 years (of very high modelled losses) which will already have elapsed before zonal losses could be implemented – 2006, 2007 and 2008. Even assuming the £65.7MM net present value net benefit (seasonal case), the value of this over the ten year period is 0.002p/kilowatt-hour (assuming constant annual demand of 360TWh for ten years), either to generators or to consumers if the value is passed on. In light of such, the upheaval on industry for minimal and uncertain gain is disproportionate, especially when alternative solutions have not been investigated.

3) Environmental benefits overstated

As noted, the benefits include 3 years which will have elapsed if a zonal losses regime is implemented – 2006, 2007 and 2008. In addition the environmental benefits assume that coal generation in the north becomes gas generation in the south and we have already noted that gas generation is already planned for the north (e.g. at Staythorpe and Teesside). For the reasons above – not least those espoused by Oxera – fuel switching may not result. In addition it is assumed that no CCGT is closed or turned down in the north but no explanation for this is given. In fact, Ofgem's own analysis (see Ofgem table 4 in the 'minded to' document) would indicate that a project developer would be more likely to site a wind farm in Scotland than to build a CCGT in the south.

In 6.15 Ofgem comments that zonal losses could create incentives for large scale private sector investment in other low carbon technologies in southern GB such as carbon capture and combined heat and power. All of the Carbon Capture and Storage projects (i.e. near zero emission power generation) proposed for the UK are coal-based and most rely on coal imports via ports in northern England. These projects cannot relocate to the south of England, where there are no suitable geologic sites for storing CO2. As regards large scale CHP, these have to be sited with an industrial steam customer, over 80% of which are in the north.

4) Increased Regulatory Risk

In the 'minded-to' statement, paragraph 3.19 states:

> "Primarily, we [OFGEM] consider that it is for businesses to manage their own risks, it is not the role of the regulator to manage risk on their behalf."

We have a fundamental disagreement with Ofgem over the meaning of regulatory risk. This is not our understanding of the 'regulated risk' as described by, for example, economic consultants NERA and is not supported by the uncertainty that P203 introduces. The consequence of the 'minded-to' position from a 'regulatory risk' perspective, as described by such economic consultants, is an increased cost of capital (requiring an increase in the rate of return) that is brought about by:

a) the significance of the decision and the apparent lack of regard for the consequential impact on existing investments; and
b) the ongoing uncertainty associated with the potential changes caused by the implementation of P203 and its inherent inadequacies.

As such we do not believe that once a decision is taken regulatory risk disappears – often the opposite is the case as continuing change can ensue. For example, the following could arise:

a) the decision is being made without apparent regard to existing investment, i.e. there being no meaningful lead time for the investments involved to accommodate the change;
b) possible future changes to the differential in the Transmission Loss Factors that are used for each zone;
c) further modifications may be raised to change the way in which Zonal Transmission Losses work;
d) possible adjustments to the methodology implemented by modification P203, should it not work as intended;
e) there may be a reversal of the decision by government in the future; in the past the government has indicated its view that zonal losses are not appropriate in the GB market environment, this was raised in Teesside Power Limited's response to the impact assessment and has not been addressed; and
f) the recently announced Transmission Access Review potentially impacting on P203.

The introduction of P203 will elevate 'regulatory risk' that is to a degree avoidable. The proposed change does not take into account the impact that the 'minded to' approach will have on future investments.

Regulatory risk will increase the cost of capital for new projects. As a result, investors will only invest in the industry when they feel that the rate of return from their investment will cover the costs of any associated 'regulatory risk'. If investors do not believe that the rate of return is adequate to cover the project's associated 'regulatory risk', a delay or cancellation in investment will occur.

5) Efficiency and economy

In 6.24 of the 'minded to' document Ofgem appears to argue that zonal losses would improve security of supply but it does not explain how and it is not clear that it has shown there to be a problem.

In 6.25 Ofgem comments that there are significant volumes of generation seeking immediate connection in Scotland to replace closure of marginal plant but if this is the case then Ofgem appears to accept that zonal losses will not affect plant siting and as such generation remote from demand will continue to be built.

6) Zonal Losses benefits assumed beyond 2015/2016

In the minded to letter at 4.47 Ofgem appear to rely on benefits beyond 2015/16. There is strong evidence from its prior analysis that benefits may, in fact, be trending negative. This highlights a particular deficiency in the methodology employed which considers a forward period of seven years ahead of the proposed implementation date. This truncated window is not sufficiently long to accurately access impacts in a sector with assets of typically greater than 15 years economic life.

Our response to the detailed questions in the consultation is set out below. Please do not hesitate to contact me should you wish to discuss.

Yours sincerely

Barry King
Regulatory Affairs Manager

Attachment – Immingham CHP LLP response to questions raised in the 'minded-to' consultation document

Answers to the following questions should also be in conjunction with the comments in the attached covering letter.

CHAPTER: Two

Question 1: Do respondents consider that we have appropriately summarised the key themes of the responses to Ofgem's impact assessment on zonal losses?

No. This does not address the impact on non-integrated, independent power producers and industrial-scale CHP and the wider competition impacts. See also our proposals for further analytical work below.

Question 2: Are there any other themes which respondents considered should have been highlighted?

As above. Also it is interesting to note that consumers as represented by energywatch, are not in favour of the proposal and as such Ofgem needs to address their issues.

CHAPTER: Three

Question 1: Do respondents consider that the additional analysis we have provided addresses the concerns expressed by respondents to the impact assessment regarding analytical gaps in the impact assessment?

A number of key issues raised by respondents to the consultation have not been addressed. For example, there is the matter of the inconsistency of zonal signals and the contradictions that can occur between zonal losses signals and System Operator actions.

Question 2: Do respondents consider that there are any remaining aspects on the modification proposals that require to be addressed analytically?

Yes. Oxera identified 5 factors that influence plant location but only analysed 3 of them. The remaining issues of land availability and planning consent should be analysed.

Industrial scale CHP can only locate adjacent to a large steam customer and Ofgem asserts a number exist in the south which could attract CHP development. Ofgem should share any study it has carried out as regards steam requirements in Great Britain that back up its assertion and demonstrate how the scale of these opportunities compare with those in the north and calculate the increase in both CO2 emissions and primary fuel usage if the opportunities in the north are not developed or are undersized.

Ofgem should analyse the impact of the locational signals on intensive energy users (especially if wind generation continues to be built in the north) and thus the likely impact on new build industrial scale CHP.

The Oxera analysis should be revised to incorporate the effect of a number of power stations that are already consented or in the process of being consented that are located in the south. It should also run the analysis for the period after 2008 (to 2015) when any proposal could take effect.

Ofgem should analyse the situation where power stations are incentivised through the gas transmission charging regime to locate adjacent to gas landing points to assess whether this would have any impact on the zonal losses proposal. Ofgem should also consider whether a zonal losses regime is in conflict with the gas transmission charging regime.

Ofgem needs to analyse the power generators that have a portfolio that is spread across Great Britain to assess whether their behaviour is likely to be incentivised in the way assumed in the context of a competitive electricity market.

The Oxera cost benefit analysis is not transparent and as such respondents are unable to critically review it to understand the modelling and underlying assumptions. For example, in the overall cost-benefit analysis (Table 8.1 and 8.2 of the Oxera report) Oxera calculated all costs and benefits from 2006/07 to 2015/16, but provides only a summary of the data over the period as a whole. Table 8.1 shows the annual net benefit from re-despatch over the 10 years to be £8.9mm for the seasonal scenario, i.e. £89mm over the 10 year period. However, Table 3.20 shows the savings yearly and over the period only up to 2011/2012. These savings are stated to be £81mm, indicating that that remaining 4 years contribute only £8mm, i.e. £2mm per year. In view of Oxera's comments about the early losses being reduced due to current new project siting decisions (rather than redespatch or siting being influenced by zonal losses) then detail on the period 2011/2012 to 2015/2016 is critical to understanding the merits of zonal losses.

Question 3: Do respondents have any additional analysis in relation to the impact of the modification proposals that they wish to bring to the attention of the Authority?

No.

CHAPTER: Four

Question 1: Do respondents consider that the modification proposals have been appropriately assessed against the applicable BSC objectives?

No. See covering letter.

Question 2: Do respondents consider that there are any aspects of the modification proposals that have not been adequately assessed in relation to the applicable BSC objectives?

There is no assessment of the impacts on different types of party. Also we do not believe that the effects of the volatile signals that zonal losses will introduce have been properly assessed. For example, we do believe the feedback effect from the actions of generators in one year and the zonal loss factors used for each quarter in the subsequent year (with potential adverse effects on the GB market) has been properly investigated.

CHAPTER: Five

Question 1: Do respondents consider that the Authority has appropriately assessed the modification proposals against the applicable BSC objectives when considered collectively?

No. See covering letter. We think the assessment over identifies alleged efficiency benefits but fails to adequately assess and to take into account negative impacts including those that may affect competition.

Question 2: Do respondents consider that there are any aspects on the modification proposals that have not been adequately assessed in relation to the applicable BSC objectives when considered collectively?

As above.

CHAPTER: Six

Question 1: Do respondents consider that the Authority has appropriately assessed the modification proposals against its duties?

As explained in the covering letter we do not believe Ofgem has made the case that the modification proposal will significantly reduce transmission losses through short term redespatch or through plant siting decisions. As such we also believe that the estimated reduction in carbon emissions from fuel switching (coal to gas generation) is overstated. Ofgem also fails to advise that the proposal will increase the costs for developers of large scale CHP and renewables across Great Britain.

Question 2: Do respondents consider that there are any aspects on the modification proposals that have not been adequately assessed in relation to the Authority's duties?

As above.

CHAPTER: Seven

Question 1: Do respondents have any comments on any of the issues set out in this chapter?

Paragraph 7.2 states that applying cost-reflective charging arrangements will facilitate lower prices to the consumer by removing the scope for cross-subsidisation between network users, facilitating effective competition between parties that use the network. P203 is not a “cost reflective” charging arrangement.

CHAPTER: Eight

Question 1: Do respondents wish to raise any specific issues regarding the Authority's minded to position?

Our main issue, arising from the above points, is that we do not believe Ofgem has presented sufficient evidence to justify its approval of modification proposal P203.

Question 2: Do respondents have any views on both the process and timetable that are proposed for the Authority making its final decisions on the modification proposals and for publishing those decisions?

In terms of process Ofgem has failed to present adequate evidence to address concerns raised by respondents, as discussed above.