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Dear Robert

ZONAL TRANSMISSION LOSSES – THE AUTHORITY'S 'MINDED-TO' DECISIONS

British Energy welcomes the opportunity to comment on the issues raised by the consultation on the above as published in June 2007. This response is submitted on behalf of British Energy Group plc.

In response to Ofgem's impact assessment and consultation on the proposals for zonal transmission losses British Energy considered that on the basis of the evidence presented within the impact assessment none of the proposed and alternative modifications could be justifiably implemented by the Authority. In addition, we identified fundamental flaws in the consultation process that we considered Ofgem should rectify before issuing their 'minded to' decision.

Following a detailed review of the 'minded to' decision consultation we continue to stand by the views expressed in our previous response and indeed those expressed previously during the BSC modification assessment stage. We do not consider that the analysis presented in the minded to decision document has addressed these serious shortcomings and therefore on the basis of the evidence presented by Ofgem we continue to oppose the introduction of any of the proposed modifications.

We do not intend to repeat our previous arguments in this response except to summarise a number of key concerns we have with the Authority's 'minded to' decision to implement P203.

Proportionality:

The net benefits of P203 are uncertain and insignificant compared to the largely arbitrary significant gross transfers between market participants, estimated to be £160M p.a. in 2006/7, or £1.6bn if continued over the ten year period studied. These transfers will create winners and losers amongst existing parties in a highly competitive market with limited opportunity to hedge either the step change for existing investments or the ongoing uncertainty for all

parties. Furthermore, this transfer would occur regardless of whether the estimated annual savings of a few million pounds (or about 0.002p/kWh)[1] materialised or not.

A decision to implement P203 would be the most significant regulatory decision directly affecting cashflows between competing companies since privatisation itself. Most previous decisions have only affected competing organisations in a uniform manner. The introduction of supply competition fundamentally changed the industry, but affected suppliers relatively uniformly. NETA and BETTA arguably transferred value away from participants with limited balancing capability, such as smaller generators and suppliers and inflexible generators, but there was significant support for it. Modification proposal P200 and its alternative, which appears to have been dismissed without due consideration, would avoid this re-distribution whilst achieving the same theoretical efficiency benefits claimed by Ofgem for P203. Furthermore, we consider that Ofgem has failed to address the concerns raised by a number industry parties in respect of the introduction of a zonal losses scheme based on short term loss factors and its affect on regulatory risk and the cost of capital of all industry participants.

Non-Cost Reflective:

P203 uses a load flow model that allocates each node to a zone of the transmission network and then averages and scales the sample raw nodal marginal factors to calculate time averaged zonal TLFs. The implication of this averaging is that the loss factors to be applied to individual plant may actually bear little resemblance to the plant's realtime nodal loss factor, and hence its effect on overall losses on the system. This is a significant weakness in the model and runs counter to the Ofgem argument that the significant cost transfers are not disproportionate since parties are not currently paying charges that reflect their contribution to losses. This is in addition to the fact that marginally derived loss factors only indicate contributions of changes in flows to **changes** in losses, and it is arguable whether this is appropriate for application to entire flows.

To varying extents, all of the proposals seek to discard the arrangement which has existed for over 17 years in which parties implicitly agree to share the costs and uncertainties associated with losses. Instead, P203 (and P198) seek an arrangement in which parties whose commercial operation happens to offset the flow of someone else, and as a side-effect happens to provide a benefit to the total system of reducing total losses, receive payment for the benefit they are considered to have provided. It can be argued that parties which benefit from reduced total losses should be willing to pay for this benefit. However, in the real competitive environment the effect is that one group of parties is forced to pay another apparently small group of parties for a service which has not been requested, and which could undermine their investment. Although there may be small benefits for the common good from slightly reduced total losses in the short-term (although evidence is limited), the willingness of a regulator to impose unpopular change significantly affecting the relative value of individual investments will increase the required return, and thus cost, of investments in future.

[1] Using NPV over 10 years for P203 of £65.7m (Table 8.1 of Oxera July report) and 360TWh for generation

We consider that some of the other modification proposals address some of these concerns. P200 protects the existing 'right' of qualifying generators to share the cost of variable losses for a qualifying volume, as if the existing arrangements were a commercial contract, being renegotiated for future investments without affecting/undermining existing investments. It retains the theoretical benefit of providing strong signals to future operation and investment to optimise the effect on total losses, while not producing a step change in value for existing major investments which cannot relocate.

Meanwhile, P204 embodies the ideas that each flow pays something, or at best nothing, towards variable losses, on the basis that in isolation it would have to pay something, and that the amount paid is dependent on the relative effect on total losses. Those in the 'better' locations (from the point of view of losses) achieve a benefit over the current arrangements by paying less towards variable losses than at present, down to a target of zero in the very best locations. However, they should not expect actually to receive payment on average, (a) because if considered in isolation of other users of the system, each user **would** have to pay something for losses, and (b) because the majority simply do not wish to pay for a benefit being provided over which individual beneficiaries have no choice or control. Those in the 'worse' locations have to pay more towards variable losses than at present, up to a maximum based on a scaling of the marginal loss factors for the 'worst' locations. This could be considered to approximate to each location paying for the losses which it would inevitably cause if considered in isolation from everyone else, or to better reflect the cost of losses associated with a given flow, rather than its impact on total losses on a shared system.

Dubious Environmental benefit:

Oxera/Ofgem analysis suggests there would be environmental benefits from the proposals, with P198/203 giving the highest benefits. However, these theoretical savings would only occur because the higher cost generation which would theoretically operate more (generally in the south) with the effect of reducing losses also happens at this particular time to have lower emissions. However, this is nothing to do with P203 itself. It is merely a coincidence of the current location of generation fuel types and fuel expected costs. If the generation locations which reduce losses happened to have higher emissions, as could occur in the future as a result of shifts in generation type or fuel prices, the effect would be reversed.

Furthermore, the estimated benefits due to generation redespatch for P203 (seasonal loss factors) are significantly greater than those for P198 (annual loss factors). However, it would appear from the Oxera analysis that these additional benefits are principally as a result of winter redespatch patterns. However, during typical winter periods the differential between coal and gas prices in the UK is almost always going to be too large for there to be a switch between fuels (e.g. northern coal to southern gas) solely as a result of zonal allocation of losses. This is not reflected in the analysis.

Flawed Consultation Process:

We have independently obtained confirmation that the TLM values used by Oxera and used by Ofgem in its impact assessment exclude the effect of fixed losses. In light of this any consultee using these values to estimate the material impact of the changes compared to

current levels will significantly underestimate the effect of these schemes. We made Ofgem aware of this in our response to the impact assessment. We note that Ofgem has failed to investigate this or indeed highlight the fact properly in the 'minded to' document. This is a serious flaw in the consultation process.

Furthermore, we understand from Teesside Power Limited (TPL), one of the other respondent's to Ofgem's consultation exercise throughout the zonal transmission losses modification proposal process, that TPL's independent expert, NERA has made requests for information to be provided by Ofgem under the Freedom of Information Act 2000. We further understand that Ofgem's approach to these requests has not aided the transparency of the process or assisted with developing the understanding of respondents to the consultation process. This is concerning given the importance of the issues under consideration.

Change to Incentives for locational market entry/exit:

Neither the BSC assessment process, the Oxera cost-benefit analysis, Ofgem's impact assessment, consultation respondents or this minded-to statement give any evidence that long term changes to siting decisions will occur. Estimated benefits arise only because of the relatively small, volatile and uncertain effects on short term despatch predicted by Oxera's modelling, and even these appear to diminish as other factors affect the generation-demand pattern.

Furthermore, Ofgem has not appropriately considered the possibility that locational signals provided by the gas market arrangements contradict those which Ofgem argue will be introduced in electricity through a zonal losses scheme. For CCGTs, transmission investment and operating costs will be avoided by locating in the North. Furthermore, shippers are incentivised through the regulated gas arrangements (e.g. the shorthaul tariff) to land gas close to large gas consumers (such as CCGTs). The existence of any contradictory gas/electricity market signals increases regulatory risk, is detrimental to market confidence and a potential barrier to new entry.

GEMA Minutes:

We would also like to take this opportunity to comment on the published minutes of the GEMA meeting on 24th May 2007 where the minded to decision was made. Firstly, at paragraph 15 it states that "*These modifications proposed ways of recovering the costs of losses on the transmission system which reflected their locational impact, whereas costs were currently recovered from BSC parties on a "uniform" basis, with no distinctions drawn as between locations, or whether parties were putting energy onto or taking it from networks.*" The final sentence of this paragraph may misrepresent the existing arrangements and the proposed changes. The current zonal losses proposals are not concerned with, and have no effect on, the existing simple division of losses between those putting energy onto and those taking it from the system. Real losses cannot be negative, and energy is never created by a flow of electricity. The idea that energy is created or 'put onto the network' by those who net off a larger flow so reducing losses is misleading.

Secondly, again in paragraph 15 it notes that transmission losses amount to some 2% of the total system demand. Over recent years, total losses have varied between about 1.5% and 2.0% of generation. Yet these modification proposals are attempting to reduce only variable

losses which Oxera estimate to be around 60% of total losses, or 0.9% to 1.3% of generation. Most significantly, Oxera then estimate that the introduction of P203 may achieve a 10% reduction of variable losses. We consider it essential that the headline facts surrounding these proposals are expressed to both GEMA and the industry in a transparent manner.

Finally, in paragraph 17 it states "*P203 had been shown, moreover, to be likely to have the greatest impact in reducing total transmission losses with therefore the strongest associated environmental benefits in terms of carbon savings and related consumer benefits*". As indicated above, the use of the word "therefore" is misleading as most of the environmental benefits of P198 and P203 are a coincidence of the current location of plant in GB and the estimated redistribution of generation despatch, and not the theoretical reduction in losses.

Our specific comments on issues raised in the 'minded to' decision document are set out below:

Additional Analysis:

We welcome the undertaking of additional analysis by Ofgem following the significant concerns raised by respondents to the impact assessment. However, we do not consider that this further analysis has sufficiently addressed respondents concerns particularly those relating to the benefits highlighted by Oxera (which form the basis of the Authority's 'minded-to' decision) being overstated, uncertain or small and do not justify such a significant change from the status quo. It is vital that these concerns are addressed and that the estimates of the benefits (if any) are sufficiently robust in order to allow the Authority to make a fully informed decision on the proposals.

P2 - Context
'Consumers, in return, pay for the costs of the network.'

Investors in users of the network may absorb some or all of the cost in reduced returns. If a user suffers financial failure, then some or all of the costs it has committed for network and other costs may effectively fall to investors rather than consumers. Uncertain costs represent a risk to investors, users and consumers. [

P2 - Context
'Transmission losses have both an environmental cost (for example, in terms of carbon costs) and a financial cost – as someone must pay for the lost energy.'

While it is true that someone must pay for the additional energy required to meet inevitable losses, and this carries with it an environmental cost, it is not generally true that the total environmental cost is correlated with or dependent on losses, so that reducing losses will reduce the environmental cost. A reduction in losses might be achieved at the expense of an increase in environmental cost. It is only a co-incidence of the current distribution of generation fuel types that an apparent small reduction in emissions may be achievable in association with a reduction in losses.

P1 - Summary
'Losses have been treated on the same basis since Vesting in 1989. However, the debate on the appropriate allocation of transmission losses has a long history and indeed at Vesting the Pooling & Settlement Agreement set out the principle of reviewing and, if appropriate, implementing changes to the treatment of losses to reflect locational factors.'

Losses were one of many issues which the Pooling & Settlement Agreement listed for review. Some of these issues have led to changes currently in effect, some have been completely dropped, and some have not led to change. Acknowledgement that a review is desirable does not necessarily require that significant change must be made, and most participants do not support the current proposed changes, as evidenced by consultation responses.

P1 - Summary
'Today's climate of increased concern about the impact of energy generation on the environment and rising energy costs set the background for this latest set of industry proposals (four proposals and two alternatives) which have been put to the Authority.'

P198 and P203 have been raised and supported by a small number of parties who expect to achieve substantial financial gain at the expense of other parties, regardless of whether or not the schemes are effective in reducing losses or emissions. Ofgem and other observers should not suppose there is any other reason for them being raised.

P1 - Summary
'The proposals aim to better reflect in losses charges the locational impacts of parties actions and, as a result, under each proposal losses charges for generators in northern England and Scotland would go up, and charges for southern generators would go down. In addition, charges for suppliers in northern England and Scotland would go down, whilst those for southern suppliers would go up.'

These are expected impacts over the next few years. Over the lifetime of investment in electricity infrastructure, analysis indicates that other factors such as fuel sources and costs, transmission infrastructure costs and planning will be far more important. Long term future generation build in the South would change these suggested outcomes.

P2 - Summary
'The Authority considers that, of all the proposals, P203 provides the greatest reduction in losses and therefore the highest savings - both environmental and financial.'

The Authority should not assume that the greatest reduction in losses is necessarily associated with the highest environmental and financial savings. Use of domestic and industrial on-site fossil generation could reduce transmission losses to zero, but would not be financially or environmentally beneficial.

P2 - Summary
'The Authority considers that P203 better facilitates the achievement of the applicable BSC objectives than the existing arrangements and is consistent with the Authority's legal duties. The Authority also considers that of the options available to it, P203 is the best calculated to

further the Authority's principal objective to protect the interests of consumers, both present and future, wherever appropriate through the promotion of effective competition.'

There are many changes to arrangements which could be made to target costs more towards those that contribute to them. While the Authority has apparently supported arrangements such as shallow transmission charging, support for favoured generation types and smeared balancing costs, which tend to socialise costs and reduce competitive risk for participants, thus promoting investment through new entry, it appears inconsistent that it is minded to support unpopular changes with very small benefit which redistribute large amounts of value from one set of participants to another.

P4 - Overview 1.11 Load Flow Model
'It [Load flow model] estimates the impact on the total flows on the transmission system of a 1MW increase in power at each node.'

This is not quite correct. The load flow model estimates the incremental change in total losses on the transmission system resulting from incremental changes in power flows at each node [generally with total demand or generation held constant].

P13 - 3.5 Marginal Loss factors
The scaling of marginal loss factors in all the proposals is mentioned as having the result that *'none of the modification proposals could be expected to lead to a material overstatement of the overall locational signals.'*.

The proposed loss factors may result in a material overstatement of locational signals due to the spatial and temporal averaging which applies values to a particular location and time which may be wholly inappropriate. A marginal loss factor gives a signal to marginal flows. If the whole flow were to react to the signal, a new marginal loss factor would exist which could give a completely different signal. Use of loss factors scaled by 0.5 or less reduces the scope for error and instability. The analysis in Appendix 3 of the minded-to statement suggests that even theoretically a scaling factor of 0.5 should be considered a maximum in conjunction with the transmission use of system charging arrangements.

P15 - 3.11 Distributed Generation
'These average values do not vary between proposals given that they all recover loss revenue in the same proportions as now i.e. 45/55 from generation and demand, and they correspond to estimates, at 0.995 and 1.006 respectively, of the generation TLM and supplier TLM values which would apply under uniform losses for the same market conditions.'

Outturn values of average TLM for 2006-07 were 0.992 and 1.010 respectively. The values quoted by Ofgem (which ignore fixed losses) are likely to understate the impact, depending on how they are used.

P15 - 3.12/3.13/3.14
The analysis of the impact on distributed generation is grossly simplified. The nature of the BSC equations is such that the impact in any settlement period currently depends on the total losses on the system in that period. Under the proposed zonal schemes, the impact on embedded benefits depends not only on the fixed losses, but on the separate 'adjustment factors' applied to delivery and offtake flows and derived from the particular pattern of

generation and TLFs in that period. No proper analysis has been done on this particular effect. (TLMg-TLMd = TLMOg-TLMOd).

P19 - Use of Oxera analysis - 3.22
'The most important point is that, whatever the price used, locational losses leads to more efficient levels of despatch and better longer-term signals than the status quo.'

In theory, setting an optimal level of locational loss allocation should lead to more efficient levels of despatch. In practice (a) the chosen loss allocation may not be optimal and (b) the effect will depend on the difference between different generation costs relative to the losses costs. Since losses costs will always be much lower than generation costs, there is a considerable risk that theoretical benefits will not materialise in practice. Some respondents have indicated that real despatch may depend on individual party commercial circumstances and not follow the expectation of a theoretical despatch model. This is confirmed by Oxera's validation of their model, described in section 2.2.2 of their July 2006 report, where the operation of a particular generating plant in reality does not exactly match that modelled by Oxera, and the difference would have the effect of completely swapping the direction of the zonal TLF applied to all flows in the zone.

P20 - Use of Oxera analysis - 3.23
'We noted in the impact assessment that the despatch benefits identified by OXERA would be lower in later years, reducing from average savings per annum of around £14m for P203, £6m for P204 and £5m for P198 (for the period to 2011/12), to around £9m for P203, £5m for P204 and £3m for P198 (for the period to 2015/16). This is the effect that would be expected as parties change their behaviour in response to the signals from zonal losses and thus the marginal impact of further changes would be reduced, creating less scope for further reduction in losses.' And
'Therefore we consider it is more meaningful to examine the trends than the results for individual years and as noted above, the OXERA results show a trend where the annual reductions in losses reduce over time as the system becomes more locationally balanced as parties respond to locational losses. Through the feedback effect, the losses signals would then provide incentives, absent under uniform losses, on parties to retain that level of locational balance.'

Ofgem seem to suggest a benefit which reduces in time as parties maintain their previous response but scope for further response reduces. This does not tally with the observed results. We suggest an alternative interpretation of the results: The current and planned pattern of installed generation is not dependent on a zonal losses scheme, but nevertheless coincidentally produces a reduction in losses over the years as despatch varies. As the distribution of generation and demand becomes more optimal with regard to losses, with or without a scheme, the effect of proposed schemes becomes correspondingly less, to the point where locational loss charging becomes largely irrelevant in despatch. Tables like 3.17 of the Oxera July 2007 report show that the year-to-year variation in estimated variable losses under a uniform losses scheme is generally greater than the estimated saving for any particular year with a zonal losses scheme. If, as Ofgem seem to suggest, a cumulative change in behaviour of parties due to zonal losses schemes was itself responsible for the reduction in annual savings in later years, the losses savings between uniform and zonal schemes would be expected to cumulate over the years towards a new equilibrium. There is no evidence of this (see Oxera July 2006, table 3.17). There is no evidence that the schemes produce anything

other than a theoretical change in despatch at the margin dependent on prevailing market conditions and the previous years conditions used to determine the TLFs. [Show as a diagram of costs under uniform and costs under zonal scheme trending apart initially but together in the longer term?]

P21 - Use of Oxera Analysis - 3.26.
'Some respondents also commented that OXERA's analysis excludes the effect of fixed losses in calculating the TLMs applicable to generation and demand and that the results are therefore unreliable. We note that the despatch impacts modelled by OXERA are based on the locational differences in TLMs, which do not vary with the level of fixed losses.'

The concern raised by British Energy is that respondents using the values of TLM given in the Impact Assessment consultation documents to estimate the impact of the schemes on their own volumes as compared with current actual values will systematically underestimate that impact. The impact will be worse in all cases, because fixed losses, which are estimated to comprise 20-50% of total losses, are completely ignored in the forecast TLMs, while being implicit in the current TLMs. The fact that Oxera have compared equivalent scenarios with and without zonal schemes is different from the fact they have not determined TLM consistent with current actual values. Ofgem have not made this clear in the impact assessment, nor in this minded-to statement, and parties may have been or be misled on the true impact when making their responses.

P21 - Impact of mitigation measures - 3.28.
'As set out in the impact assessment, we note that no specific analysis is provided either by the Modification Group or in the impact assessment of the impact of the phasing solution proposed by the P198 Alternative or the hedging solutions proposed by P200 and the P200 Alternative. This reflects the difficulty in modelling these scenarios to provide meaningful data and indeed no respondent provided any further data on these scenarios.'

The phased solutions will obviously have an intermediate impact, both in terms of impact on value transfer between parties and on estimated net benefit (or cost).

P200 applies the same signal to changes in generation as P198 and P203 and should, to a first approximation, have the same impact on the despatch decisions which drive the estimated saving in losses, without producing the step transfer in value associated with other proposals. No analysis is necessary to be confident of this. Differences in savings would only be expected to arise as cumulative changes from the reference volume occur for reasons other than the losses scheme. The differences in cost of the scheme would also have a small impact on the overall cost benefit. Ofgem should consider these points more objectively rather than apparently simply dismissing the proposal because it is more complex and in their view discriminatory (more on alleged discrimination below).

P25. Transmission Licence conditions
P25 - 4.7 - Ofgem suggest that discrimination, presumably between existing and new generators, is a reason why they do not consider P200 to meet BSC Objective (a). This seems inconsistent with their approach in other areas (electricity and gas transmission access) where discrimination between existing and new assets is a necessary condition for business confidence.

P28 - *'4.20. OXERA's analysis highlighted that these benefits would reduce over time to average savings per annum (for the period from 2006-2015) of around £9m for P203, £5m for P204 and £3m for P198. This is the effect that would be expected as parties change their behaviour in response to the signals from zonal losses and thus the marginal impact of further changes would be reduced.'*

There is no evidence for a cumulative impact. The impact of the schemes is forecast by Oxera to be solely on marginal despatch, and benefits relative to reference do not systematically grow year on year. There is no evidence that losses schemes have significant effect on plant commissioning or decommissioning which would drive a cumulative effect. The reduction in benefit in later years is believed to be due to coincidental changes in generation and demand location and level.

P30 - *'4.29. The Authority considered that the introduction of locational loss charging arrangements, by ensuring that transmission users will pay charges that reflect their impact on the network, would result in those users making more efficient decisions regarding their use of the GB transmission system. As noted above, the impact of better decision making is to reduce the level of total losses and in doing so promoting a more efficient, economic and co-ordinated operation of the GB transmission system.'*

The schemes proposed all use heavily averaged loss factors derived from network flows one to two years earlier (April-August use data from the previous March-August, while September-March would use data from March the year before and September to February two years earlier). Therefore the TLF applied and response (if it exists) in any given period may be wholly inappropriate to the situation in that period, and theoretical benefits may not be achieved. In any given year, it is theoretically possible that the TLFs used could give wholly incorrect outcomes, for example if there were a large change in generation behaviours due to fuel price changes or other factors. Although Oxera modelling indicates a real benefit despite this, it appears that Oxera used data from one year for the next rather than the proposed mixture of data from one and two prior years.

P31 - *'4.37. In addition, under the existing arrangements variable losses are charged on a uniform basis and thus parties are not paying charges that reflect their impact on the network. As a result, generators in the south are cross-subsidising generators in the north while suppliers in the north are cross-subsidising suppliers in the south.'*

We argue that the benefit given to northern generators by southern generators offsetting total losses should not be considered a cross-subsidy, but a voluntary side-effect of their location on the system. If generators in the north did not exist, there would still be losses. The best possible outcome is no losses. If a southern generator approached a competing northern generator offering to displace its generation and demanding payment equalling the losses which would be saved, it is unlikely a freely entered into agreement would be reached. P198 and P203 seek to force such an agreement through regulation. Generators in the south are offsetting the losses due to generators in the north, and therefore there is an argument that they should receive some advantage for the effect which their activity has. However, on the shared system in a competitive environment, where participants have no control over the activities of others and the recipient of a benefit cannot choose whether or not to accept that benefit, there must be some doubt over the extent to which a cross-subsidy exists.

P33 - *'4.45. Once again, while the Authority agreed with some respondents that the modification proposals may have some impact on perceptions of the stability and predictability of the existing arrangements, on balance the Authority considered that any associated risk is manageable and its impact would be outweighed by the positive impact on competition of introducing locational charging arrangements which are more reflective of costs.'*

(a) While suppliers with short term contracts can develop tools to manage the risk associated with uncertain transmission loss factors, generators with long term investments and contracts cannot. For them, all these proposals except P200 represent a step change in value of varying amounts which might be passed through to customers in some circumstances, or simply absorbed by investors in others. The transfer of some £160m a year from one set of participants (northern generators and southern suppliers) to another, possibly £1.6bn over the next 10 years if the level of transfer continues, to achieve a small and uncertain potential benefit in reduced losses, is not in our view a proportionate action.

(b) There is no clear evidence how competition itself will be better achieved, because there is no clear evidence that anyone will respond to the signals created. There is a high risk that the change will simply deliver a windfall gain to a few parties at the expense of others.

P33 - *'4.47. This conclusion is supported by OXERA's cost benefit analysis report which, although noting that the medium term affect of the modification proposals on the siting decisions for new plant was uncertain, highlighted potential benefits in the longer term (beyond 2015/16) of between £1m and £20m. Further detail on this subject was set out in the impact assessment.'*

Uncertain potential benefits of between £1m and £20m in the distant future do not justify transferring some £160m/year between one set of locations and another because some parties wish to end the sharing which has existed for 17 years.

P34 - *'4.48. Barriers to entry hamper effective competition as they prevent new parties entering, or limit the ability of new parties to enter, the market in a short timeframe thereby potentially enabling existing parties to secure excessive benefits unchallenged.'*

While in general this statement is true, it is far from clear that it applies in this case. Most participants argue that sharing arrangements reduce the risks associated with uncertainty over losses. We are not aware of new entrant southern generators (as opposed to existing participants) or northern demand making strong cases that reduced losses charges will be the deciding factor in locating new plant. Market exit is more likely to be affected, but again there is little evidence that losses charges would be a deciding factor in practice.

P34 - *'4.48 A locationally based charging mechanism would be expected to provide more cost reflective charges and thus remove cross-subsidies.'*

The extent to which charges are cost reflective and/or cross-subsidies exist is not clearcut on a shared transmission system. We would question whether it is a cross-subsidy for a party whose flow happens to offset the flow of another party flow not to be paid for the reduction in losses which result. Each party in isolation would suffer losses, it is only their sharing of the system that provides the possibility for a benefit. P204 proposes a compromise where

those in a favourable location have less than average or zero proportion of variable loss costs, while those in less favourable locations have more than average costs, the precise amount being a function of the theoretical loss factor (but not equal to it).

P34 - *'4.51. Overall, the Authority considers that, on balance, each of the proposals would better facilitate applicable BSC objective (c) than the current uniform losses arrangements.'*

A large transfer of wealth between participants, imposed by regulatory action to achieve a small and uncertain benefit, on the basis of counter-intuitive theoretical arguments, changing 17 years of custom and practice, will create uncertainty among participants which could well undermine any theoretical savings. Although theoretical benefits to competition could be achieved, the cost to future investment confidence, added to extra trading uncertainty, could be considerable and outweigh the theoretical benefits.

P35 – *'4.55 ... The most complex models are the variable scaling model proposed by P204 and the hedging models proposed by P200 and the P200 Alternative.'*

Compared to the complexity of the load flow model and all the data required for it; the spatial and temporal averaging of the outputs from it, and the allocation rules of the BSC, the additional complexity of P200 and P204 is insignificant.

P36 – *'4.57. The proposed hedging model adds significant complexity. …' '… The impact of these additional responsibilities could be considered to be inconsistent with the promotion of efficiency in the BSC arrangements.'*

Additional complexity (P200) and cost over other proposals should be weighed against the benefits the rationale delivers in reducing uncertainty associated with regulatory decisions.

P36 – *'4.58. In relation to both cost and complexity, the Authority considered that P198, the P198 Alternative and P203 are each broadly neutral in relation to the promotion of efficiency in the implementation and administration of the BSC arrangements.'*

The usual interpretation of BSC Objective (d) is in relation to whether a change delivers efficiency in the operation of the BSC, usually manifested by a reduction in costs. In this case, the additional complexity of all the proposals will add additional cost. We would expect all the proposals not to better meet BSC objective (d). Any distinction between them should be made in relation to the net effect taking into account the other BSC objectives and the different impacts on cashflow between parties and the potential loss savings.

P36 – *'4.60. The Authority further considered that the proposed hedging arrangements under P200 and the P200 Alternative are significantly more complex than the other models and combined with their higher implementation costs would not promote efficiency in the implementation and administration of the BSC arrangements. The Authority considered that neither P200 nor P200 Alternative would better facilitate applicable BSC objective (d).'*

All of the proposals add additional complexity and cost to BSC processes, and none of them meet BSC objective (d) taken in isolation. It seems somewhat disingenuous to suggest that the Authority's preferred proposals meet this objective while P200 does not.

Basis of collective assessment

P198

P37 – *'5.3. On that basis, the Authority considers that P198 better facilitates the achievement of the applicable BSC objectives overall, compared with the existing provisions of the BSC.'*

As discussed previously, we disagree with the conclusion that P198 will better meet BSC Objective C, because of the commercial and regulatory uncertainty created by it, indeed by its very imposition against the majority view. The increased administrative cost means that Objective D is not met by any of the proposals. We do not consider there to be a significant argument for or against the proposals in relation to BSC objectives A and B.

Size of the transmission grid
'p44 - 6.16. There is evidence to suggest that consumers value visual amenity. This has been particularly evident in the current public inquiry into the upgrading of the transmission line between Beauly and Denny where, following protests from local communities, organisations such as the National Trust for Scotland and the Highland Council have expressed deep concern regarding the impact of pylons on visual amenity and landscape character. In the Authority's view, although it is unlikely that the decision on zonal losses would in itself significantly influence the decision on Beauly-Denny, cost reflective loss charges which alter the long term pattern of generation connections and encourage generation to locate closer to demand may be expected to have positive environmental impacts in this respect.'

We see no justification for using protest against the appearance of some specific power lines as an environmental benefit for a losses scheme. In general, power lines are likely to be preferable to the economic alternative: a local power station.

Security of Supply

P46 – 6.24.
No evidence has been provided to show that transmission losses or any of the proposed schemes would have an effect on security of supply.

P46 – *'6.25. In the short term, an increase in charges to generators in the north may be expected to bring forward the closure of marginal plant, particularly thermal generation facilities in Scotland. … ' '… An accurate signal may also send the appropriate signals to marginal plant in the south to continue operating…' '…In the longer term, stronger incentives to locate closer to demand might be expected to reduce the likelihood of system faults causing the disconnection of consumers.'*

Oxera analysis did not indicate any of these theoretical effects would occur in the short term, nor that any significant theoretical change in behaviour would occur with any confidence in the long term.

Protecting Consumers Interests

P50 *'7.2. …. As noted, if parties charges better reflect their impact on the network then they are likely to make more efficient decisions regarding use of the system which would result in lower costs for losses overall which would be expected to result in lower prices to consumers. This will be a particular benefit to those consumers who are in fuel poverty.'*

Locational charging might deliver small net savings in total generation costs. However, it would increase prices for consumers in the South, and particularly the South-West. Consumer benefits are likely to be restricted to the North and Scotland. It is misleading to suggest that consumers in fuel poverty will generally benefit, unless they are all in the North and Scotland.

P51 – *'7.4. … In addition to the impact on prices, the Authority considers that facilitating more effective competition will encourage more generation to enter the market. This will further protect the interests of consumers as this would be expected to have a positive impact on security of supply. On that basis, a decision to approve one of those modification proposals would, in the Authority's view, be likely to further its principal objective.'*

No firm evidence other than a 'statement of faith' is provided as to how any of the proposals would promote security of supply. In fact, many respondents have suggested that regulatory action contrary to majority industry preference could deter investment, or increase the return required in the face of future regulatory uncertainty.

I trust you will find these comments helpful. They should be read in conjunction with our previous comments made on these proposals during the Ofgem and BSC modification assessment stage. I would be happy to clarify any aspect of our response with you should you wish. I would also be happy to provide copies of our previous responses on request.

Yours sincerely

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