Responses from P75 Assessment Consultation

Consultation issued 2 October 2002

Representations were received from the following parties:

No.	Company	File Number	No. of BSC Parties Represented
1.	Enfield Energy Centre Ltd	P75_ASS_001	1
2.	RWE TDL	P75_ASS_002	1
3.	The Major Energy Users Council (MEUC)	P75_ASS_003	0
4.	Corus Group	P75_ASS_004	0
5.	Lakeland Power	P75_ASS_005	1
6.	Aquila Networks	P75_ASS_006	1
7.	Edison Mission	P75_ASS_007	2
8.	Intergen	P75_ASS_008	4
9.	NGC	P75_ASS_009	1
10.	South Coast Power Ltd	P75_ASS_010	1
11.	Innogy	P75_ASS_011	7
12.	British Energy	P75_ASS_012	4
13.	Scottish Power	P75_ASS_013	4
14.	Teeside Power Ltd	P75_ASS_014	1
15.	AES Drax	P75_ASS_015	1
16.	Great Yarmouth Power Ltd	P75_ASS_016	1
17.	Scottish and Southern	P75_ASS_017	4
18.	Energywatch	P75_ASS_018	0
19.	Powergen	P75_ASS_019	12
20.	Immingham CHP LLP	P75_ASS_020	1
21.	Chemical Industries Association	P75_ASS_021	0
22.	British Gas Trading	P75_ASS_022	2
23.	Humber Power Ltd	P75_ASS_023	1
24.	TotalFinaElf Gas and Power Ltd	P75_ASS_024	1
25.	LE Group	P75_ASS_025	6

26.	SEEBOARD Energy	P75_ASS_026	1
27.	Magnox Electric	P75_ASS_027	1
28.	Energy Intensive Users Group	P75_ASS_028	0
29.	Alcan Primary Metal - Europe	P75_ASS_029	0
30.	NERA (late response)	P75_ASS_030	1

P75_ASS_001 – Enfield Energy Centre Ltd

Respondent Name	Enfield Energy Centre Limited
BSC Party	**Yes**
Role of Respondent	Generator
Responding on behalf of	Enfield Energy Centre Limited

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**P75**	P75 will more accurately target the costs of transporting energy to end users and will in the long term lead to more optimal investment decisions
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**No**	Though EECL does recognise the difficulties participants may face in forecasting TLFs if they are to be applied on an ex-post basis.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year Other?**	Settlement Period	
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used; Intact Indicative Other?**		EECL think it appropriate for the expert group to make this recommendation

Q	Question	Response	Rationale
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	April 2003	
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	No	A phasing in process would not better achieve the Applicable BSC Objectives (though should phasing in be a feature of zonal Transmission Losses, then it should be done so over a maximum of two years)
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**		EECL think it appropriate for the expert group to make this recommendation though can see no reason for demand and generation not to share the same zones
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**		While AC modelling would appear to increase accuracy EECL is happy to leave this for the expert group to decide.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both**		There will be a impact on EECL's trading systems though this should be of little consequence and given adequate time (2 months) to review any file

Q	Question	Response	Rationale
	systems and operations?		specifications easy to accommodate.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_002 – RWE TDL

RWE TDL response to the Elexon Consultation on Modification Proposal 75 – Introduction of Zonal Transmission Losses

Respondent Name	**Rob Watson, Power Trading Director**
BSC Party	**Yes**
Role of Respondent	**Supplier**
Responding on behalf of	**RWE Trading Direct Limited**

Question	**Response / Rationale**
1. On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives: ❑ **Modification Proposal 75** ❑ **An Alternative Proposal to P75**	Neither P75 nor an alternate version would better achieve the applicable BSC objectives. In particular with respect to C3.3 (c) 'Promoting effective competition in the generation and supply of electricity and promoting such competition in the sale and purchase of electricity'. The proposal will result in a discriminatory regime for those who are non-incumbent, new entrants to the energy market.
3. If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after would lead to better achieving the applicable BSC objectives?	No. The fundamental problem with this modification proposal is the fact that it is based upon TLFs calculated and applied and settled half-hourly rather than annually. This introduces risk to the market of an unknown factor, difficult to hedge against. The only option therefore is to introduce a risk premium, which ultimately will flow through to the consumer. The forecast of such Losses is further complicated by the unknown effect of NETA. It is acknowledged that losses have reduced since the regime was introduced and analysis is undecided as to the exact reason why, be it additional part-loaded plant on the system or improved network management by NGC.
4. If a zonal transmission Losses Scheme were to be introduced what time period should TLFs apply to: ❑ **Settlement Period / BSC Year / Other?**	**BSC year. Easier to apply, least risk route and least cost to implement, maintain and audit**
1. If a Zonal Transmission Losses were to be introduced what network should be used:	The report rationale supporting the use of an indicative network for P75 appears robust, we therefore concur with this view

❑ **Intact/ Indicative/ Other?**	
6. If a Zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?	Exclusion of the demand side would level the playing field for all demand takers within England and Wales. The majority of demand is not directly connected to the Transmission Network and does not directly affect losses. The actions of NGC themselves have significant impact when taken in conjunction with those of generators and DNO's
7. If a zonal Transmission Scheme were to be introduced, when should such a scheme be introduced?	As much notice as possible will be required. Many supply contracts span periods of more than 12 months; with negotiations beginning too much earlier timescales than historically has been the case. Customers also look towards longer-term deals that may span periods of 2, 3 or 4years+. Renegotiating contracts is a costly and time-consuming process. Justification is difficult for an element of a bill, which to the individual consumer may be a minute fraction of their overall business and energy cost. In addition participants will require sufficient notification in order to facilitate changes to internal forecasting, validation, credit assessment and billing systems.
8. If a zonal Transmission Losses Scheme were introduced, would phasing better achieve the applicable BSC objectives? If so, what timescales for full implementation should be employed? ❑ **4 / 10/ 15/ 25 years or other?**	In the current climate of change regarding the proposed introduction of BETTA, changes to the Transmission Access Regime (one aspect of which will be to introduce a locational signal), in addition to the current review of NGC Charging Methodologies, modification of the treatment of losses may not be prudent at this point in time. The cost benefit of such an exercise has yet to be proven. A cautious approach is preferred.
9. If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used: ❑ **GSP Groups for demand and generation/ GSP Groups for demand, TNUoS charging zones for generation/ Other?**	**GSP Groups for demand and generation would appear the simplest approach**
10. If a zonal transmission losses scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?	**AC as recommended by the modification group**

11. If a zonal transmission losses scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?	The impact from RWE TDL would be large affecting the following areas within our organisation: risk management, energy purchasing, pricing, legal, sales, settlement, credit assessment and billing.
12. Do you have any other views you wish to express about modification proposal P75?	**The report quotes the following indicative costs:** ❑ **TLF Agent < £1m although it is expected that this will be towards the top end of the quotation for this modification due to the half-hourly activity required to deliver the proposal** ❑ To support a move from Settlement Day to Half-Hourly central system functionality £230,100 + vat Costs yet to be established include: ❑ If approved the cost of phasing in this modification ❑ The adjustment to the calculation of the indicative imbalance prices on the BMRA ❑ Additional Audit costs due to the increase in audit scope ❑ NGC costs for provision of indicative or intact network data Ofgem quote an estimation NGC provided during 2001 of the cost benefit delivered by a move to zonal differentiation of £3million. With project costs looking to match the savings raised together with the complexity introduction of this modification over the current simple to manage scheme justification of such a move would not be judicial.

P75_ASS_003 – MEUC

Response to consultation on Proposed Modifications P75 and P82 on Transmission Loss Factors

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I am writing on behalf of The Major Energy Users Council (MEUC), which represents the interests of a large number of industrial and commercial consumers in comment to the two Modification Proposals P75 and P82.

My comments relate to individual demand consumers, virtually all of which are connected through the distribution network, although I expect they could equally apply to consumers that are directly connected to the grid.

Suggesting that zonal, average or marginal loss factors will in any way provide demand incentives for an industrial or commercial consumer or even a community makes no sense. They are where they are for historical reasons that are unlikely to have anything to do with the provision of an electrical supply.

The government's vision for the future is for the rapid development of renewable energy through small generators connected in the most part to the distribution networks. Quite recently the Regulator confirmed that Ofgem would be playing its part through its processes to ensure that this happens.

If the provision of complicated loss factors is perceived to be a useful efficiency tool, it would be more equitable for them to be allocated in full to generation on an appropriate basis, whether it be zonal or through the grid supply points. This is more likely to provide a level playing field for the future.

Customers, of course, pay in the end through their TNUoS charges but at least this would have the benefit of being relatively simple for them to verify as a regulated monopoly charge.

Customers remain concerned at the increasing complexity of the processes that continue to be developed through the many modifications to the trading arrangements. It is worth remembering that one of the frequently stated objectives of NETA was to have active demand side participation. It is difficult to see how applying either P75 or P82 can assist this objective.

I trust that you will reject both proposals.

Yours Sincerely
Hugh Conway
For MEUC

P75_ASS_004 – Corus Group

Please find attached Corus Group's responses to your questionnaires.

By way of elaboration please read the following comments which apply to both proposed modifications

1. We do not believe that the applicable BSC objectives are enhanced by P72 or P82, particularly in respect of demand. There is already differential zonal pricing for transmission (through NGC TNUoS charging) and the introduction of zonal losses will result in inappropriate (ie. too strong) locational signals.
For demand, competition in supply will not be enhanced as zonal loss factors would apply equally to all suppliers in a given zone. Also, it is quite likely that suppliers will use the small print of their contact terms and conditions to increase charges to potential losers but not offer to pass through benefit unless pushed by winners.
The added complexity of having to price energy on a zonal basis could constitute a barrier to entry by new suppliers, particularly small ones..

2. It is interesting to note that losses have been falling since privatisation and the scale of the alleged problem - likely to be less than NGC's estimate of £ 3 million - does not warrant the potential upheaval, the creation of winners and losers and the implementation costs for Elexon and market participants, over and above the market inefficiency caused by excessive zonal signals.

3. If zonal losses were introduced, NGC has said it may have to take account of the change in its review of transmission charging. The outcome could well be a levelling off of TNuoS charges between zones. This should result in making triad avoidance load management less attractive, thereby reducing the benefit to NGC of consumers avoiding consumption at times of system peak (and therefore stress). The key point here is that consumers will load manage for relatively short periods to avoid a triad peak charge but would not do so in respect of charges that apply throughout the year.

4. Unlike generation, whose raison d'être is to make and sell electricity, consuming electricity is not a core activity nor an objective for demand. This explains why there is no evidence that any demand has located or re-located in respect to electricity price signals within GB. Our view is that no demand will react to the locational signals of a zonal losses scheme, even if consumers are aware of it in their charges.

5. Overall we believe demand should be excluded from zonal losses ie. there should be one single demand group for England and Wales with a single loss factor. Moreover, we do not believe that the gaming opportunities that may arise for interconnectors and trading sites by having different factors for demand and generation in the same zone would be a sufficient reason not to exclude demand from P75 and P82. Gaming opportunities should

be addressed separately, either by licence obligation or changes to the BSC.

6. Whilst we favour maintaining the status quo by rejecting P72 and P82, if we had to choose between the two, the lesser evil is P82 because of its ex-ante nature and the smaller zone variation to the existing uniform loss factor for demand.

I hope you find these comments helpful.
Regards, Steve Macey.

Respondent Name	Stephen Macey
BSC Party	**No**
Role of Respondent	Large end-user
Responding on behalf of	Corus Group plc

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	Neither – keep the *status quo*	See covering email.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	Neither	See covering email
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year**	Please state preference	BSC year (April – March)

Q	Question	Response	Rationale
	Other?		
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state	No preference
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**Yes**	See covering email.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		Not before 1 April 2004
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	25 years using the Beta approach	The Beta approach is less complicated than 'F' factor.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**		No preference
10	**If a zonal Transmission Losses Scheme were to be introduced, what**	**AC/DC**	No preference

Q	Question	Response	Rationale
	approach to TLF production should be used, AC or DC based load flow modelling?		
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		No impact on investment decisions. Some cost involved in reprogramming bid analysis software and renegotiation of contracts.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	See covering email.

P75_ASS_005 – Lakeland Power

This response is being submitted on behalf of Lakeland Power only. A separate response is to be submitted by First Hydro Company.

Lakeland Power does not support either of these modifications. We have no further comments to make on the questions contained in the consultations.

regards

Libby Glazebrook
Edison Mission Energy

P75_ASS_006 – Aquila Networks

Please find that Aquila Networks Response to P75 Assessment Consultation is'
No Comment.'

Regards,

Jason Guest on behalf of Rachael Gardener.

Jason J Guest
Distribution Support Office
Aquila Networks plc

P75_ASS_007 – Edison Mission

Respondent Name	Cathy McClay
BSC Party	**Yes**
Role of Respondent	
Responding on behalf of	List all Parties (inc. respondent) First Hydro Company Edison First Power Ltd

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Neither**	Please see responses to questions 3 and 4. EME believes that an alternative to P75 that better meets BSC objectives would have the characteristics of P82.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	**P82**	
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	EME believes that ex-post TLFs will create too much uncertainty for market participants. Modelling has shown that events outside a participant's control e.g. breakdown of neighbouring plant , can dramatically change the TLF in a half-hour. EME believes that this is an unmanageable risk, which is further exacerbated by the lack of prompt reporting. Creating such a risk will not result in an efficient market as participants will not be given signals that they can respond to. EME therefore believes that ex-ante TLFs better meet applicable BSC objectives.

Q	Question	Response	Rationale
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	Annual TLFs	EME considers that an ex-ante annual TLF will provide the necessary signals to increase market efficiency. It is not clear that the administrative burden required to move to settlement period TLFs would result in further cost-effective savings. In addition annual TLFs provide greater certainty for participants as to the level of their losses when entering into longer-term contracts.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	Although an indicative network could be considered to give a more 'accurate' calculation of the TLFs this would result in individual participants being charged for losses caused by NGC actions e.g. line outages. Ideally NGC should be charged for these losses. However, as this is not possible under either modification, EME believes that is more appropriate to charge these losses to all participants rather than to individuals. This can be achieved through the use of an intact network.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	EME believes that excluding demand would not better meet BSC objectives. Losses occur on the system because of the location of both generation and demand. It is therefore appropriate that both pay for the losses that their choice of location gives rise to. Both generation and demand can respond to locational signals. This response may not be in the form of a relocation but may, for example, be an improvement in the efficiency of a process which results in less demand at a location in the South.

Q	Question	Response	Rationale
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	As soon as possible	In making the decision about implementation date the impact on systems must be considered. Timing should also be managed to coincide with one of the seasonal contracting rounds.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	No phasing	EME believes that a losses modification without phasing better meets BSC objectives as the identified defect in the market is immediately addressed. If phasing were to be included the preference is for 4 years.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	GSP groups for demand and generation	It is recognised that GSP groups need to be used for demand given the metering available. In order that generation and demand at a node has the same TLF the same zones are required for generation. This reduces the possibility of gaming the losses system. EME believes it is preferable for each zone to have a single TLF for the year in order to keep systems simple. This will not be the case if there are different zones for generation and demand; the TLF will depend upon whether the BMU (or trading unit) is consuming or generating.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	EME believes that given the lack of metered data for VARs and limited knowledge of the network configuration, it is more appropriate to use a form of dc load flow rather than an ac load flow of the form used for the modelling exercise.

Q	Question	Response	Rationale
			Although an ac load flow can be more accurate than a dc load flow this accuracy depends on the quality of the data. The use of an ac load flow requires assumptions about the power factor of loads, the VARs produced by generators and settings for SVCs and tap changers. Whilst power factors can be assumed up front, the other items are determined by algorithms in the ac load flow software. This is clearly not a transparent process. There have been arguments made that because the VARs affect the losses they should be included in the model. However, if the wrong VAR flows are included in the model, which will always be the case, the process results in inaccurate results. Given these issues, EME considers that the use of a form of dc load flow is more appropriate. All assumptions are made explicitly and so the methodology is more transparent. This should allow the modelling methodology to be defined clearly in the BSC. In addition, it is not clear that the ac load will provide any more accurate results given the lack of input data.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		The introduction of an ex-post TLF scheme would require significant changes to our risk management systems. An ex-ante annual scheme would require minimal system changes.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_008 – Intergen

Respondent Name	Chris Ridgway
BSC Party	See below for list
Role of Respondent	Commercial Operations Manager, InterGen (UK) Ltd
Responding on behalf of	Coryton Energy Co Ltd InterGen Energy Trading and Shipping Ltd Rocksavage Power Co Ltd Spalding Energy Co Ltd

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Neither**	InterGen do not believe that the extensive transition and ongoing costs of implementing this modification can be justified. No cost / benefit analysis has been undertaken which demonstrates an increased efficiency in the operation of the transmission system or administration of the BSC. As such none of the Applicable Objectives would be better achieved by introduction of P75.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		Neither better achieves the Applicable BSC Objectives.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes – ex-ante determination is preferred.**	TLF's calculated in advance allow participants to manage their risks more effectively and efficiently. Ex-post calculations result in uncertainty and hence higher costs which will be passed on to consumers, against Objective 3.3c. One of the unhedgable major risks of the half-hourly ex-post determination in P75 is the

Q	Question	Response	Rationale
			volatility arising from events outside of a participant's control (e.g. plant trip, pumped storage activity or bid/offer activity with the zone). This is likely to result in participants adopting a long position to avoid imbalance charges, which would certainly go against Objective C3.3b.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	BSC Year	Since the BSC systems are currently unable to cope with half-hourly TLF's there would be yet further costs in re-coding of the central systems to allow for this. Averaging over an extended time period gives greater certainty in TLM's and hence control over imbalance volumes. If this were not present it would be yet another incentive for parties to operate a long position to avoid penal SBP penalties.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Indicative	No strong preference but we would agree that the indicative network seems most appropriate.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	This mod attempts to provide for better cost allocation (Objective C3.3c) which would certainly not be achieved if demand sites were excluded from losses. In addition, we do not believe there could be significant cost savings from removing demand from the TLF calculation methodology.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	No strong view on implementation date but appropriate notice period	Changing the losses calculations would trigger issues in long term contracts which would require translation. Adequate notice (i.e. at least 12 months) would be required to implement this in a

Q	Question	Response	Rationale
		required.	ordered manner.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	25 years	This is representative of the lifetime of a typical generation projects. Since investment decisions have already been made on the basis of no zonal transmission losses, a long-term phasing approach is to be preferred.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	**GSP Groups for demand, TNUOS charging zones for generation**	No strong preference but it seems pragmatic to use the current GSP and TNUOS zones so that direct comparisons of current charges could be made with forecast costs. That said, the modelling suggests that a some nodes do not seem to be particularly representative of their current zone indicating that there is a case for redrawing of existing zones.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	The consultation document suggests that an AC model would require additional assumptions but does not guarantee more accurate results.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		The biggest impact for InterGen would be the time and costs of renegotiating long term power offtake agreements. It is difficult to estimate but further significant legal costs will arise from renegotiation of contracts to take account of any new losses methodology. Additional costs will arise from changes to IT systems. Specifically this will be the capture and forecast of TLF and changes to Settlements checking processes.

Q	Question	Response	Rationale
			For ongoing operations P75 would encourage us to run with a slightly longer position at present to ensure no exposure to penal SBP. It is unlikely that the introduction of P75 will have a major impact on future plant closure or investment (including locational) decisions as there are much more significant issues relating to such decisions.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	1) P75 appears to be a complex attempt to address a relatively small perceived issue of inaccurate cost allocation with no cost – benefit analysis of the proposal. 2) There exist much more significant inaccuracies in cost allocation within NETA e.g. the poor reflection participants total imbalance costs have on system operator costs. 3) The modelling results suggest that for some individual nodes the revised TLM will actually be a poorer reflection of real losses than is currently the case. 4) The TLF's calculated in P75 effectively over recover the true costs of losses. Although the resulting TLM's have the effect of smearing back this over-recovery, such an approach clearly does not accurately target costs to those that cause them. 5) Due to the modelling assumptions and inaccuracies, the TLM's resulting from P75 will still not be "right". It is difficult to justify the level of complexity of P75 compared with the simplicity of P82. 6) The intention to send locational signals is misguided. Such signals for generation already exist

Q	Question	Response	Rationale
			through TNUOS charges. If they don't work as intended neither will zonal losses.

P75_ASS_009 – NGC

Respondent Name	Malcolm Arthur
BSC Party	**Yes**
Role of Respondent	Transmission Company Representative
Responding on behalf of	National Grid Company

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Alternative**	There are benefits in introducing P75 and we believe that these benefits better achieve the applicable BSC objectives. However, providing fully marginal TLFs may exaggerate the locational signals, distorting the targeting of losses. Also, the costs associated with implementation of P75 are currently unknown and could be high. Therefore an alternative that will reduce the implementation and operational costs of P75 would better meet the applicable BSC objectives. Calculation of marginal TLFs could be carried out using a single intact network model and actual demand and generation patterns. Although there will be a decrease in accuracy, we believe this is not significant.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better**	**Yes**	Regarding the signals given to participants, if TLFs were calculated on an ex-ante basis, accurate locational signals could be provided in advance. However, there would be still be some non-

Q	Question	Response	Rationale
	achievement of Applicable BSC Objectives?		locational adjustment to the TLF (using the TLMO factor), so signals would not exactly match the actual loss allocation. If TLFs were to be calculated on an ex-post basis, some signals could still be given to participants via historical data (assuming some stability and reasonable TLF reporting) but these would be less accurate. Several input data sets are required to calculate TLFs. Either of these can be based on ex-ante or ex-post data. Whether any of these data sets should be used on an ex-post basis depends on the benefits of potentially more accurate TLFs and the drawbacks in terms of additional costs, complexity and added uncertainty to market participants. Ex-post network data would be extremely difficult to obtain in a transparent and usable format causing complications in the allocation of generation and demand to the relevant nodes. We believe that the improved accuracy of signals provided using ex-post data do not warrant the additional complexity, uncertainty and costs involved in providing the information.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	**Settlement Period**	Settlement Period (if ex-post TLFs are used). As it is proposed with P75 that the TLFs are calculated ex-post, to represent the effects of real time demand and generation changes, it is consistent with this approach that TLFs are calculated per settlement period (though this will increase the operational costs).

Q	Question	Response	Rationale
			However, as stated in our answer to question 3, we favour ex-ante calculation of TLFs, so if this method were adopted, then we would favour BSC Year for the time period. Calculating averaged daily TLFs as defined in P75, reduces complexity and costs but also reduces accuracy of signals. The reduction in accuracy of signals would warrant the use of a DC model and an intact network in the TLF calculation. We believe the benefits of providing daily TLFs outweigh the drawbacks.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact**	The modelling results indicated that there is little variation in TLFs associated with network configuration. Therefore, the costs and complexity of moving away from an intact network are not justified.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	Variable Transmission losses are caused by the location of both generation and demand. To provide the market with the correct locational signals, both demand and generation should be included in the Transmission Losses Scheme. Also, if generation faces zonal TLFs whilst demand does not, then the incentive to net generation against demand by becoming a trading party varies widely across the country, which is inefficient.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**Start of the BSC Year, 2004**	The Transmission Losses scheme should be implemented at the start of BSC year. Which year depends on the work required and notice available to implement. We believe that the earliest practical implementation date is the start of

Q	Question	Response	Rationale
			the BSC year, 2004.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	**Yes, over 5 years**	Phasing would ease the implementation of the Transmission Losses Scheme. When introducing Investment Cost Related Pricing for TNUoS in the early 1990s, NGC agreed with the industry that an impact of 2 £/kW in the change in locational tariff from year to year was the maximum acceptable. The study results show that P75 might have an impact of TLF=6% at the extremes of the system; a TLF of 6%, applied to a 100% base-load 1kW generator at an energy price of 20£/MWh equates to an impact of 6% × 1kW × 8760hr × 20£/MWh = 10.51 £/kW. Hence a five-year phasing would just exceed a 2 £/kW criterion in the extreme case. Using the same methodology as that used when introducing Investment Cost Related Pricing for TNUoS, the phasing period should be 5 years using the beta approach.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	**GSP Groups for demand and generation**	If the application of TLFs were equal and opposite for generation and demand, this would reduce the opportunities for uneconomic arbitrage. It would also reduce the possible problems arising from having to define 'generation' or 'demand' from BM Unit metered volumes. To achieve equal and opposite TLFs for generation and demand, the zones would need to be identical. Using the same zones would also ease the definitions and administration associated with trading sites.

Q	Question	Response	Rationale
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	Using an AC load flow model can slightly improve the accuracy when calculating TLFs. However, we do not believe the benefits of using an AC model justify the extra complexity and costs.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		There would need to be additional manpower for producing and supplying data sets. This depends on what data is required. Using either real time network configuration for each half hour, a representative network for the day, a weekly network or a number of representative networks over the year would mean significantly different workloads and implementation timescales for the System Operator. Also there will need to be systems and processes put in place to send information to the TLFA in a usable format. Using an AC model will mean the provision of additional information, impacting on resources and implementation timescales. An historic study has indicated that the maximum reduction in transmission losses was estimated to be about £3 million pounds per annum. This cost estimate was calculated prior to the implementation of NETA and used a number of simplifications and assumptions. Losses have subsequently fallen following the implementation of NETA and so we believe that this is an over-statement of the potential savings. After the introduction of the TLF scheme, NGC will need to consider any changes required to the Charging Methodology statement.

Q	Question	Response	Rationale
12	**Do you have any other views you wish to express about Modification Proposal P75?**		We believe that the obligation on the System Operator to provide network data to the TLFA should be coded into the BSC. There are a number of different phasing methodologies. Although the F-Factor approach provides some benefits, we believe that these do not compensate for the complexity of introducing such a scheme. Therefore, if phasing is adopted, the beta approach should be used.

P75_ASS_010 – South Coast Power

Respondent Name	South Coast Power Ltd
BSC Party	**Yes**
Role of Respondent	Generator
Responding on behalf of	South Coast Power Ltd

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Alternative**	We understand that a variation to P75 would have ex-ante monthly charges. An alternative based on this would better achieve BSC Objectives.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	P75 then P82 But we would favour an alternate, see rationale box.	The Modifications have a number of elements. At present there is no single modification or alternative that provides a perfect solution. However, the elements that we would find attractive include Ex-ante, seasonal or monthly, marginal, using generation TNUOS zones and no phasing
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	This would give greater stability and more opportunity to take hedging action if necessary
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year Other?**	Monthly, seasonal and yearly in that order	The modelling work has shown that there is little variation between settlement periods. However the transaction costs of operating in this period might outweigh the benefits. Monthly would better reflect the seasonal patterns
	If a zonal Transmission Losses	Indicati	More cost effective, and a

Q	Question	Response	Rationale
5	**Scheme were to be introduced what network should be used;** • **Intact** • **Indicative** • **Other?**	ve	sensible basis for planning decisions.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	The removal of demand from a scheme would have the effect of dampening the TLFs for generation.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	As soon as possible	Investment plans should have taken account of the possibility of losses and prudent operators that did so should be able to realise the benefits immediately
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** • **4 years** • **10 years** • **15 years** • **25 years** • **Other?**	No	One to two years phasing from the Authority's decision should be the absolute maximum. Parties have been aware of the possibility of a transmission losses scheme since 1990.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** • **GSP Groups for demand and generation,** • **GSP Groups for demand, TNUOS charging zones for generation,** • **Other?**	TNUOS for generation and GSP Groups for demand	TNUOS zones are based in part on load flow patterns and a losses scheme that is based on similar groupings will better reflect signals and costs for generators.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC/DC** (delete as appropriate)	Ideally, this should be AC, but the choice will depend on the robustness and validity of the model

Q	Question	Response	Rationale
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**	As a generator in the south of the country there would be an immediate benefit to the costs of power production. This would have to be balanced with increased costs of managing TLMs. But overall the effect would be positive	(As part of your answer, please provide preferred lead times, with rationale and also any views on future investment decisions (including mothballing of plant), if possible. Refer to questions in section 4.2 to help formulate your response. Please distinguish between different types of asset (e.g. demand, CHP, renewable))
12	**Do you have any other views you wish to express about Modification Proposal P75?**	no	

P75_ASS_011 –

Respondent Name	Bill Reed
BSC Party	**Yes/~~No~~**
Role of Respondent	BSC Party
Responding on behalf of	List all Parties (inc. respondent) Innogy plc, npower Limited, Innogy Cogen Trading Limited, Innogy Cogen Limited, npower Direct Limited, npower Northern Limited, npower Yorkshire Limited

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	~~**Modification**~~ **Alternative** (delete as appropriate)	(An Alternative would be implied if you identify one or more elements of the proposal that differ from those given in the table in section 2.3. Subsequently, the TLFMG may determine that some variants may be accommodated as refinements to the Mod as proposed) Modification Proposal P75 requires the calculation of loss factors for each settlement period ex post. The weakness in this approach is that, in addition to being administratively complex (and potentially expensive), it will require users to forecast the likely applicable loss factors. This will lead to increased imbalance risks. These risks will be different for different zones leading to inefficiency in the operation of the system, and also be detrimental to competition. As a result P75 does not better achieve the BSC Objectives. An alternative based on calculation of losses ex ante over short time periods (say week or month ahead) using the P75 methodology (fully marginal loss factors and TNUoS zones for

Q	Question	Response	Rationale
			generation) would provide certainty for players and thus reduce risks and enhance competition.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		The alternative approach could better achieve the applicable objectives when compared to P75 original and the current baseline, particularly in relation to improving efficiency and competition, as well as removing the current cross subsidy in the allocation of losses.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes/~~No~~** (delete as appropriate)	Calculation of losses ex post will create additional risks for BSC parties arising from uncertainty in loss factors. This may encourage parties to over contract in relation losses reducing overall efficiency of the system. Therefore an ex ante scheme would better achieve the applicable objectives.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	Please state preference Other	As noted above, it may be possible to construct an alternative to P75 that requires the calculation of loss factors ex ante over short time periods (say one week or one month) in order to provide sharper locational signals and improve efficiency in the allocation of losses.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state preference	Under the P75 ex post approach the network applied should be the network in place during the relevant settlement period. In an ex ante approach, the network, by definition, must be a model of the expected conditions prevailing for the relevant period.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**~~Yes~~/No** (delete as appropriate)	Modification P75 is explicit in retaining the current proportion of losses allocated to demand. Exclusion of demand would require a separate modification. Excluding demand would dilute

Q	Question	Response	Rationale
			any locational signals and may be unduly discriminatory in that it does not treat all market participants equally. In particular it will not treat embedded generation on the same basis as transmission connected generation.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	Please state preference **As soon as practicable**	The scheme should be introduced as soon as practicable.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Please state preference **No phasing**	The lack of zonal loss factors in the despatch decision is creating uneconomic despatch. There should be no phasing since this will prolong these diseconomies.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Please state preference **GSP Groups for demand, TNUOS charging zones for generation**	Zones should be defined in a manner that best reflects the locational differentiation of losses in order to provide "accurate" signals. For generation this would imply use of TNUoS zones when compared with GSP groups. Alignment with the TNUoS charging zones would also bring benefits from simpler administration. Under current settlement arrangements it is difficult to treat demand in any way other than in GSP Groups. As a result, the only practical solution at this time for demand is to introduce a zonal losses scheme on a GSP group

Q	Question	Response	Rationale
			basis.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC/DC** (delete as appropriate)	The choice of an AC or DC model should be determined by the trade off between the costs of development and the "accuracy" of the outputs. Both models require certain assumptions to be made with the potential to affect results. However, if there were no other considerations an AC model should better represent the reality of the system.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		(As part of your answer, please provide preferred lead times, with rationale and also any views on future investment decisions (including mothballing of plant), if possible. Refer to questions in section 4.2 to help formulate your response. Please distinguish between different types of asset (e.g. demand, CHP, renewable)) The introduction of zonal losses will improve efficiency in the despatch of plant and the siting of load and remove the current cross subsidies in the market place. If the locational signals are sufficiently effective then the overall costs of operating the system should be reduced.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	No

P75_ASS_012 – British Energy

Respondent Name	Rachel Ace
BSC Party	**Yes**
Role of Respondent	BCA
Responding on behalf of	**British Energy Generation Ltd, Eggborough Power Ltd and British Energy Power and Energy Trading Ltd**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	**Modification** **Alternative** (delete as appropriate)	We do not believe P75 better facilitates the relevant BSC objectives for the following reasons: The introduction of zonal marginal TLF calculated on a ex-post Basis represents an increased and unhedgeable market risk which existing users will be unable to respond to and this will damage market efficiency. Similarly it is hard to see how transmission system operation and investment will improve. The necessary stable long term investment signals which this industry needs are at best relegated to a secondary role and replaced by potentially unstable short-run signals. The lack of stability/predictability of TLF's calculated ex-post on a settlement period basis is a major cause of concern. Such an approach will not yield the long-term signals efficient long-term investment decisions in generation, demand and transmission infrastructure need. The only way P75 might be seen to better facilitate the BSC objectives would be through the introduction of appropriate long

Q	Question	Response	Rationale
			term risk mitigation measures which recognise and address the shortfalls and concerns raised above. Annexe 4 of the assessment report describes such a scheme.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		See above
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes / No** (delete as appropriate)	Ex-post TLF calculation is only one element of P75 and it does not seem to us to be sensible to single this out as an issue for review in isolation. Our view on P75 is given above. Nevertheless we would hope for objectivity and predictability in any form of ex-post calculation since transmission users will be unable to react efficiently to TLF's calculated in this fashion.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	Please state preference	Here again we are being asked to comment on one aspect of the P75 package. As stated above it does not seem to us to be sensible to consider such an issue in isolation as if we are able to 'cherry pick' individual elements that we might support.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state preference	From an initial review of the analysis undertaken by PTI on behalf of the TLFMG the precise choice of network model seemed to make little difference. However the lack of real time network data will undermine the accuracy of the analysis and thereby the efficiency of any reaction to it by users.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives**	**No** (delete as appropriate)	No. The exclusion of demand will create distortion. We believe that such a decision would result in an inefficient pattern of power station

Q	Question	Response	Rationale
	being better achieved?		development and output.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	Please state preference	The introduction of such a scheme would need to take into account the various wholesale and retail markets contracting cycles. The timing is unclear as the April and October contracting rounds may not dominate as they have in the past.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Please state preference	We believe that it is the long term interest of economic efficiency that a number of aspects of the existing arrangements for the allocation of transmission losses be preserved. Investments in this market need long term certainty and that this certainty and confidence is damaged if the present arrangements are changed without good reason in ways that create arbitrary windfall winners and losers through the withdrawal of existing rights. Such actions damage efficiency. The phasing proposals set out in the assessment report provide important risk mitigation tools which avoids the above problems. The period over which such phasing should apply should be consistent with the lifetime of the assets. We also believe that suggestions that phasing is inappropriate on the grounds that changes to the losses regime were signalled in the past to be wrong for the following reasons: the two current schemes are not the same as proposals made in the past. Past predictions of a reallocation of losses have been proven to be

Q	Question	Response	Rationale
			wrong many times. Because the latest proposals only became possible after the government changed the market governance procedures by law.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Please state preference	We believe the use of common groups for demand and generation to be the most appropriate approach to zonal grouping for any transmission loss allocation scheme. This is because it keeps generation and demand TLF's closer in line and hence discourages artificial bundling and unbundling of generation and demand and the associated inefficiencies.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC / DC** (delete as appropriate)	The work of the TLFMG and the accompanying report show that the choice between the two approaches is not straightforward. The DC approximation will be inaccurate if losses arising from reactive flows are significant. An AC model that allows more accurate representation is likely to be more complex and expensive.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		The systems related issues associated with the implementation of P75 are likely to be similar to the central systems from the settlement validation perspective. There will be additional changes to our risk management and pricing systems. Such a change without the risk mitigation discussed in our response and the TLFMG report represents a largely unmanageable risk to British Energy.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	We have the following additional comments. The consultation documents

Q	Question	Response	Rationale
			differences in TLF's due to changing the slack bus bar and states that the TLFMG did not consider this should diminish their confidence in the model. However, it is worth pointing out that this view was expressed in relation to the PTI model not a final model which would be used to calculate real TLF's. The slack bus may be a significant issue in practice. We fully support the interpretation of BSC objectives set out in Section 4.1 of the report. This interpretation was derived using arguments reviewed by the TLFMG. We believe the TLFMG should not now be side-tracked by including any other suggestions unless they are equally well supported by argumentation. The arguments set out in section 4.3.1 appear us to be divorced from any assessment against BSC objectives. Section 4.4.2 raises the topic of accuracy. The amount of variation in nodal TLF's suggests that P75 will at time overstate the differentials between nodes, which would lead to excessive and inefficient outcomes. As a general comment Section 4.4.2 (marginal vs. scaled) and 4.4.4 (TNUoS or GSPG's) and 4.4.5 (Network descriptions) all indicate areas where the method of implementation requires explicit assumptions. The need to make such assumptions, which affect outcomes, indicates yet again that the proposal was not predictable in any meaningful sense and hence exposes system users to substantial risk. This risk

Q	Question	Response	Rationale
			strengthens the arguments for risk management arrangements such as phasing.

P75_ASS_013 – Scottish Power

P75 and P82 Assessment Consultation

ScottishPower welcomes the opportunity to contribute once again to the debate on the possible introduction of the locational allocation of transmission losses in England and Wales. Our responses to the specific questions raised by the TLFMG in the consultation paper are contained in the attached questionnaire. We also have two other points to make and these are set out below.

BETTA

While our responses are, of course, focussed on the possible implementation of the current modification proposals in England and Wales we have some concerns which we would like to draw to the attention of the Panel and Ofgem concerning the potential interaction of these proposals with the work which is currently being undertaken by DTI and Ofgem to introduce GB-wide trading under BETTA.

The BETTA Programme has indicated that any future GB BSC will be the subject of consultation and will be based on the BSC which is extant in England and Wales at the time of consultation. Whether or not any modification to the BSC as a result of P75 or P82 will have been made by the time that consultation takes place is a matter of conjecture. We would nonetheless take this opportunity to draw the attention of the Panel and Ofgem to the potential for nugatory work if the locational allocation of transmission losses is introduced in England and Wales and then rejected for GB a short time later. The detrimental effect of locational losses on generators in the north of England is clearly evident from both the estimated loss factors published in Ofgem's February paper and the modelling work commissioned by the TLFMG as part of the assessment process for P75 and P82. The Scottish Executive's policy of support for the development of Scotland's renewable energy potential is well known and was restated at the BETTA seminar in Edinburgh. There is, therefore, a clear conflict between the Ofgem policy of deterrence of northern generation by increasing its share of the costs of losses and the Government policy of encouragement of renewable generation some of which, by its very nature, requires to site in the north of Britain.

These issues will doubtless be raised during any future consultation on the content of the GB BSC. Should the decision then be that transmission losses should be allocated on an average basis, as they are at present both in England and Wales and in each of the two Scottish transmission areas, any work which had been carried out to introduce locational losses in England and Wales would be wasted. ScottishPower acknowledges that the BSC Panel must assess the current modification proposals against the applicable objectives of the England and Wales BSC but we would ask that, should their decision be to recommend acceptance of either of these proposals, they draw to Ofgem's attention the potential for nugatory work which we have highlighted here and suggest that Ofgem decline to accept their recommendation and reject the modifications.

Choice of modelling technique

ScottishPower is concerned, but not surprised, that the TLFMG have only considered the traditional AC and DC load flow techniques for the production of loss factors for use under these modifications. The time pressures inherent in the BSC modification process are such that this was to be expected. However, we would draw the Panel's attention to a particular feature of the modelling results which we believe points to the need for further research into alternative methods.

The modelling results show quite clearly that the loss factors for both generation and demand are greatest at the periphery of the system and are zero in the midlands. The results also show that the volatility of the loss factors is proportional to their magnitude. While the intention may be to encourage generation and demand to site in the same zone in order to reduce power transfers over long distances, the logical course of action in response to these signals would be for both generation and demand to locate in the midlands to avoid the volatility and variability of loss factors which occurs in the peripheral zones when using this technique. This is not the desired outcome. The desired outcome must be to achieve a balance between generation and demand in each area of the country. If balance has been achieved in a particular area then the loss factors applied in that area should reflect that balance, rather than merely reflecting the distance from the system centre. If a balanced zone is subject to transit flows due to an imbalance in a more distant zone, the loss factors in the balanced zone should not be affected. The power flows which underly the modelling results are not known in detail. However, projected flows at the time of system peak are included in the NGC seven year statement. From these it can be seen that, for example, the estuary zone is exporting the equivalent of over 200% of the zonal demand, while the northern zone, net of the transit flow from Scotland, would be importing about 10% of the zonal demand. The loss factors indicated by the modelling results, perversely, would induce generation to leave the northern zone in favour of the estuary zone. Calculation techniques which avoid this problem are available. One technique is the method of network tracing, also known as the method of average participations. This technique has recently been used by the European Commission as a means of determining the use made by each member state of the transmission networks of other member states in the context of the work on cross border tariffication. As noted in the Annex to the CEER position paper *Inter-TSO Compensation Mechanism: a model for the longer term*, the same algorithm can be used to determine the share of losses on the respective systems. This technique could easily be applied to the zones of the NGC transmission system in order to determine the magnitude and responsibility for losses caused by intra- and inter-zonal flows.

ScottishPower would therefore suggest that the assessment period for these modifications is extended and the TLFMG be requested to consider other calculation techniques which would avoid the perverse loss factors produced by the traditional method. Failing this, the modifications should be recommended for rejection as they will neither allocate the cost of losses correctly nor send the correct locational signals to influence siting and closure decisions. Hence they cannot be considered to better achieve the applicable BSC objectives. We would also note in passing that this problem with the traditional calculation method is likely to be exacerbated under BETTA.

I trust that you will find these comments helpful. Nonetheless, should you require further clarification of any of the above, please do not hesitate to contact me.

Yours sincerely,

Man Kwong Liu
Calanais Ltd.
For and on behalf of: - *ScottishPower Energy Trading Ltd.; Scottish Power Generation Ltd.; ScottishPower Energy Retail Ltd.*

Respondent Name	Man Kwong Liu for ScottishPower Energy Trading Ltd.
BSC Party	**Yes**
Role of Respondent	Trading Party
Responding on behalf of	List all Parties (inc. respondent) ScottishPower Energy Trading Ltd.; Scottish Power Generation Ltd.; ScottishPower Energy Retail Ltd.

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**No**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. Indeed, as noted in our responses to the questions below, we believe that certain fundamental aspects of P75 would jeopardise the achievement of these Objectives as compared to the current baseline. We do not support either Modification Proposal P75 or any Alternative.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		N/A
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the**	**No**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives.

Q	Question	Response	Rationale
	period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?		The particular feature in question, the ex post calculation of zonal TLF's, exposes parties to imbalance risks consequent on the actions or omissions of others (e.g. failure of a nearby genset) and on chance occurrences (e.g. transmission faults), which may cause the pattern of flows to deviate from expectation. Such risks cannot be hedged and will lead to a risk premium being factored into prices, jeopardising the achievement of Applicable BSC Objective (b). Further, given that under P75 the allocation of transmission losses would be on an essentially geographic basis (see the comments in our covering letter regarding the modelling technique), the magnitude of these imbalance risks will be dependent on the location of the party. Hence the consequences of a particular event will not be the same for all parties, which would jeopardise the achievement of Applicable BSC Objective (c).
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	Settlement Period	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. If such a scheme were to be introduced using ex post calculation of TLFs from actual system data it would seem sensible for the TLF to apply only to the settlement period pertaining to the data from which it was calculated, although this might be considered to jeopardise achievement of Applicable BSC Objective (d). To combine data and/or TLFs across multiple settlement periods would seem to negate the benefits in terms of accuracy which are alleged to be achieved by the ex post methodology and thus would also jeopardise the achievement of Applicable BSC Objective (d). However, we would also assert that any accuracy benefits gained through greater granularity of input parameters, may be lost through inaccuracies in the model results (see Question 10 and covering letter), and through distortions created by subsequent zonal averaging (see Question 9). As such not only

Q	Question	Response	Rationale
			does the scheme proposed in P75 jeopardise achievement of Applicable BSC Objective (d), but may not necessarily improve on the current baseline at meeting Applicable BSC Objective (b).
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. If such a scheme were to be introduced using ex post calculation of TLFs from actual system data then the calculations should use an intact network. The modelling results have shown that the TLF's are sensitive to NGC's actions. Changes to the TLFs caused by NGC's actions are not within the control of parties and they should not be exposed to this additional imbalance risk. The use of an indicative network in an ex post calculation would expose participants to the consequences of NGC's actions, thus jeopardising the achievement of Applicable BSC Objective (b). The Panel should draw the attention of the Authority to the need, in the event that a zonal losses scheme is introduced, to review NGC's incentives regarding the total volume of losses with a view to ensuring that they do not conflict with to the incentives faced by trading parties.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. However, were such a scheme to be introduced it is important that it applies equally to demand as well as to generation. Both sides of the market give rise to power flows and hence cause transmission losses. While the use of zonal loss factors arguably does not enhance competition between suppliers for a particular customer, the presence of a cost message for each customer must promote the achievement of Applicable BSC Objective (b), the efficient, economic and coordinated operation by the Transmission Company of the Transmission System. That

Q	Question	Response	Rationale
			demand can and will react to such price signals is evidenced by widespread triad avoidance activity. Please see also our answer to Q9.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	April 2008	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. Whilst the idea of increasing the efficiency of the short term despatch process may seem attractive, our studies suggest that only minimal changes would occur in the overall pattern of generation in the short term. It has been argued that the zonal allocation of losses will ensure that correct closure decisions are made but we would point out that the benefits thus realised would be relatively small, relating only to the marginal costs of losses for the remaining life of the plant, and would be achieved at the cost of introducing a considerable shock to the market. The benefits in terms of improved siting decisions, on the other hand, are available over the entire life of the plant and it is these benefits which a zonal losses scheme should seek to realise. To allow informed siting decisions without the risk of market shock we would suggest that any such scheme be introduced with a notice period of at least five years. The planning, siting and construction of new plant could then be carried out in the full knowledge of the future market arrangements under which it would operate. (We do not believe that the presence of a principle on a regulator's wishlist has provided sufficient certainty on which to base investment decisions in the past.) On this basis we would suggest an implementation date of April 2008.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full**	5 or 10 years, depending on implementation date	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. As noted above, whilst the idea of increasing the efficiency of the short term despatch of generation may seem attractive, the sudden

Q	Question	Response	Rationale
	implementation should be employed? **4 years** **10 years** **15 years** **25 years** **Other?**		introduction of such a scheme into a mature market will increase the perceived risk of market shock, leading to increased costs and prices. Thus the intended short term benefit will be outweighed by the longer term disbenefits. The scheme cannot therefore be considered to better achieve the Applicable BSC Objectives. Should the Authority believe otherwise and direct that the modification be made, a transition period during which the loss factors were gradually increased to their final value would mitigate, but would not entirely remove, the adverse effect on the achievement of the Applicable BSC Objectives. Given that the asset life of generation and major demand side plant is 20 years, a transition period of half this, i.e., ten years from Authority decision to full implementation, would be appropriate. The use of a five year transition period after the five year notice period which we advocated above would provide both a certain framework for all and reasonable protection for existing players.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand,** **TNUOS charging zones for generation,** **Other?**	GSP Groups for demand and generation	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. However, were such a scheme to be introduced the zonal groupings should be the same for generation and demand. The underlying methodology of P75 produces a single loss factor at each network node which is applicable to both generation and demand. Use of different loss factors during the assignment of losses to BM Units in settlement could result in the opportunity for spurious, opposing contract flows to be created by a party such that the difference between the loss factors applied in settlement could produce an energy surplus to the credit of the party, and this would jeopardise the achievement of Applicable BSC Objectives (b) and (c).

Q	Question	Response	Rationale
			There are therefore good reasons in both theory and practice why the same zonal groupings should be used for generation and demand. Given that settlement of the demand side on the basis of GSP Groups is unavoidable, GSP Groups should also be used for generation. If Applicable Objective (d) is not to be jeopardised, the constraints of the SVA process mean that loss factors for demand and, we believe, for generation must be averaged across GSP Groups. The results of the modelling show clearly that this process leads not only to significant alterations to the loss factors applied to individual BM Units but also to changes in the relative positions of BM Units in the notional loss-adjusted national merit order. While it may be argued that the stepped gradient of loss factors across the network gives a better cost allocation than the current single zone, we believe that such errors will lead to excessive and inefficient reactions by some parties and jeopardise the achievement of applicable objectives (b) and (c). The zonal averaging effect is best reduced if the zones are chosen in order to minimise the intra-zone variation in TLFs (c.f., the selection of generation TNUoS zones on the basis of 'similar' nodal marginal costs derived from ICRP). However, the identification of the optimal zonal definition may not be clear cut due to the sensitivity of nodal results to a variety of factors. We would question whether any transmission cost allocation issues can be sensibly taken forward under the BSC while the SVA process is based on GSP Groups and would therefore urge that P75 be rejected.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**If using the traditional loadflow modelling technique, DC**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P75 would better achieve the Applicable BSC Objectives. However, were such a scheme to be introduced then the choice of modelling methodology will play a significant role in whether or the Applicable BSC Objectives are

Q	Question	Response	Rationale
			better achieved, particularly since the apparent intention of the scheme is to more accurately target costs of transmission losses on those who cause them. We do not believe that the traditional AC/DC loadflow loss factor technique is appropriate and have set out our arguments in the covering letter. However, were this technique to be used the AC loadflow has a number of drawbacks, most notably the requirement for reactive data. Given the absence of reactive energy data of a standard equivalent to the active energy data, assumptions will need to be made on which will depend the accuracy of the resulting TLFs. This is unsatisfactory. The variability of nodal differentials when using different slack busbars is also a cause for concern. While the TLFMG may be satisfied that this was not material to the modelling there can be no guarantee that this feature would not introduce material distortions into the TLFs in a production environment, to the detriment of some parties. If the traditional loadflow technique is to be used, these problems suggest that the DC methodology is more robust.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		The introduction of a zonal transmission losses scheme would introduce a further, potentially significant factor into ScottishPower's investment decisions regarding new generation plant. It would also be a factor in any decision to mothball, should such a course of action be contemplated. If either Mod (P75 or P82) is accepted, the Transmission Loss Factor Agent will be formed and will be sending calculated zonal TLFs to BSC Parties. It is not clear at this stage how this will happen, and what new interfaces or flows will need to be handled. It is assumed that either a new flow will be created or modifications to the structure of existing flows will be made to form the interface between the TLFA and a Party. There will be an impact on Sonet (our internal settlement system), which would be similar regardless of which Mod is adopted, if either, and this will have a

Q	Question	Response	Rationale
			knock-on effect to other dependent systems within Scottish Power. At a minimum, a DLIA for each of these would be required, plus a full test of Sonet and regression testing of the systems dependent upon it. The size of the systems impact is judged at this stage to be similar to that for the Sonet-related aspects of BSC Systems Release 2. Hence Scottish Power would require up to 6 months notice for implementation from the point that the implementation details of the Modification are agreed.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	As has been noted by the proposer of Modification P82, the heating losses for which locational cost allocation may be considered appropriate comprise only about 50% of the total volume of transmission losses. While the BSC formulation for the allocation of losses will not over-recover the total volume, the use of fully marginal locational loss factors in the formulation will create excessive differentials between zones. This could lead to distortions in the notional loss-adjusted national merit order and will jeopardise the achievement of Applicable BSC Objectives (b) and (c). ScottishPower is concerned that the implementation of P75 would introduce a locational signal in addition to the signal currently provided by NGC's transmission network use of system charging methodology. NGC have stated that they may reconsider the strength of the locational signal provided by TNUoS if P75 is implemented. ScottishPower is concerned that no convincing arguments have been made, by Ofgem, NGC or anyone else, as to what is the 'correct' degree of locational signal. NGC's TNUoS methodology is subject to governance outside the BSC (and might also benefit from the application of the network tracing methodology which we have advocated for losses) and we are concerned that strengthening the locational signal through the BSC while unable to weaken the existing signal will lead to punitively high locational costs at the periphery of the system. This would jeopardise the

Q	Question	Response	Rationale
			achievement of Applicable BSC Objectives (b) and (c).

P75_ASS_014 – Teeside Power Ltd

TEESSIDE POWER LIMITED

General comments on: **"CONSULTATION – Modification Proposals P75 'Introduction of Zonal Transmission Losses' and P82 'Introduction of Zonal Transmission Losses on an Average Basis'**

In addition to the responses to the specific questions set out in Annex 1 & 2, we would wish to make a number of comments and observations on the text of the Consultation Paper itself.

Section 3.3:

We note the comments regarding the significance of the choice of "slack bus". Whilst we acknowledge that the TLFMG are undertaking further work to assess the significance of the choice of slack bus, which we support, we would wish to register our concern that such a fundamental assumption, adopted by the TLFMG, has turned out to be incorrect. We would wish therefore to reserve our position on the validity of the load flow modelling assumptions.

Section 4.1

This section provides a sound basis for the assessment of both P75 and P82. Having considered the different aspects, we conclude that:

i) short and medium term gains in efficiency will be derived from changes in the levels of marginal production and marginal demand: based on a re-assessment of the analysis undertaken by NGC on the potential value of such gains, we estimate these will amount to less than £1 million per annum;
ii) re-location is an extremely impractical proposition for either generation or demand: only market participants with a number of production or demand facilities are likely to respond by optimising their portfolio production or consumption;
iii) closure of generation or demand will be largely driven by factors other than zonal transmission loss charges; and
iv) any changes to NGC incentive arrangements can be achieved by alternative means, which may be more effective than any change in transmission losses charging regime.

Section 4.2

TPL supports the TLFMG approach of undertaking a cost-benefit analysis of the proposals.

Our comments on the specific questions posed in section 4.2 are as follows:

a) given the lack of definition of the changes, we are unable to quantify the cost of implementation which TPL would incur if either scheme were to be

adopted: That said, based on our experience, we would expect to budget something of the order of £500,000 for the costs incurred by TPL to cover the renegotiation of contract terms, making changes to existing systems and where necessary, developing and implementing new systems. These costs will inevitably be greater the more complex the new arrangements: the converse is that additional ongoing operation costs will be greater for a simple system which requires a higher level of ongoing risk management.

b) a P82 style scheme would cost TPL significantly less to implement than a P75 type scheme.

c) as regards size, we would expect generators and consumers with a portfolio of sites to benefit from the economies of scale.

d) we have a number of concerns regarding the NGC short term benefit analysis. Recent calculations, using a more representative figure for generation costs, suggest that the benefit from a more efficient despatch would be less than £1million: given movements in generators costs, this figure is insignificant.

Section 4.3.2

Whilst we understand the reluctance of the demand-side of the market to become involved in zonal differentiation, in considering whether a scheme would better achieve the Applicable BSC Objectives, we conclude that there is no basis for giving any particular group of market participants the right to be excluded from the scheme. The reasons given as to why a consumer cannot relocate apply equally, if not more so, to a power station, such as that operated by TPL.

To exclude any group from the scheme would be an explicit discriminatory act which would result in particular market participants being unfairly treated, in comparison with other market participants.

In conclusion, we can identify no grounds for either demand or for any particular sector of the generation market to be excluded from any zonal transmission losses scheme.

Section 4.4.2

We note the comments that both proposals had the stated intention to allocate costs in a better manner than under the current arrangements. Whilst we recognize that neither proposal sought to achieve precise cost allocation, the evidence from the work undertaken by PTI shows that both temporal and spatial averaging of TLFs will result in inaccuracies in cost allocation. Given this fundamental difficulty, consideration should be given to whether to scale down the factors further than proposed by P82 to avoid particular market participants being unfairly treated through the application of an average factor which is detrimental compared with the “precise” TLF for that location and for the circumstances at the time.

Section 4.5.3

This section acknowledges that NGC “may” need to review the basis for its Use of System Charges, should the charging for transmission losses under the BSC be changed. The nature of such changes needs to be established prior to any decision on P75, P82 or any alternate

proposals to avoid over-stating the locational signals given to market participants. Furthermore, given the extent of the locational signals in current TNUoS charges, we consider it of paramount importance to resolve what amendments are required to TNUoS charges before any zonal transmission losses scheme is implemented.

Respondent Name	Teesside Power Limited (Keith Miller)
BSC Party	**Yes**
Role of Respondent	
Responding on behalf of	Teesside Power Limited (TPL)

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**An Alternative Proposal to P75 - Possibly**	As it stands, the Modification would not better achieve the Applicable BSC Objectives. The introduction of the scheme as defined would, in the short to medium term, simply result in a re-distribution of wealth among market participants in return for an increase in industry costs: hence, it would be inefficient. Given the extreme nature of the modification Proposal P75, an alternative which: fixed the TLF for a period of longer than a single settlement period adopted the same zones for generation and demand; and

Q	Question	Response	Rationale
			included phasing based on the "F" factor approach over a significant period for historic levels of production or consumption might better achieve the Applicable BSC Objectives, although this would require further analysis to justify such a scheme.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	This matter is not one where a simple "yes/no" answer can be given: whether either ex-ante or ex-post would lead to the better achievement of Applicable BSC Objectives depends upon the timescales over which the TLF is calculated and applied. On balance, however, because it allows market participants to manage their own position, we consider that ex-ante would lead to the better	TPL considers that if a zonal transmission losses scheme were to be introduced the basis for the calculation of the TLFs will determine whether or not the scheme would better achieve the Applicable BSC Objectives. On the one hand, any scheme which uses ex-ante TLFs will inevitably suffer from the deficiency that the TLFs will be wrong and hence, any potential gain derived from a more efficient despatch of generation and consumption will be diluted. The extent to which any such potential gain is reduced will depend upon the errors in TLF. A single annual zonal TLF figure will clearly result in a greater reduction in efficiency than a figure which is profiled, based on history. In addition, the use of ex-ante zonal TLFs set well in advance, as proposed under P82, will clearly not allow changes which occur during the year to be

Q	Question	Response	Rationale
		achievement of Applicable BSC Objectives	reflected, hence introducing a time delay which will lead to inefficiency in the operation of the market and hence adversely affect the achievement of applicable BSC objectives. On the other hand, any scheme which uses ex-post TLFs will clearly have the ability to make use of half-hourly TLFs which will accurately reflect the TLFs which applied at the time, subject to reliable data being available. Such a scheme, however, will suffer from the deficiency that market participants will be forced to "guess" the TLFs which will be applied ex-post and hence, as for the ex-ante approach, any potential gain derived from a more efficient despatch of generation and consumption will be diluted. The extent to which any such potential gain is reduced will depend upon the ability of all market participants to predict the out-turn TLFs. Clearly, similar considerations to those in the paragraph above will apply to any scheme which adopts ex-post average zonal TLFs which apply for a longer period than a single settlement period.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	As we have made clear in the response above, the period over which TLFs should apply also needs to be considered in the context of ex-ante versus ex-post. We consider that the errors introduced through averaging TLFs over a period longer than a settlement period have not yet been	If a zonal losses scheme were to be introduced, then because of the nature of the current BSC arrangements, the zonal TLF will be applied on a half-hourly basis. From our perspective, this question essentially is about over what period that TLF is averaged, if at all. For a scheme which uses ex-ante TLF, assuming that there is a sufficiently liquid forward market which is readily available to all wholesale market participants, the fundamental issue is how accurate an average ex-ante TLF is, compared with the actual value: it must also be recognised that the zonal averaging will also have an adverse

Q	Question	Response	Rationale
		adequately investigated and that before an averaging period is chosen, further studies should be undertaken: consideration should also be given to setting a "maximum averaging error", which would then be used to determine the basis for determining average zonal TLFs. One option would clearly be to use the same standard as has been adopted for metering systems.	impact on the ability of the scheme to better achieve the applicable BSC objectives. In terms of achieving short term economic efficiency in market operation, given that prices are set and that settlement is based on a half hour period, we consider that the TLFs should be averaged over a shorter period than the annual basis proposed for P82. Given the need for forward planning, we recognise that half-hourly values are impractical and would be costly for the industry to implement. We suggest that a period between one year and a settlement period is chosen, based on criteria which are set out in the BSC and which would provide a robust basis for the future. For a scheme which uses ex-post TLF, the major issues are: how accurate an average ex-post TLF is, compared with the actual value; and how volatile are the zonal TLFs, and hence how accurately are market participants likely to be able to forecast them in order to be able to "hedge" their position against imbalance charges? As with ex-ante TLFs , it must also be recognised that the zonal averaging will also have an adverse impact on the ability of the scheme to better achieve the applicable BSC objectives. In terms of achieving short term economic efficiency in market operation, given that prices are set and that settlement is based on a half hour period, we consider that the TLFs should be averaged over a shorter period that the annual basis proposed for P82. Given the need for forward planning, we recognise that half-hourly values are impractical and would be costly for the industry to implement. We suggest that a period between one year and a settlement period is chosen, based on

Q	Question	Response	Rationale
			criteria which are set out in the BSC and which would provide a robust basis for the future.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	The network used to derive the TLFs should be as representative of the outturn situation as possible.	The significance of this question relates largely to any scheme's ability to improve market efficiency in the short to medium term. The matters which need to be considered are very similar to those addressed in the response to question 4 above. In order to better achieve the BSC objectives in the short to medium term benefits can only be justified if any scheme implemented results in a more efficient despatch of generation and demand as the result of a zonal transmission losses scheme were such a scheme to be introduced. For an ex-ante scheme, such as P82, participants would know in advance what their exposure to TLFs is and hence be able to manage the exposure through sales or purchases in the market, or through adjustments to generation output or customer demand. For this to be achieved in a manner such that efficiency is improved and hence there is a contribution to the applicable BSC objectives being better achieved, requires the TLFs to be as accurate as can be achieved. Hence a representative network should be used. For an ex-post scheme, it is, in principle, possible to use the actual network configuration as existed during the relevant settlement period. Unfortunately, adopting this approach is likely to lead to increased volatility and inefficient despatch of generation and demand. Hence the need to average over a period longer than the single settlement

Q	Question	Response	Rationale
			period, which whilst compromising accuracy, will improve efficiency over the half-hour approach. That said, there is no evidence in the work carried out to date that an ex-post TLF approach even with an average network configuration will result in the applicable BSC objectives being better achieved.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	If a zonal transmission losses scheme were to be introduced, in view of the significant impact it would have on individual market participants, it has to be assumed that the Authority had determined that in its judgement, such a scheme did clearly result in the applicable BSC objectives being better achieved. From the analysis presented in section 4.1 of the Consultation Paper, for this to be the case, the benefits from both short term and longer terms changes in the patterns of generation and consumption would need to outweigh the additional costs. Given that demand is no less able either to relocate in response to the introduction of zonal losses or to change its consumption than is generation, we can see no reason for excluding demand from the new arrangements. We would also wish to point out that the same arguments apply to any market participant group which argues to be excluded from a new zonal transmission losses scheme. We are aware the argument has been put forward that introducing zonal losses charges will have no impact on competition in supply. Whilst we would tend to agree with this, we would also maintain that for those with existing generation assets, the same arguments apply.

Q	Question	Response	Rationale
			If a zonal transmission losses scheme were to be introduced, whilst, in principle, there would be changes in output at the margin, in the short to medium term this would have no impact on competition at the margin, nor does it promote the effectiveness of the competition: it simply changes the level of output of those already competing in the market as a result of changing the costs seen by those competing in the market. This mirrors precisely the situation for demand. Paper manufacturing plants in different parts of the country will potentially change their levels of production as a result of the marginal change in costs, but the changes will not promote or enhance the effectiveness of competition in that industry.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	If a zonal Transmission Losses Scheme were to be introduced, it should be implemented on 1 April but not before 1 April 2004.	There area number of factors which lead us to conclude that 1 April is the most appropriate date to introduce a zonal losses scheme: there remain a number of contracts which either expire on 31 March each year, or whose terms change on that date; it has been generally recognised that there is an interaction between the proposed zonal losses schemes and NGC charges for Use of System: these are reset annually from 1 April; there is likely to be implications for other NGC incentive schemes which operate from 1 April to 31 March each year As regards the precise timing, to deliver the benefits which will be implicit if there is a decision to proceed with the introduction of a zonal transmission losses scheme, it is essential that market participants have an opportunity to make the necessary changes to their business systems to accommodate the new arrangements. Furthermore, in the

Q	Question	Response	Rationale
			event that the scheme is based on the uses of ex-post TLFs, market participants will need to develop the appropriate forecasting methodologies appropriate to their individual commercial arrangements to enable them to best manage the risks introduced by such new arrangements.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	In our view, if a zonal transmission losses scheme were to be introduced, phasing over a period of 10 years would better achieve the Applicable BSC Objectives.	In considering the question of whether to adopt a phased implementation, it is important to take into account the balance between the overall impact on the market and the impact on an individual market participant. As regards the former, the only analysis of which we are aware is that carried out and reported by NGC in its response to an earlier Ofgem consultation document on transmission access and losses. Based on our understanding of that analysis, we conclude that in the current market environment, and also taking account of recognised deficiencies in the analysis, the short to medium term benefits derived from the introduction of a zonal transmission losses scheme would be less than £1 million a year from improved despatch. This can be measured against the impact on any individual participant which could be significantly greater than £1 million a year from both the cost of losses and from additional financing and risk management charges as a result the increased market/regulatory risk, as discussed in Annex 4 to the Consultation Paper. To mitigate against this adverse impact on market efficiency, we advocate a phasing approach. Whilst we accept the argument that a "ramp" approach over a fixed timescale has the advantage of simplicity, we believe that an approach based on the "F factor"

Q	Question	Response	Rationale
			methodology as described in Annex 4, would better achieve the Applicable BSC Objectives. Finally, we are aware that Ofgem has claimed in its February 2002 document entitled "Transmission Access and Losses under NETA: Revised Proposals", that market participants should have been aware of the impending implementation of a zonal transmission losses scheme. The document includes a list of references which, Ofgem claims, demonstrate that Ofgem had signalled its desire to introduce zonal loss charges and hence, market participants should have taken appropriate steps to hedge their position. We are aware that this argument has been restated by some market participant representatives during discussions in the Transmission Loss Factor Modification Group in support of early implementation of a new transmission losses scheme. We have reviewed and considered the evidence listed by Ofgem but and can find no justification for the conclusion that such evidence supports a prompt implementation of the transmission losses scheme with no phasing. Our main reasons for reaching this conclusion are: neither of the current proposals are the same as any proposal put forward in the past past statements of the re-allocation of transmission losses have been proven wrong on a number of occasions the latest proposals have only become possible due to the change in governance arrangements and finally, we are aware that at the time of privatisation of the

Q	Question	Response	Rationale
			industry, TLF charges were removed from the despatch process, then carried out centrally by NGC, in order to achieve the government objective of a single nationwide market price. Against this background, it is not justifiable to claim that market participants had adequate warning and should have managed the risk of implementation of a zonal transmission losses scheme.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	If a zonal transmission losses scheme were to be introduced, we accept the arguments for using GSP Groups for both generation and demand.	We believe that it is economically efficient for the same zone to be used for generation and demand and given the difficulty in implementation of adopting other than GSP Groups for demand, we accept that a sensible solution is to adopt GSP Groups for both. We are concerned, however, that inadequate analysis has been carried out on the impact of such an approach which will inevitably result in individual market participants, both consumers and producers being unfairly prejudiced by having a Zonal TLF which differs significantly for the local TLF. The preliminary work presented by PTI shows a significant variation within individual zones for particular settlement periods investigated in the study. We recommend that further analysis is undertaken by the Modifications Group to establish the extent to which participants are unfairly prejudiced and that this is taken into account before any scheme is proposed for implementation.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be**	**AC/DC?**	We do not have a strong view on which of these two alternative approaches would better achieve the Applicable BSC Objectives. We do note, however, that there is an alternative approach to

Q	Question	Response	Rationale
	used, AC or DC based load flow modelling?		modelling load flows based on power tracing, developed by the University of Durham. Furthermore, we understand that this approach is currently being assessed by the European power community to determine flows through member state systems as a means of allocating cross state flows and hence transit charges. Before any decision is taken on AC versus DC based load flow modelling, Elexon should justify not including the power tracing methodology as one of the options.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**	TPL operates a single power station on Teesside in the north east of England. In addition to producing and selling electricity to its customers, it supplies substantial quantities of steam to ETOL for use by its customers on the Wilton industrial site. In the medium term, based on the results from the PTI study, the impact of implementing a zonal transmission losses scheme may be to reduce the level of generation output from Teesside when it is competing at the margin. This will depend upon a number of factors: in particular whether there is an impact on its ability to meet the steam	TPL produces a substantial quantity of steam which is exported to manufacturing plant on the neighbouring Wilton site. In recognition of this, between 0.5 and 1 TWH of generation per annum is considered as Qualifying Power Output, the precise amount being dependent upon the level off steam off take. Furthermore, TPL has the capability to increase its steam production substantially should the economics determine that this would be more efficient than ETOL using its own capability on the Wilton site.

Q	Question	Response	Rationale
		requirement of its customers and other contractual requirements. As regards the longer term implications, these will depend upon the response to the introduction of a zonal transmission losses scheme by other market participants. In order to maintain the requisite level of risk management for the TPL trading function, some development of the systems used by the trading function will be inevitable.	TPL is not currently considering the mothballing of any generation capability. The impact of the introduction of a zonal transmission Losses scheme is more likely to result in any plant enhancement being deferred or cancelled should it be determined that in the new environment, such investment is no longer justified. Whilst no detailed assessment has yet been undertaken of the scope of any development, mainly because of the lack of definition of the changes which will result from adoption of any scheme, we would anticipate allocating a budget of £500,000 to cover the costs of making the necessary changes to systems and agreements. Nevertheless, once the changes have been fully specified, we would require a period of several months to make the necessary changes to our own systems.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please see separate note.	

P75_ASS_015 – AES Drax

Respondent Name	Melanie Wedgbury
BSC Party	Yes
Responding on behalf of	AES Drax Power Ltd

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	Alternative	P75 does not incorporate long-term risk mitigation; inclusion of phasing would better meet applicable BSC objective C3.3(c). The absence of phasing would result in stranded costs with a consequent impact on long-term cost recovery and so efficient investment. Phasing will protect both consumers (price shocks) and generators (sunk costs).
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	Phasing based on a baseline generation volume.	A volume phasing approach provides short-term signals whilst protecting long-term investments. For the reasons given in Q1, such an approach should be considered efficient.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	Yes	The unpredictable effect of an ex-post approach, given its variability stemming from SO and competitor actions, will be totally unhedgeable and will, therefore, lead to inefficient outcomes. For example, generators would naturally assume a worst case (ie factor in higher losses) which would lead to an inefficient outcome for the system as a whole, ie excess spill on the system. Greater certainty is afforded by the ex-ante approach. Indeed, Ofgem stated in its revised proposals (February 2002) that it is "...important for participants to be able to forecast transmission losses in advance in order to hedge effectively their

Q	Question	Response	Rationale
			exposure to imbalance...".
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	BSC Year	Application over a year as opposed to a settlement period has the effect of smoothing and ultimately stabilising price signals.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Actual	In the interests of accuracy, and therefore efficiency, actual network data is preferred.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	No	As concluded in the consultation paper, exclusion of demand would "create distortions". In particular, an inefficient pattern of power station development and output would result if demand and generation, or any groups thereof, received special treatment.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	April 2004	Sufficient notice should be given in advance of retail and wholesale contract round negotiations. One year would be the ideal notice period.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Yes 15 - 20 years	As argued in Q1, phasing should be introduced with the aim of protecting both consumers and generators. In the case of protecting the sunk costs of generators, it is argued that a 15 - 20 year timescale should be employed as this typically reflects the financing period for power station acquisitions.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be**	GSP groups for demand and	Using GSP groups for both demand and generation should lead to alignment of BSC variables

Q	Question	Response	Rationale
	used; **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	generation	TLMD and TLMG, which in turn promotes efficiency in power station development (see Q6).
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	AC	The preference is for a model that most accurately reflects real conditions. The DC approximation is not robust enough to some changes in conditions.

Q	Question	Response	Rationale
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?** *Cost-benefit* For the reasons presented in the consultation document it is anticipated that the costs saving resulting from the introduction of locationally differentiated transmission loss factors will be significantly less than the NGC quoted figure of £3m. The short-term benefits of changes should be updated to allow for the reduction in transmission losses currently witnessed, changes in the price of electricity, and the time-weighted average (as opposed to peak demand) marginal zonal transmission loss factors as used in the PTI study. The modelling undertaken has shown the potential for increased costs due to SO actions in despatching MVar. Since MVar balance is principally a generation-side activity, this will inevitably lead to a cost increase based on current system generation profiles. *Location of demand and generation* It is considered unlikely that a significant number of consumers will take the decision to relocate on the basis of price signals. Indeed, the majority of consumers are non-half hourly metered and as such will not be exposed to sophisticated price signals. Current market conditions have illustrated how remotely consumer prices are related to market prices, therefore the actual effect of transmission loss changes will be insignificant. In addition, customer churn could potentially expose suppliers to extra locationally sensitive costs which will mitigate any realised cost benefits. Similarly, the anticipated impact of locationally differentiated loss factors on generation is believed to be insignificant. The actual effect will merely provide a transfer of costs among existing participants. The economic efficiency that is much heralded can only apply to efficient new investment decisions or inefficient exit from the market. Other locational factors, eg land, fuel supply etc, affecting the former far outweigh any potential benefits from locational transmission losses. The decisions surrounding the withdrawal of capacity are also influenced by other factors such as plant age, fuel price etc, again far outweighing location transmission loss effects. Given the above, the financial impact will mainly be felt by those participants who have a long-term investment in generation assets. It is doubtful whether the proposed changes will result in any further realignment of generation patterns than already witnessed under NETA and irrespective of transmission loss effects. More likely is an increase in prices by northern generators with no corresponding reduction in prices by southern generators. In summary, AES Drax does not believe that locationally differentiated transmission loss factors will have any ACTUAL meaningful effect on the siting of generation or demand.		

Q	Question	Response	Rationale
12	**Do you have any other views you wish to express about Modification Proposal P75?** Ofgem has repeatedly stated its objective of targeting costs on those participants that impose them on the system. Fixed losses, which contribute to around one-third of total losses, arise from the existence of the network, ie they are not load dependent, and as such should be allocated on a non-locational basis. Since losses are incurred in any power flow, it is counter-intuitive that some participants should receive a 'benefit'. P75, based on marginal loss calculations, gives some participants a 'benefit' by effectively allocating to them a negative loss.		

P75_ASS_016 – Great Yarmouth Power Ltd

Respondent Name	Ian M. Mullins
BSC Party	**Yes**
Role of Respondent	Regulatory Advisor
Responding on behalf of	Great Yarmouth Power Limited

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **Alternative Modification Proposal**	**Modification** (delete as appropriate)	(An Alternative would be implied if you identify one or more elements of the proposal that differ from those given in the table in section 2.3. Subsequently, the TLFMG may determine that some variants may be accommodated as refinements to the Mod as proposed)
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes** (delete as appropriate)	
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	Please state preference	Settlement Period
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative**	Please state preference	Intact

Q	Question	Response	Rationale
	Other?		
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No** (delete as appropriate)	
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	Please state preference	As soon as operationally possible.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Please state preference	4 years
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Please state preference	GSP Groups for demand, TNUOS charging zones for generation
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC** (delete as appropriate)	
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both**		Current industry systems have a standard and uniform approach to transmission losses that facilitates accurate notification of positions

Q	Question	Response	Rationale
	systems and operations?		to the BM to avoid balance exposures. Any new system that did not allow BSC signatories the ability to establish their position in the BM pre-Gate closure is adding an unacceptable risk into the BM. Without detailed knowledge of the system requirements, we believe that our organisation's operational abilities would be severely impacted.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_017 – Scottish and Southern

This response is sent on behalf of Scottish and Southern Energy, Southern Electric, Keadby Generation Ltd. and SSE Energy Supply Ltd.

We are strongly opposed to the implementation of either of these two proposals or their alternatives. We have listed below some of our reasons for opposing a change to the losses regime.

1. Despite some 6 months of development through the TLFMG, there is as yet no cost benefit analysis.

2. There can be no meaningful locational signal given to either demand, or to new developing generation, such as wind generation that will site where the resource is.

3. Significant windfall gains and losses will be made for no good reason, thereby creating investment uncertainty, as well as impacting on the viability of ongoing generation and customer load.

4. In practical terms, these proposals will impact on renewable development and is therefore inconsistent with the Government's objectives and indeed Ofgem's statutory duties with respect to the environment.

5. Even the most benign of the proposals will add to the complexity of an already complex and risky market place.

6. There would appear to be no consistency between these proposals and Ofgem's desire for shallow connections.

7. The relationship between Ofgem's consultation process on this issue and their ultimate power to approve or not any Modification proposal on this issue is, in our view, an abuse of the regulatory process.

8. There is significant turmoil in the market place at present. We would therefore respectfully suggest that there are more fundamentally important issues than zonal losses which should be considered by Ofgem and the industry.

9. Finally there should be no significant reform of NETA ahead of BETTA.

In relation to the Consultation on Modification Proposal P75 contained in your note of 2nd October 2002, our comments and answers to the twelve questions listed are as follow:-

(See attached file: P75 - SSE Consultation Response.doc)

Regards

Garth Graham
Scottish & Southern Energy plc

Respondent Name	Scottish and Southern Energy plc
BSC Party	**Yes**
Role of Respondent	
Responding on behalf of	Scottish and Southern Energy, Southern Electric, Keadby Generation Ltd. and SSE Energy Supply Ltd.

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**No change to the existing regime**	We do not believe that Modification Proposal P75 would better achieve the Applicable BSC Objectives. We believe that the current arrangement in respect of losses better achieves the Applicable BSC Objectives. For the avoidance of doubt we are firmly opposed to P75 or any other form of zonal Transmission Losses scheme. We would refer you to our comments at the P75 Definition phase. These comments still remain valid in respect of this latest consultation on P75.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	**No change to the existing regime**	As noted in our response to Q1 above, we believe that the existing arrangements are a better way of achieving the applicable BSC Objectives.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC**	**Yes**	As noted in our response to Q1 above, we believe that the existing arrangements are a better way of achieving the applicable BSC Objectives. However, if an Alternative were raised, in respect of the

Q	Question	Response	Rationale
	Objectives?		Transmission Loss Factor it should be calculated on an Ex Ante Annual basis (using the previous BSC year). This would substantially reduce the complexity of applying the zonal Transmission Losses calculation.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	BSC Year	As noted in our response to Q1 above, we believe that the existing arrangements a better way of achieving the applicable BSC Objectives. However, if an Alternative were raised, in respect of the Transmission Loss Factor it should be calculated on an Ex Ante Annual basis (using the previous BSC year). As above, this would substantially reduce the complexity of applying zonal Transmission Losses calculation, and hence cost to market participants.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**Yes, but the outcome would still be unsatisfactory**	Excluding Demand would have the effect of distorting the marketplace for embedded generation. Against this it is clear that Demand (i.e. end customer) is less able to respond to zonal signals. This question therefore illustrates the absurdity of introducing a zonal Transmission Losses scheme.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	Over an appropriate, phased, timeframe.	The introduction of zonal Transmission Losses has the potential to significantly distort the market place. As such we believe at the very least that a phased

Q	Question	Response	Rationale
			and measured introduction would be merited in this case to minimise the adverse effect of the scheme. In addition, given the considerable effect on prices to customers, we believe that the lead time for adopting zonal Transmission Losses should not be before April 2004. We note that many industrial, commercial and domestic customers have already signed one year contracts which, in the case of I and C customers often run from October to September. Introducing zonal Transmission Losses prior to April 2004 would distort the market place as these customers would find their expected costs being altered. We believe that a more equitable solution would be to set an appropriate implementation date of April 2004. This would allow sufficient lead-time for market participants and customers to be aware of them in their pricing decisions. We note that there may be an additional requirement, in respect of the appointment of the TLF Agent, to conform to EU procurement rules, which would, we believe, mean that an appointment could not be made in time for the changes associated with Modification P75 being put into effect in the 03-04 charging year. It is not clear that an enduring arrangement for calculating zonal Transmission Losses has been agreed, but it is likely that, in some scenarios, data acquisition (by the TLF Agent) will take some time.

Q	Question	Response	Rationale
			In addition it is not clear that system changes for the half hourly application of zonal Transmission Loss Factors can be made for April 2003. A date of April 2004 would allow for all the above.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	15 Years	We note, in respect of Scotland, that there has been no prior consultation on zonal transmission losses nor, for example, was there any reference in the Scottish Hydro Electric and Scottish Power prospectuses to them. Accordingly, the argument that the intention to introduce zonal Transmission Losses has been known for some time would not apply to Scotland. We do not believe that zonal Transmission Losses should be extended to Scotland as part of BETTA. Indeed we do not consider that it is appropriate for Ofgem / the Panel to introduce substantial reforms such as zonal Transmission Losses in England and Wales before BETTA. We note that generators are currently developing projects in northern Britain, with a 15 year plus project lifespan on the basis of NO zonal Transmission Losses. Accordingly, whilst we believe that the existing arrangements better achieve the BSC Objective, we believe that any form of zonal Transmission Losses should be phased in, from April 2004, over a 15 year timeframe. This would take account of the investment timeframe used within the electricity sector. The 15 year period would commence from the

Q	Question	Response	Rationale
			date of implementation, with a simple 6.6% increase year on year; starting at 6.6% in Year 1 and concluding at 100% in Year 15.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Zonal groupings based on GSP groupings for Generation and Demand	As noted in our response to Q1 above, we believe that the existing arrangements are a better way of achieving the applicable BSC Objectives. We believe that moving to zonal Transmission Losses will lead to undue market power being apportioned to those zones where there are few generators. This, in turn, will result in volatility in the level of losses which will bring uncertainty into the market place for new and existing generators. The problem will be particularly acute for operators of single generation assets compared to portfolio generators. This is even the case under P82. We would also refer you to our comments in respect of 'cross subsidies' in Q12 below.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	We believe that DC based modelling would be better for the ex ante calculation of TLFs.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		Not withstanding our fundamental objections to zonal Transmission Losses (see covering note), given the considerable effect on prices to customers, we believe that the lead time for adopting zonal Transmission Losses should be from April 2004 onwards. We note that many industrial, commercial and domestic customers have already signed one year contracts which, in the case of I and C customers often run from October to September. Introducing zonal

Q	Question	Response	Rationale
			Transmission Losses prior to April 2004 would distort the market place as these customers would find their expected costs being altered. We believe that a more equitable solution would be to set an appropriate implementation date of April 2004. This would allow sufficient lead time for market participants and customers to be aware of them in their pricing decisions. We believe that the introduction of zonal Transmission Losses has the potential to significantly distort the electricity market place. In particular, we note the significant capacity of renewable generation that is currently under 'development' in Scotland (with some reports talking of circa 6GW). As indicated in the presentations given at the TLFMG meeting on 24th September, the introduction of BETTA (when combined with zonal Transmission Losses) will seriously affect the economic viability of these projects. In so doing it will harm the achievement of both the UK Government and the Scottish Executive targets in respect of renewable energy and the attainment of Kyoto and other environmental commitments. We feel certain, taking account of its own obligations in respect of the environment, that the Authority will wish to examine this matter extremely closely. It would seem that the claimed environmental benefit associated with zonal Transmission Losses regime is, at best, the equivalent of a few tens of MW. It would be peculiar if this were to be

Q	Question	Response	Rationale
			achieved at the expense of the development of 6GW of new renewable capacity which would have a far greater environmental benefit. Furthermore, the introduction of zonal Transmission Losses is also likely to have a detrimental effect on many existing and future CHP projects in northern Britain. It is for the reasons outlined above that we are firmly opposed to zonal Transmission Losses. However, at the very least we believe that the implementation of this proposal should be phased over a 15 year period to (a) minimise the disruption to customers and market participants; and (b) to ensure that any extremes that may arise form zonal Transmission Losses can be mitigated, via remedial action, if appropriate. In regard to the matter of the cost/ benefit analysis associated with this Modification P82, we note that the basis on which the £3m reputed 'benefit' was been based has changed in terms of, for example, the reduction in losses from 1.8% to circa 1.45%. Accordingly, it would appear that there is little room for improvement in variable losses. NGC have already reduced these by some 40%. In addition the price upon which the £3m 'benefit' is predicated has since declined. When this £3M 'benefit' is measured against the additional cost to market parties of going to an ex-post arrangement (with its significant increase in market volatility and uncertainty) coupled with the cost of employing a TLF

Q	Question	Response	Rationale
			Agent (reputed to be in the order of £1M) we believe that a revised cost / benefit analysis would indicate that the costs outweigh the benefits in this case. Furthermore, due to the lack of competition in southern generation, parties locked into gas contracts, market prices are likely to increase with the introduction of zonal Transmission Losses.
12	**Do you have any other views you wish to express about Modification Proposal P75?**		In respect of the methodology to apply, in regard to Marginal Transmission Losses Factors, we believe that there should be a scaling involved. This is because previous work in this area has shown that without scaling there is a danger that the total amount of funds reallocated will bear little relationship to the actual outturn costs of Transmission Losses that occur from the despatching of generation by NGC. This would introduce a competitive disadvantage into the market place and run counter to the achievement of the applicable BSC Objectives. In respect of comments that have been made concerning the suggestion of a 'cross subsidy'; we note that such a hypothesis would still exists in the zonal Transmission Losses regime outlined in Modification P75 in regard to the averaging of losses within a zone verses nodal losses themselves and that this could still be acute for those located near to or on the boundary of zones and nodes. It is also clear that any scheme that transfers funds from northern generation to southern generation in excess of the cost of losses is in itself a cross subsidy.

Q	Question	Response	Rationale
			We note, in respect of Scotland, that there has been no prior consultation on zonal transmission losses nor, for example, was there any reference in the Scottish Hydro Electric and Scottish Power prospectuses to them. We reiterate our views in the covering note here, namely:- We are strongly opposed to the implementation of either of these two proposals or their alternatives. We have listed below some of our reasons for opposing a change to the losses regime. Despite some 6 months of development through the TLFMG, there is as yet no cost benefit analysis. There can be no meaningful locational signal given to either demand, or to new developing generation, such as wind generation that will site where the resource is. Significant windfall gains and losses will be made for no good reason, thereby creating investment uncertainty, as well as impacting on the viability of ongoing generation and customer load. In practical terms, these proposals will impact on renewable development and is therefore inconsistent with the Government's objectives and indeed Ofgem's statutory duties with respect to the environment. Even the most benign of the proposals will add to the complexity of an already complex and risky market place. There would appear to be no consistency between these proposals and Ofgem's desire for shallow connections.

Q	Question	Response	Rationale
			The relationship between Ofgem's consultation process on this issue and their ultimate power to approve or not any Modification proposal on this issue is, in our view, an abuse of the regulatory process. There is significant turmoil in the market place at present. We would therefore respectfully suggest that there are more fundamentally important issues than zonal losses which should be considered by Ofgem and the industry. Finally there should be no significant reform of NETA ahead of BETTA.

P75_ASS_018 – energywatch

Respondent Name	Lesley Davies
BSC Party	No
Role of Respondent	Director of Policy & Research
Responding on behalf of	energywatch

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	Neither	energywatch does not consider that either P75 or a P75A would better achieve the applicable BSC objectives. energywatch does not consider that P75 better meets applicable objective (b). Improved locational signals are not in themselves a BSC objective and efficiency would only be improved if there was a significant change in behaviour. We do not consider that demand would be able to change their behaviour. Electricity is a non-core activity for consumers and there is no evidence to suggest that demand would locate or relocate in response to electricity price signals from a zonal losses scheme. Domestic consumers do not decide where to live on the basis of fractional differences in electricity prices, this also holds for most of commerce and industry. Other factors, such as planning or business opportunities, take precedence over electricity prices in a consumer's locational decision making process. We do not consider the P75 better meets applicable objective (c). energywatch is concerned that the additional complexity of the calculation of TLFs under P75 may create a barrier to entry for smaller players. energywatch is also concerned that suppliers would be able to use the small print of contracts to pass on any increases to consumers but would be more reticent to pass on any savings to consumers. As operational costs will increase under P75, energywatch does not consider that the proposal would better meet applicable objective (d).

Q	Question	Response	Rationale
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	n/c	No comment.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	Yes (Qualified)	energywatch does not support the introduction of a zonal losses scheme. However, in the event that a zonal loss scheme is introduced we would prefer the P82 approach where TLFs are calculated ex ante.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	BSC Year (Qualified)	energywatch does not support the introduction of a zonal losses scheme. However, in the event that a zonal losses scheme is introduced we would prefer the P82 approach where TLFs are applied to a BSC year.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	n/c	No comment.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	Inconclusive	As we have stated in our response to question 1, fractional changes in electricity prices are not a key determinant in consumer's locational decision making process. As a consequence, energywatch does not consider that a zonal losses scheme should be introduced for the demand side. However, we are not in a position to state that the applicable BSC objectives would be better achieved even if P75 was applied only to generation.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	April 2004 (Qualified)	energywatch does not support the introduction of a zonal losses scheme. However, in the event that a zonal losses scheme is introduced we consider the implementation date should not be before April 2004.

Q	Question	Response	Rationale
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Inconclusive	energywatch is concerned that phasing proposals may be overly complex and hence would not better meet applicable BSC objective (d). However, we do recognise that phasing may help to mitigate against increased risks to participants should zonal losses be introduced and so in principle phasing would be supported. However, as previously stated, energywatch does not support the introduction of a zonal losses scheme.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	GSP for demand and generation (Qualified)	energywatch does not support the introduction of a zonal losses scheme. However, in the event that a zonal losses scheme is introduced we would prefer the P82 approach where the zonal groupings are GSP groups for demand and generation.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	n/c	No comment.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**	n/c	No comment.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Yes	energywatch does not consider that a robust case for introducing a zonal losses scheme has been made. Transmission losses have fallen since privatisation and are estimated to be of the order of 1.5 per cent for 2001-02. We do not consider it has been demonstrated that the benefits of P75 would outweigh the costs of P75. Whilst we recognise that the impact of extending a zonal losses scheme to Scotland is outwith the vires of the BSC, we think it is

Q	Question	Response	Rationale
			important to highlight the interaction between P75 and the BETTA project. energywatch is concerned that the transmission losses arrangements are being developed in England & Wales without due regard to the Scottish dimension. energywatch supports the rejection of both P75 and P82. However, should a zonal losses scheme be introduced we would prefer the introduction of P82.

P75_ASS_019 – Powergen

Respondent Name	Powergen UK plc
BSC Party	Yes
Role of Respondent	Generator and Supplier of electricity
Responding on behalf of	Powergen UK plc, Powergen Retail Limited, Diamond Power Generation Limited, Cottam Development Limited, Midlands Gas Limited, Western Gas Limited, TXU Europe (AHG) Limited, TXU Europe (AH Online) Limited, Citigen (London) Limited, Severn Trent Energy Limited (known as TXU Europe (AHST) Limited), TXU Europe (AHGD) Limited and Ownlabel Energy Limited.

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?** Our proposed alternative would be: Fully marginal TLF methodology defined in BSC Ex ante calculation of monthly TLFs using data from relevant month in previous year. TNUoS zones for generation and GSP Groups for demand. DC Load Flow model to be used. Intact (historic) network configuration. Nodal TLFs to Zonal TLFs using a volume-weighted average. Half-hourly TLFs to Monthly TLFs using a time weighted average.	**Both** The suggested alternative specified to the left.	Currently the cost of transmission losses is not accurately targeted at BSC parties that are to a greater or lesser extent contributing to those losses. By introducing a zonal differentiation in the allocation of losses the proposal will provide appropriate locational signals which will help reduce overall transmission losses in the short-term and encourage more optimal siting of generation and demand in the longer term. The fully marginal approach ensures the right economic signals are provided to users whilst the use of the TLMO balancing factors in determining TLMs always ensures the correct volume of total system losses are recovered in a given settlement period.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the**	**P75 alternative as specified**	The suggested approach outlined in the original P75 proposal sought to apply losses that were, as far as reasonably possible

Q	Question	Response	Rationale
	greatest degree?	**under Q1** (at the current time)	representative of the actual losses on the system. The results of the modelling work seem to suggest that the benefits of added accuracy of the ex post, per settlement period application of TLFs, is currently outweighed by the added costs and perceived risks of such an approach. Hence the suggested move to an ex ante calculation of monthly TLFs. Nevertheless a move to an ex post regime may be appropriate at a future date should the market evolve in such a way that both generation and demand can respond to the more 'accurate', dynamic loss signals described in the P7 original suggested approach. In reality the alleged uncertainty associated with within-day volatility of TLFs is overstated. The fact that the modelling (figure 25) clearly shows patterns exist should enable parties to reasonably predict TLFs. Parties should become more comfortable with managing these perceived risks in the longer term. An ex post approach is consistent with the treatment of other volume forecasting risks under the BSC such as demand forecasting.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes** (at the current time)	See also answer to question 2. At the current time the implementation costs and perceived difficulty in forecasting TLFs seem to outweigh the added benefits of greater 'accuracy' of TLFs. Nevertheless we believe an ex post approach is the best approach in the longer term.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period**	**Monthly**	Monthly ex ante using data from the relevant month in the previous year. This is probably the highest practical level of resolution for an

Q	Question	Response	Rationale
	BSC Year **Other?**		ex ante approach. Such a level of resolution matches the wish to make TLFs as representative of actual losses as possible and ensures that the changes on the system are reflected in those within the space of one year.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact historical**	With the lower level of accuracy inherent in the suggested P75 ex ante alternative, it would be spurious to seek higher levels of 'accuracy' in the choice of network implied with the use of an indicative network.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	It is not practical to exclude demand. In particular embedded generation (represented by negative demand) in a given area could be treated significantly differently from generation plant in the same area that happens to be connected to the transmission system.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**1 April 2003**	To coincide with the next contracting round. If this were infeasible we would suggest 1 October 2003 as the next convenient implementation date.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	**No phasing.**	P75 is rightly silent on phasing. Any form of phasing will mean that the full benefits of better locational signals will not be realised for some time. Meanwhile inefficient locational decisions (such as closure of generation plant in the south in preference to equivalent plant in the north) are likely to be made. Any alternative proposal must both, address the defect or issue outlined in the proposal and better achieve the Applicable BSC objectives compared to the original. **Any form of phasing**

Q	Question	Response	Rationale
			fails on both counts. It would be much better if the advocates of phasing had the confidence to make their case through a separate phasing modification proposal, rather than to seek to compromise the integrity of this proposal. Advocates of phasing seem to imply that their investment decisions could not have reasonably taken into account the possible change to geographically differentiated loss factors. They seem to be seeking some transition relief aligned with investment timescales. Such arguments are implausible given: OFFER signalled such changes in its 1989 Annual Report The issue was described in the prospectuses of the newly privatised electricity companies. In 1997 a scheme was approved by the Pool but later postponed in the run up to NETA. One element of those proposals namely the 45:55 split between generation and demand was introduced with NETA. It has remained on the agenda as 'unfinished business' ever since and Ofgem reaffirm their continued support in Transmission Access and Losses consultations dated Dec 1999, May 2001 and February 2002. It is hard to envisage such a well trailed prospective reform was not taken into account in the financing arrangements for new generation plant built in over the last 13

Q	Question	Response	Rationale
			years. Other examples of phasing of up to 25 years have be cited by the advocates of phasing. We could equally have chosen examples of very significant changes implemented immediately. The internal unbundling of Transco's metering business from their transportation business in 2000 overnight resulted in increased transportation charges to gas customers of up to 17%. In another example, over-recovery of revenues from gas entry capacity auctions in 2000 and 2001 resulted in hundreds of millions of pounds worth of adjustments to transportation charges. The resulting redistribution of money between market participants would dwarf the relatively minor impact of full implementation of P75. In considering the merits of phasing we must consider the particular circumstances and history behind reform of losses. Without such contextual analysis any comparison with phasing or otherwise of other reforms is pretty meaningless.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	**GSP groups for demand and TNUoS zones for generation**	Unfortunately, system and organisation constraints mean that we are stuck with GSP Groups for demand. This doesn't mean we should apply GSP Groups to generation. The generation side of the market is likely to be the most responsive to any losses signals. It would be therefore be wrong to force generation into a smaller number of GSP Groups that are not as

Q	Question	Response	Rationale
			representative of actual losses compared to TNUoS zones. This 'lack of representative' TLFs (i.e. 'TLF drift') is likely to become worse over time because GSP Groups cannot realistically be changed Consistency with the NGC charging regime is also desirable if only to avoid conflicting locational signals with TNUoS charges. There is a theoretical gaming opportunity to arbitrage between different loss factors at the same location because TNUoS and GSP Group zones overlap. In practice this may be only be a real concern at Interconnectors – it may therefore be appropriate to apply a single loss factor at interconnectors.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	With the lower level of accuracy inherent in the suggested P75 ex ante alternative, it would be spurious to seek higher levels of 'accuracy' through an AC model.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**	**Manageable within the envisaged timescales.**	The greatest impact is in respect of reviewing the mechanisms for charging losses to customers. Our IT and operations staff are fully aware of the prospect of zonal transmission losses and are currently assuming a 1 April 2003 implementation date.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	The fully marginal P75 approach is preferable to the scaled marginal approach advocated under P82. Any dampening or attenuation of the locational losses signal (as per P82) is less likely to realise the efficiency gains in terms of reduction in overall system losses and more optimal siting of generation of demand.

1.22 BSC Modification Assessments P75 and P82
1.23 Supplementary Comments by Immingham CHP LLP

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1.25

1.26 Introduction

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1.28 These comments are intended both as a covering letter and in response to Q12 of both P75 and P82 assessment consultations.

1.29

1.30 Immingham CHP LLP strongly opposes the change proposals related to P75 and P82, and we believe that they do not better facilitate achievement of the applicable BSC objectives. The England and Wales electricity market design already incorporates locational signals through NGC's transmission network use of system (TNUoS) charges, which are generally considered within European markets to be comparatively sharp. The considerable upheaval inherent in the modification proposals heavily exceeds the potential gains.

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1.32 In this context our comments in support of a variant of P82 in the relevant assessment consultation pro forma should be seen as support for a lesser evil should the Authority determine that, despite the strong opposition from most parts of the industry, change should still be made. If the Authority were to proceed, we consider that the resulting changed losses scheme should entail:

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- annual ex ante zonal loss factors;
- application only to new investment that has not yet been consented; and
- if existing plant and committed investment were deemed to be included, phased implementation over a fifteen year time horizon.

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1.35 Market-wide Arguments

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1.37 Our opposition arises not solely from the fact that Immingham CHP, as a northern generator, will be adversely impact by all of the proposals discussed by the Transmission Loss Factors Modification Group (TLFMG), but the profound effects that the proposals would have if implemented on risk and competition in the market. There are also critical equity issues which would arise from the competitive effects of implementation of the proposals. Put simply, a **future** sharpening of locational signals could be considered as desirable for future siting decisions on efficiency grounds **assuming** the benefits are clearly demonstrated to outweigh the costs. However, extrapolating these arrangements to participants already committed to investment creates a random redistribution of wealth. In our view, these distributional effects could be sufficiently material as to lead to cancellation of some committed schemes and discourage significant new investment.

Economic signals can only work if market participants are able to respond to them. Many participants, e.g. existing generation, CHP (located to suit demand needs on existing industrial sites) and windpower (located where the wind blows), cannot respond to new

locational costs in the market. It is highly undesirable, given the vast quantum of sunk investment, to create such incentives. Imposing either P75 or P82 on a market where there will be skewed ability to respond will lead to market inefficiency through artificially increasing some participants' costs, especially where very large capital investment has already been spent on facilities designed to last 30 years. In turn such change will distort competition.

1.38 Demand will also be unresponsive. For the most part, with the limited exception of certain large industrial loads, demand is price inelastic. The purchase of electricity by large industrial loads is not the core activity of demand sites and locational decisions would be much more likely to be influenced by, for example, planning permission, proximity to market, local skills pool and availability of key primary resources. None of these factors, of course, will be affected by the current change proposals.

1.39

The timing of the proposed change is particularly inauspicious. The 1990s saw significant new build based on current transmission pricing arrangements, and we have now entered a period of oversupply. Further new build is likely to be restricted over the foreseeable future to developments aimed at delivering government targets for environmentally benign technologies. The proposed rule changes are likely to most directly impact on exactly those developments, and we comment further on the technology-specific impacts below.

1.40

We consider that implementation of either P75 or P82 would have the following further detrimental impacts.

- prices for some consumers will rise:

  The proposals create new costs and increase market risk, which cannot be hedged, impacting on prices. Suppliers have openly stated that any increased cost will be passed on. We would note that in the past, politicians in the south and southwest have put up strong resistance to higher relative electricity prices for their constituents.

- risk in the market will be harder to manage, and new unmanageable risks will be created:

  Understanding, forecasting and managing the variation in locational transmission loss factors (TLFs) will be difficult and impose further transactional costs on the market. We estimate that these effects are such that they could impact on sectoral financing costs and could be regarded as creating a further barrier to entry. Locational effects are also dependent on other parties' behaviour. An operator located next to peaking plant could be very adversely affected by something it can neither predict nor control.

- contract disputes will arise:

  It will be necessary to redefine standard terms for contracts (GTMA, etc) that identify the point of sale by location (or any similar basis). Liability for the new allocation of losses may also be unclear in some contracts (e.g. whether it is an energy cost or a transmission cost). This situation could give rise to huge administrative, legal and dispute resolution costs.

- the value of generation capacity and customers' premises may change, owing to the imposition of substantial new costs;

- Besides being inequitable (there will be windfall gains as well losses), the proposed changes might put even affect decisions already taken to mothball plant and push more plant into administration. They would significantly increase market complexity:

  > There are already widespread concerns in the electricity market that central trading arrangements are too complex and benefit large integrated players with considerable resource to deal with the implications. The losses proposals would constitute a further change and more complexity, and we consider they will increase barriers to market entry.

The proposals also represent a further example of regulatory risk in the market. Immingham CHP has previously highlighted in submissions to government the significant increase in regulatory risk evidenced by the losses, and other recent regulatory, proposals. In the electricity market, persistent rules changes and split jurisdictions between governance structures are causing fractured rule making and have greatly increased risks of double counting from uncoordinated rules change. This position is aggravated by the inability of the assessment process to take into account the complex interrelationship of the losses change proposals with other rules changes presently being contemplated. We return to the process issues below.

1.41 Technology-specific arguments

1.42

1.43 Besides the generic arguments set out above that point to significantly increased market inefficiency, we believe that the current change proposals disproportionately and systematically disadvantage specific technologies and certain classes of market participants.

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1.45 CHP plant location is largely tied to the industrial site it is associated with, and it would therefore not be responsive to the cost signals these proposals seek to introduce. In terms of capacity, the regions of Scotland, Yorkshire/Humber, the North West and the North East of England - which would be impacted most adversely by the P75/82 proposals - account for well over 2/3rds of currently installed CHP capacity. The proposed changes would thus result in less competitive generation from most of the CHP sector undermining its ability to compete fairly and further undermining its targeted growth. The same comment applies to renewables who have very limited discretion over development areas. They would not relocate to less windy locations in response to more favourable costs arising from transmission losses.

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1.47 As an active developer, we are concerned not only for our consented asset but also for new developments we are assessing, which are all CHP or renewables. All these developments are in areas that would be worse off under other proposed methodologies, and could be put at risk. It is naïve to assume that future developments of these technologies have significant choice over the areas in which they can be located. Consequently we believe that both P75 and P82, because of the quantum of the costs involved, would have a detrimental impact on government targets regarding

CHP and renewables at a time when there is already widespread and increasing scepticism about the ability of government to meet its targets.

1.48

1.49 Nuclear power, largely located in remote areas, would also be systematically disadvantaged. The proposed changes, if implemented, would result in the transfer of more unavoidable costs that could further undermine the ability of British Energy to compete in the market.

1.50

1.51 Costs vs Benefits

1.52

The Assessment Consultation documentation reports that NGC studies pre-NETA showed potential benefits of £3m per year, based on 1.8% losses and electricity priced at £20/MWh. In present day figures, with significantly reduced losses and electricity prices, the potential benefits will be substantially reduced to less than £2m per year.

Some of the central implementation costs are identified in the Consultation Report at around £300k, with central operational costs estimated at just under £1m per year. This is only part of the picture, and it is essential to give due consideration to the potential overall costs of these proposals. Participants will need to review their settlement and billing systems and, equally important, renegotiate existing contracts. Taking into account the IT and legal costs, we estimate the total overall implementation cost will be between £1m and £2m and overall operation costs will approach around £1m per year. A key uncertainty not factored into these costs is the cost of the additional risk that this proposal will bring. There are also NGC's costs, which do not yet seem to have been taken into account. The Consultation Report identifies a potential scenario that could bring additional costs of £150m per year to customers, and even a small fraction of this figure will exceed any potential benefits that the proposals might bring.

So, in summary, we believe there is clear evidence demonstrating that the benefits of these proposals do not outweigh the costs and do not justify their implementation.

1.53

A related argument frequently deployed by Ofgem in its past advocacy of more dynamic losses arrangements is that change has been clearly signaled in the past, and that market participants have been able either to anticipate new costs and manage the new risks. We would highlight the following arguments:

- the two current proposals are not the same as proposals made in the past;
- past predictions of losses reallocation have not proved correct; and
- the current proposals have only been enabled by changes implemented through recent legislation.

These factors mean that it is unreasonable to assert that market participants have been able to hedge these risks. It follows that the costs referred to above are real – and material – and need to be fully taken into account in Elexon's cost benefit analysis.

1.54 Process Issues

1.55

The process for progressing P75 and P82 under the BSC has been unsatisfactory. Many participants have been unable to track the proposals due to the complexity of the process and the myriad of major commercial issues competing for their time.

Modeling results from the work commissioned by the TLFMG has also been dilatory and subject to revision to eliminate mistakes. This outcome should not be a surprise given the magnitude and complexity of the task and the time constraints in which PTI have had to operate. Final numbers - on which we have been able to base our response - only became available last Wednesday, three working days before these responses fall due.

At a higher level, the evaluation process for P75 and P82 fails to consider impacts within the wider GB market place. Little reliance can be placed on the modeling effort to date in the light of the government's intention of moving to the single BETTA market place from April 2004. We consider that the evaluation is also flawed because it does not take into account other potential changes being debated in the transmission charging and access domains. It is essential that a **holistic assessment** is made of all these change programmes and the interdependencies identified, and that decisions are not taken in isolation.

A final important process issue concerns interaction with the government's wider energy policy review. A key theme at the heart of the review is the need to achieve market structures that take into account externality pricing, to enable development of a low carbon energy system. We believe that taking forward one element of externality pricing in a vacuum would totally distorts cost signals to the detriment of precisely those environmentally beneficial technologies that the government is seeking to promote. Locational transmission cost signaling should be tested within government's wider analytical framework and as part of a packaged policy solution against wider energy policy goals.

Maureen McCaffrey
Commercial Manager
Immingham CHP

Respondent Name	**Maureen McCaffrey**
BSC Party	**Yes**
Role of Respondent	
Responding on behalf of	**Immingham CHP LLP**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	**No. We are strongly opposed to P75. It is significantly inferior to P82, though**	P75 introduces an immense level of complexity and risk which will act as a barrier to potential new entrants and depress competition. See response to P82.

Q	Question	Response	Rationale
		neither proposal in our view better achieves the Applicable BSC Objectives. We consider that it does not warrant develop-ment of any alterantive/s.	
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	**N/A**	-
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	See response to P82.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	**BSC Year**	See response to P82.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact**	See response to P82.
6	**If a zonal Transmission Losses**	**Yes**	See response to P82.

Q	Question	Response	Rationale
	Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?		
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**Any change should be implement-ed at the start of a financial year. Its application should ideally be only for new planting decisions. In this context "new" should be defined as any new develop-ments that are not currently consented.**	See response to P82.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	**15 years**	See response to P82.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be**	**GSP Groups for both.**	See response to P82.

Q	Question	Response	Rationale
	used; **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**		
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	See response to P82.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**	**The impact would be particularly detrimental under P75 without phasing.**	See response to P82.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	**Please see our covering letter.**	

P75_ASS_021 – CIA

Additional text to support questionnaire response to consultation on modifications P75 and P82.

The chemical industries association has assessed the content of the consultation and would like to submit the following points in addition to the completed questionnaires (which are attached below). Though we support the general principle of moves towards greater cost reflectivity, and believe that this can also apply to transmission charging, we do not feel able to give support to either proposed modifications P75 or P82.

There are a number of reasons for this, which are set out below:

Our principal concern is the effect that the changes might have on the current triad arrangements. NGC has signalled that if the proposed modifications were accepted then this might change the current traid arrangements. In particular, we understand the effect may be to reduce the differences between the locational charges that currently exist. This, in turn, might result in less motivation to shed load at the triad period and a further reduction of demand-side involvement in the electricity market. CIA supports the current system of triads because it is a simple, and reasonably cost reflective signal, that allows demand side players to offer a valuable service to the electricity market, in return for a benefit in the form of reduced charges. We would not support modifications that would have an adverse affect of demand-side involvement in the market.

Moreover, the absolute amounts of money associated with transmission losses are small and it is unlikely that the signals sent to demand side players by new charges for transmission losses would be large enough to change behaviour regarding decisions about location. These decisions are made for a range of reasons of which electricity transmission charges are likely to be only a minor consideration. We also believe that while transmission loss charges might render one aspect of the transmission charging system more cost-reflective, they are unlikely to help in meeting objective 4.1 (c) of the consultation, "to promote effective competition", at least on the demand side, because all suppliers in a given zone will be exposed to the same change in charges.

In summary, though we are not against the principle of greater cost reflectivity and are not against them being introduced on an average zonal basis for generation, we feel the risks associated with the changes for the demand side are too great and might lead to unwanted consequences in respect of what demand side involvement already exists. However, if we were forced to support one of the modifications, we would opt for P82 because of its average zonal, rather than marginal basis.

I hope these additional comments help to explain our response to the

questionnaires attached below.

<<RAS-Consultation Proforma Annex 1 - P75.doc>> <<RAS-Consultation Proforma Annex 1 - P82.doc>>

Yours sincerely.

Rob Siddall.

ROB SIDDALL
UTILITIES POLICY MANAGER
CHEMICAL INDUSTRIES ASSOCIATION

Respondent Name	ROBERT SIDDALL
BSC Party	**No**
Role of Respondent	REPRESENTATIVE OF LARGE INDUSTRIAL CONSUMERS
Responding on behalf of	THE CHEMICAL INDUSTRIES ASSOCIATION

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	NO	Please see attached text
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	N/A	
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	YES	
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year**	N/A	

Q	Question	Response	Rationale
	Other?		
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state	No preference
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	YES	Please see attached text
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**		
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**		
10	**If a zonal Transmission Losses Scheme were to be introduced, what**		

Q	Question	Response	Rationale
	approach to TLF production should be used, AC or DC based load flow modelling?		
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	Please see attached text.

P75_ASS_022a – British Gas Trading

Re: Response to October 2002 Consultation on Losses Proposals P75 and P82

In principal British Gas Trading (BGT) supports changes which improve the efficient operation of the electricity market and the allocation of costs to those that cause them.

In introducing new proposals such as P75 or P82 it is necessary to show, as far as possible, that the changes will result in more efficient operational and investment decisions in the market. We are not persuaded that either P75 or P82 achieves this.

We note that the Transmission Loss Factor Modification Group (TLFMG) believes that there needs to be more work done in this area and we would agree the importance of the need for Ofgem to be confident that it has all the relevant information such that it can make a decision that reflects the BSC objectives. However, this needs to be balanced against the likely benefits of any work and/or delays in making a decision.

Our concerns as well as answers to specific questions that are raised in the body of the text are set out below and we request that these are noted and included within the final consultation on these Modification Proposals. In addition to this letter please also find enclosed the completed response templates.

Potential Reductions in Losses

To ensure that any losses scheme will result in a more efficient outcome with respect to the operation of the transmission system there is a need to more adequately assess the potential level of savings achievable.

- Transmission losses as a % of transmitted energy have dropped by over 20 % * between 1993/4 and 2001/2 and there is a natural limit to the base level that losses can be driven down to on the transmission system recognising the inherent conflicts in siting generation close to demand and assuming we still want to connect generators to a HV transmission system. Therefore, as there is a law of diminishing returns in any efforts to reduce the level of losses and, given that they have already dropped quite considerable, this highlights the need to be absolutely confident of the potential savings that could be achieved from the introduction of either P75 or P82.*

- As a consequence of the above there is a considerable risk that under these proposals the financial burden of losses will simply be reallocated without the ability of those affected to respond in a way that makes any material difference to the level of losses, ultimately leading to increased costs for consumers.

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* Source: Elexon / NGC (1.88 % to 1.46 %)

- The inability to respond to the losses signals is particularly important for CHP and/or renewable generators (the latter who tend to be situated in windy or coastal areas in the North of the UK and can not change location for obvious reasons). The introduction of losses could necessitate an increase in the level of support that renewable receive if Governmental Policy is to be met.

Updating NGC Cost Benefit analysis

- It is necessary to update the generation pattern (and reflect recent station mothballing?)

- In terms of assessing the short-term benefits there is certainly a need to repeat NCS work with an up to date forecast of electricity prices.

- This assessment should consider both P82 and P75 if a comparison between the two is to be made.

How much would the location of generation and demand change in response to the introduction of P75 or P82?

- Given the relatively small size of losses signals as compared with the other siting drivers and, even more importantly, the inability of existing sites to move in response to changes in their signals, it is difficult to see that either of these scheme will result in a material change in location for either generation or demand.

What benefits would the introduction of P75/ P82 have in ensuring the efficient development of the transmission system by The Transmission Company?

- As we understand it, the current proposals under the BSC do not have any interaction with NGC's losses management incentives. As we understand it, these incentives are agreed with Ofgem outside of the BSC. Therefore it would only have a benefit if NGC's targets were modified to reflect an assumed decrease in the level of losses arising from the introduction of one of these proposals, with NGC bearing the costs of failing to reduce losses through investment and technical development.

- It is difficult to see any difference in NGC's investment level as a result of these proposals (they already consider losses when investing in equipment) and as such it should not result in any increase in the level of UoS charges.

How would P75and P82 change the overall shares of fuel used in generation

- At a high level obviously the biggest impact is going to be on northern generators in the northern or extreme parts of England & Wales and exports from Scotland. Of these the most impacted category in terms of new siting decisions will probably be renewables as they have relatively little choice in were they can locate. Therefore it is likely that these proposals will have a negative impact on

renewable generation. It is also likely that existing generation, located close to demand will receive a benefit such that otherwise uneconomic, inefficient or polluting plant may be kept on in preference to other more fuel efficient sites. This in itself could impose unnecessary costs on GBplc.

Lastly, whilst we appreciate that the following items are not within the vires of the TLFMG, we would like to raise the following issues which again we believe should be part of the final consultation document.

Interaction with TNUoS

There is a lack of clarity in respect of the interaction between the locational TNUoS signals and the losses proposals. This makes it impossible to gauge the overall impact of the total locational signals received by a market participant.

BETTA

Assuming that under BETTA the losses proposals are extended northwards into Scotland this could have a significant impact on the calculation of the regional loss factors as well as raising a number of other complex issues including the impact on renewables and the inclusion of the 132 kV system in the definition of the Scottish transmission system.

Yours faithfully,

Simon Goldring
Transportation Manager

Respondent Name	British Gas Trading Ltd
BSC Party	**Yes**
Role of Respondent	
Responding on behalf of	**All Centrica Group BSC Parties**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable**		We do not support P75 and do not believe it better facilitates the Applicable BSC Objectives. we do not believe an Alternative

Q	Question	Response	Rationale
	BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?		Proposal would better achieve the Applicable BSC objectives However, if despite industry opposition P75 is progressed, then we prefer the suggestion of an ex ante, daily calculation of losses using a DC load flow model and of phasing, using a BETA model. This will require development of an Alternative Proposal which itself would require further consideration. P75 is likely to introduce significant locational concerns which will adversely impact specific classes of generation and demand to the detriment of the market. We would also draw attention to BETTA which has also been heavily signalled by the regulator. Unfortunately these proposals, which will have a significant impact on the TLFs seen by England and Wales participants (and hence the basis of any change being proposed now), cannot be discussed as they are outside the vires of the BSC. We believe this is a fundamental flaw in the development and implementation of any arrangements.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	Calculation prior to the period will provide the opportunity for parties to hedge the risk associated with variations in TLFs more effectively. Although arguably this will not give the most accurate reflection of transmission losses for the settlement period we believe a balance must be struck between accurate calculation of losses and predictability in those losses.

Q	Question	Response	Rationale
			Participants will not make efficient decisions based on unpredictable losses. Furthermore as with all modification proposals it is necessary to find a pragmatic solution that will not have associated costs far outweighing any of the benefits to be gained
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**		In our opinion a more appropriate methodology would be to apply TLFs for a BSC year. We do not support the approach of P75 where TLFs would be applied for each settlement period. This will not provide long term investment signals for any party and will, as the modelling exercise has illustrated, increase the short term volatility faced by participants.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	Although lack of real time data arguably provides less accuracy than using an indicative network we believe an intact network will provide a sufficient granularity for the purposes of calculation of the TLFs. Also as analysis of the modelling results indicates there is little sensitivity of TLFs to the choice of network it would appear to be most cost effective to use an intact network.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	It would create an artificial distortion to any transmission losses scheme if demand, or any other interest group, was excluded from the final proposals. The BSC applicable objectives are best facilitated by the participation of both generation and demand in the trading arrangements. This applies equally well to a transmission losses scheme.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		If these proposals are implemented it would be appropriate for them to go live in conjunction with BETTA. We also recognise the need for alignment with contract rounds but believe these needs could be accommodated by the extended implementation time frame. Any introduction requires a minimum of

Q	Question	Response	Rationale
			12 months leadtime after a decision by the Authority due to the scale of change required to central systems, party systems and the extensive testing required to avoid problems (as per the NETA programme).
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Yes	15 years. This is an average figure based upon a view of the average remaining life of asset for existing plant and equipment.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	**TNUOS charging zones for generation and demand**	Using common groups for both generation and demand is a rational approach as it will maintain a strong link between generation and demand.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**DC**	
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		If P75 were to be introduced, it is anticipated that there would be significant impact and implications on our systems and operations. Not all elements of required change can be identified at this time but a high level value indicates a range of £1.5 -£5.5m
12	**Do you have any other views you wish to express about Modification Proposal P75?**		We believe that P75 would adversely impact on the following areas: renewables and CHP

Q	Question	Response	Rationale
			introduction of BETTA interaction with TNUoS charges Ofgem's Transmission Access proposals.

P75_ASS_023 – Humber Power Ltd

HUMBER POWER LIMITED

General comments on: **"CONSULTATION – Modification Proposals P75 'Introduction of Zonal Transmission Losses' and P82 'Introduction of Zonal Transmission Losses on an Average Basis'**

In addition to the responses to the specific questions set out in Annex 1 & 2, we would wish to make a number of comments and observations on the text of the Consultation Paper itself.

Section 3.3:

We note the comments regarding the significance of the choice of "slack bus". Whilst we acknowledge that the TLFMG are undertaking further work to assess the significance of the choice of slack bus, which we support, we would wish to register our concern that such a fundamental assumption, adopted by the TLFMG, has turned out to be incorrect. We would wish therefore to reserve our position on the validity of the load flow modelling assumptions.

Section 4.1

This section provides a sound basis for the assessment of both P75 and P82. Having considered the different aspects, we conclude that:

v) short and medium term gains in efficiency will be derived from changes in the levels of marginal production and marginal demand;

vi) re-location is an extremely impractical proposition for either generation or demand: only market participants with a number of production or demand facilities are likely to respond by optimising their portfolio production or consumption;

vii) closure of generation or demand will be largely driven by factors other than zonal transmission loss charges; and

viii) any changes to NGC incentive arrangements can be achieved by alternative means, which may be more effective than any change in transmission losses charging regime.

HPL believes that to date, there is insufficient evidence that the introduction of a zonal losses scheme will result in the applicable BSC objectives being better achieved.

Section 4.2

HPL supports the TLFMG approach of undertaking a cost-benefit analysis of the proposals.

Our comments on the specific questions posed in section 4.2 are as follows:

e) given the lack of definition of the changes, we are unable to quantify the cost of implementation which HPL would incur if either scheme were to be

adopted: a P82 style scheme would cost HPL significantly less to implement than a P75 type scheme.

f) as regards size, we would expect generators and consumers with a portfolio of sites to benefit from the economies of scale.

g) we have a number of concerns regarding the NGC short term benefit analysis. Recent calculations, using a more representative figure for generation costs, suggest that the benefit from a more efficient despatch would be less than £1million.

HPL believes that it is essential to identify all costs associated with the introduction of a zonal losses scheme and that if necessary, data should be solicited from participants in a manner that protects the confidentiality of such information.

Section 4.3.2

Whilst we understand the reluctance of the demand-side of the market to become involved in zonal differentiation, in considering whether a scheme better would better achieve the Applicable BSC Objectives, we conclude that there is no basis for giving any particular group of market participants the right to be excluded from the scheme. The reasons given as to why a consumer cannot relocate apply equally, if not more so, to a power station, such as that operated by HPL.

To exclude any group from the scheme would be an explicit discriminatory act which would result in particular market participants being unfairly treated, in comparison with other market participants.

In conclusion, we can identify no grounds for either demand or for any particular sector of the generation market to be excluded from any zonal transmission losses scheme.

Section 4.4.2

We note the comments that both proposals had the stated intention to allocate costs in a better manner than under the current arrangements. Whilst we recognize that neither proposal sought to achieve precise cost allocation, the evidence from the work undertaken by PTI shows that both temporal and spatial averaging of TLFs will result in inaccuracies in cost allocation.

Section 4.5.3

This section acknowledges that NGC “may” need to review the basis for its Use of System Charges, should the charging for transmission losses under the BSC be changed. The nature of such changes needs to be established prior to any decision on P75, P82 or any alternate proposals to avoid over-stating the locational signals given to market participants. Furthermore, given the extent of the locational signals in current TNUoS charges, we consider it of paramount importance to resolve what amendments are required to TNUoS charges before any zonal transmission losses scheme is implemented.

Respondent Name	Humber Power Limited

BSC Party	**Yes**
Role of Respondent	Generator
Responding on behalf of	**Humber Power Limited**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Alternative**	We do not support P75 and do not believe it better facilitates the Applicable BSC objectives. It may be possible that an alternative proposal which reduces the uncertainty and volatility associated with ex-ante calculation of losses by settlement period and was introduced in a phased manner, may better achieve the Applicable BSC objective, although such a scheme would require further consideration.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes** (delete as appropriate)	The introduction of P75 with half hour ex-post calculation of TLF's would place unpredictable and volatile short-term energy imbalance on BSC Parties. The calculation of Transmission Losses (by any method) should be predictable and stable in both the short and long term to allow system users to react efficiently. Ex-ante calculation of TLF's will introduce a variance between the calculated and actual TLF and reduce any potential efficiency gains.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year Other?**	Please state preference	The introduction of P75 with half hour ex-post calculation of TLF's would place unpredictable and volatile short-term energy imbalance on BSC Parties. The calculation of Transmission Losses

Q	Question	Response	Rationale
			(by any method) should be predictable and stable in both the long and short terms to allow system users to react efficiently. TLF's should take account of seasonal variation in generation and demand and, to avoid excessive cost to the industry, be averaged over a period considerably longer than a settlement period.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	The choice of network should be based on real network data and in the case of ex-post calculation of TLF, be as close as possible to the actual network to give accuracy in calculation of TLF. Inaccuracy will reduce the efficient reaction of system users.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	Any difference in the treatment of Generation and Demand in any transmission losses scheme would lead to an inefficient pattern of development. System users would receive perverse signals to possibly bundle or unbundle generation and demand, to gain advantage or avoid penalty. Zonal transmission losses intended to give a signal to relocate in the long term should apply equally to generation and demand.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		The absence of any consultation and modelling on the effects of any scheme in a GB context suggests that any transmission losses scheme should be reconsidered after the introduction of BETTA. In any event of the introduction of a losses scheme, sufficient time should be allocated between decision and Implementation to allow participants to arrange systems, operations and hedging accordingly.

Q	Question	Response	Rationale
			NGC transmission charges contain an element of zonal differentiation, the introduction of any losses scheme should be linked to both a re-evaluation of charges and to a re-evaluation of the NGC incentive scheme.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Yes	To give long-term certainty / efficient investment decisions, the introduction of any transmission losses scheme should be phased over a period of 15 years. An imminent move to a zonal transmission losses scheme without phasing has not been widely predicted within the industry and investments have not been made in the light of such a scheme. The main reasons for reaching this conclusion are: neither of the current proposals are the same as any proposal put forward in the past past statements of the re-allocation of transmission losses have been proven wrong on a number of occasions the latest proposals have only become possible due to the change in governance arrangements at the time of privatisation of the industry, TLF charges were removed from the despatch process, then carried out centrally by NGC, in order to achieve the government objective of a single nationwide market price. Any transmission loss scheme should be phased over an extended period to avoid arbitrary windfall gains or losses that would harm economic efficiency. A paper to TLFMG dated 14/8/02

Q	Question	Response	Rationale
			"Phasing of Implementation", sets out the economic reasoning behind phasing changes to market rules. Attention is drawn to this paper in support of the response to Q8.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Identical Zones for Generation and Demand	Any difference in the treatment of Generation and Demand in any transmission losses scheme (including different loss zones) could lead to an inefficient pattern of development.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC**	The AC transmission network should be modelled using data that accurately reflects AC electrical flows (ie an AC model). The potential for inaccuracy by assumptions that approximate the calculation of AC electrical flows should be positively defined before such a (DC) model is introduced.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		No detailed analysis is yet available on the systems impact of zonal transmission losses, the financial impact on the organisation of the introduction of such a scheme is expected to be considerable. It is unlikely that systems design and implementation can be completed in the short term to support changes to operations brought about by the introduction of such a scheme.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	Refer to attachment.

P75_ASS_024 – TotalFinaElf Gas and Power Ltd

Respondent Name	**TotalFinaElf Gas and Power Ltd**
BSC Party	Yes
Role of Respondent	Trading Party
Responding on behalf of	**TotalFinaElf Gas and Power Ltd**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Alternative**	We do not support P75 and do not believe it better facilitates the Applicable BSC objectives. It may be possible that an alternative proposal which reduces the uncertainty and volatility associated with ex-ante calculation of losses by settlement period and was introduced in a phased manner, may better achieve the Applicable BSC objective, although such a scheme would require further consideration.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes** (delete as appropriate)	The introduction of P75 with half hour ex-post calculation of TLF's would place unpredictable and volatile short-term energy imbalance on BSC Parties. The calculation of Transmission Losses (by any method) should be predictable and stable in both the short and long term to allow system users to react efficiently. Ex-ante calculation of TLF's will introduce a variance between the calculated and actual TLF and reduce any potential efficiency gains.
4	**If a zonal Transmission Losses**	Please state	The introduction of P75 with half

Q	Question	Response	Rationale
	Scheme were to be introduced what time period should TLFs apply to; **Settlement Period** **BSC Year** **Other?**	preference	hour ex-post calculation of TLF's would place unpredictable and volatile short-term energy imbalance on BSC Parties. The calculation of Transmission Losses (by any method) should be predictable and stable in both the long and short terms to allow system users to react efficiently. TLF's should take account of seasonal variation in generation and demand and, to avoid excessive cost to the industry, be averaged over a period considerably longer than a settlement period.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	The choice of network should be based on real network data and in the case of ex-post calculation of TLF, be as close as possible to the actual network to give accuracy in calculation of TLF. Inaccuracy will reduce the efficient reaction of system users.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	Any difference in the treatment of Generation and Demand in any transmission losses scheme would lead to an inefficient pattern of development. System users would receive perverse signals to possibly bundle or unbundle generation and demand, to gain advantage or avoid penalty. Zonal transmission losses intended to give a signal to relocate in the long term should apply equally to generation and demand.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		The absence of any consultation and modelling on the effects of any scheme in a GB context suggests that any transmission losses scheme should be reconsidered after the introduction of BETTA. In any event of the introduction of a losses scheme, sufficient time should be allocated

Q	Question	Response	Rationale
			between decision and Implementation to allow participants to arrange systems, operations and hedging accordingly. NGC transmission charges contain an element of zonal differentiation, the introduction of any losses scheme should be linked to both a re-evaluation of charges and to a re-evaluation of the NGC incentive scheme.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	Yes	To give long-term certainty / efficient investment decisions, the introduction of any transmission losses scheme should be phased over a period of 15 years. An imminent move to a zonal transmission losses scheme without phasing has not been widely predicted within the industry and investments have not been made in the light of such a scheme. The main reasons for reaching this conclusion are: neither of the current proposals are the same as any proposal put forward in the past past statements of the re-allocation of transmission losses have been proven wrong on a number of occasions the latest proposals have only become possible due to the change in governance arrangements at the time of privatisation of the industry, TLF charges were removed from the despatch process, then carried out centrally by NGC, in order to achieve the government objective of a single nationwide market price. Any transmission loss scheme

Q	Question	Response	Rationale
			should be phased over an extended period to avoid arbitrary windfall gains or losses that would harm economic efficiency. A paper to TLFMG dated 14/8/02 "Phasing of Implementation", sets out the economic reasoning behind phasing changes to market rules. Attention is drawn to this paper in support of the response to Q8.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	Identical Zones for Generation and Demand	Any difference in the treatment of Generation and Demand in any transmission losses scheme (including different loss zones) could lead to an inefficient pattern of development.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC**	The AC transmission network should be modelled using data that accurately reflects AC electrical flows (ie an AC model). The potential for inaccuracy by assumptions that approximate the calculation of AC electrical flows should be positively defined before such a (DC) model is introduced.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		No detailed analysis is yet available on the systems impact of zonal transmission losses. It is unlikely that systems design and implementation can be completed in the short term to support changes to operations brought about by the introduction of such a scheme.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_025 – LE Group Ltd

Respondent Name	Rupert Judson on behalf of Liz Anderson
BSC Party	**Yes**
Responding on behalf of	London Electricity Plc, EDF Trading, EDF Generation, Jade Power Generation Ltd, Sutton Bridge Power, West Burton Ltd**.**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	**Modification** **No.**	The proposed modification would be inefficient due to the requirement for calculation of TLFs on a half hourly basis which would result in significant set-up and ongoing central costs. Furthermore, the modification would damage competition by creating unhedgable risks associated with unpredictable short term changes in demand/generation patterns, network configuration, interconnector flows and constraints. The potential volatility of TLFs resulting from these short term changes would result in inconsistent short term signals to participants which would harm the efficient and economic operation of the Transmission Network. We note that the modification aims to remove regional cross-subsidies between participants thereby promoting effective competition. However, by applying fully marginal zonal loss factors this modification would recover both the fixed and variable elements of transmission losses. Since fixed losses cannot be considered to be locational the recovery of fixed losses on a zonal basis is effectively creating a new cross subsidy. This would be detrimental to competition.
		Alternative **Yes**	We believe that P82 provides a better foundation for Zonal Transmission Losses as it addresses the key failings of P75, i.e. ex-post calculation, zonal

Q	Question	Response	Rationale
			charging of fixed losses and half hourly calculation of loss factors.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	**N/A**	N/A
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes** **Ex-ante**	Ex-post calculation of TLFs provides a more accurate reflection of the "real time" system conditions but also results in the exposure of participants to unhedgable short term risks caused by unexpected changes on the system. Ex-ante calculation and publication of TLFs provides a predictable allocation of costs that can be more easily managed and acted upon by participants.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	**BSC Year**	Participants require stable and predictable market conditions in order to enter into medium to long term contracts. Production of annual TLFs would provide this stability but would still provide long term locational signals. The pattern of transmission losses as indicated by the current variation of TLMs across the year indicates that TLFs calculated seasonally or monthly would be very similar to those calculated annually. The annual approach would therefore be more efficient. We do not believe that calculation of TLFs on a half hourly or daily basis would provide any additional benefit but would increase both costs and risks to the market.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact**	The modelling results show that changes in network configuration if reflected in the calculation of TLFs can affect the resulting TLFs locally. In a short term, ex-post methodology these local changes would represent unpredictable risks to participants and

Q	Question	Response	Rationale
			would obscure rather than reinforce any intended locational signals. An intact network would remove these short term unpredictable changes from the TLFs and would maintain the stable long term signals and allocation of costs consistent with the underlying trend in transmission losses.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	Competition in electricity supply would be unaffected by zonal transmission losses and only a limited number of demand participants might be expected to respond to locational signals. However, to avoid unfair distortions in the market the effects of TLFs in any zone need to be equal and opposite for demand and generation.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**After BETTA.**	These modification proposals raise significant issues with respect to the ongoing development of BETTA, Transmission Access and Transmission charging which the modifications group have been unable to consider due to its vires. We believe that the full impact of Transmission Losses needs to be properly assessed in the context of all of these market developments and therefore it would not be sensible to implement Zonal Transmission Losses before BETTA is implemented.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 Years** **25 Years** **Other?**	**4 Years**	A four year phasing in of TLFs would allow time for the effects of TLFs to be factored into most contractual arrangements. It would also spread the impact of large changes in the costs of transmission losses on participants or electricity consumers over a reasonable timescale.

Q	Question	Response	Rationale
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUoS charging zones for generation,** **Other?**	**GSP Groups for both demand and generation**	The application of any existing zonal grouping to Transmission Losses is arbitrary. For demand zones the use of GSP Groups in the only possible choice. GSP Groups also provide a reasonable zonal granularity for generation and consistency with demand brings additional benefits in the elimination of any differential between the demand and generation TLFs at any specific point on the network. TNUoS zones have been developed specifically to suit Transmission Network charging and are subject to change in the future. These zonal groupings provide no additional benefits over GSP groups and are less consistent with demand.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC**	We believe that AC load flow modelling produces more accurate results than DC and since the proposed half hourly calculation of TLFs in P75 is intended to provide accurate cost allocation it seems sensible that the most accurate approach is adopted. However, we would be interested to better understand the difference in the results gained from the two different calculation options.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		There is currently no information available regarding the interface, if any, between the proposed TLFA and BSC Parties' systems. This is an area where systems changes may be required to take account of new data flows from the TLFA. Our existing settlement systems receive TLFs and TLMs for each BMU and for each settlement period. We do not anticipate any requirement to change these systems for either P75 or P82. From an operational point of view, the uncertainties inherent in ex-post, half hourly calculation of loss factors would

Q	Question	Response	Rationale
			result in additional risk management requirements that would ultimately increase costs to all customers.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	
	The introduction of Zonal Transmission Losses will result in some suppliers paying more for their electricity and other suppliers paying less. Whether or not the changes in regional costs will be passed on to customers is a subject for debate but it is possible, given experience with recent wholesale price reductions, that price rises will be passed on but that price reductions will not. This would result in a rise in the overall cost paid on average by customers. The effect on the generation side of the market would be a readjustment of value of generation in different zones which may be a factor in decisions made regarding mothballing or closure of plant in the medium term or siting of new generation in the longer term such that overall transmission losses are reduced. However, it should be borne in mind that transmission losses in England and Wales overall are relatively low and that striving to reduce them further may not necessarily result in greater overall efficiency of the industry or achievement of environmental goals. Indeed current and planned network development projects by the Transmission company are aimed at increasing the capacity for North to South energy flows and this combined with the implementation of BETTA will provide easier access to the whole GB electricity market for Scottish generators. There are clear inconsistencies between these developments and the proposed modifications and this will probably result in minimal benefit from zonal Transmission Losses.		

P75_ASS_026 – SEEBOARD Energy

Respondent Name	Dave Morton
BSC Party	**Yes**
Role of Respondent	Supplier
Responding on behalf of	SEEBOARD Energy Limited

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	**Alternative**	P75 does not better achieve applicable BSC objectives. We believe that use of marginal losses will over-estimate zonal differences leading to a greater redistribution of costs than is appropriate. This would result in a less efficient outcome than the status quo and therefore cannot be considered to be promoting effective competition in generation and supply. Seeboard Energy supports P82 in preference to P75.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**		
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	An ex-post calculation would lead to an inefficient outcome, as participants are unable to respond to signals. Being unable to reliably predict losses would increase risk of exposure to volatile cash-out prices. Participants in the south will have a greater than average increased exposure to cashout as a result of P75 because: extreme north / south regions will be more volatile and

Q	Question	Response	Rationale
			the Interconnector will make Southeast especially unpredictable.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	BSC Year	Half hourly varying TLFs would be unpredictable and, therefore, present an unmanageable risk to participants.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Intact	We accept findings of the group and we prefer intact as it more suitably applies to P82.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**No**	We believe that exclusion of any group would result in distortions in the market and therefore would not better achieve BSC objectives.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		We have no view other than it would be sensible to implement it at the beginning of a financial year.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	25 years	A precedent has been set by the implementation of Transco Local Distribution Zone (LDZ) charging arrangements.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be**	GSP group for demand and generation.	

Q	Question	Response	Rationale
	used; **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**		
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC**	We accept findings of TLFMG that an AC study is appropriate for P75.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		See Q3. Also there will be a major impact on our forecasting systems, which could require extensive investment.
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_027 – Magnox Electric

Respondent Name	Nigel Burrows
BSC Party	**Yes/~~No~~**
Role of Respondent	Regulation & Market Access Manager
Responding on behalf of	**Magnox Electric Plc**

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives; Modification Proposal P75, An Alternative Proposal to P75?**	**Modification** **Alternative** Both	Transmission Losses impose a temporal and locational cost upon the Transmission System. Current arrangements do not attempt to reflect these variable elements of losses are and consequently are not cost reflective. Objectives C3.3 (b), (c) and (d) are all better served under both the proposed modifications to the current arrangements. However, being based upon a fully marginal approach, P&% clearly better achieves these objectives.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	P75	The BSC objectives of C3.3 (b) and (c) will be best served when users are faced with the costs they impose upon the system. In suggesting a 'fully marginal' methodology, Modification Proposal P75 does more appropriately allocate the costs of losses to responsible parties. The improved cost-reflectivity of the P75 proposal
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes/~~No~~**	TLF's calculated on an ex-post basis would be consistent with operation of the electricity market. Concerns about risks imposed by an ex-post system would be addressed by the market development of appropriate risk management tools.
4	**If a zonal Transmission Losses Scheme were to be introduced what**	**Settlement Period**	Consistency with current BSC arrangements. Any reduction in

Q	Question	Response	Rationale
	time period should TLFs apply to; **Settlement Period** **BSC Year** **Other?**		resolution beyond this level would result in a dilution of the cost signals to system users.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact**	Based on evidence presented in TLFMG report.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	~~**Yes**~~**/No**	If Demand is actually imposing costs on the system by their location and or actions in the market. If the modification is seeking to address the shortcomings of the current approach by appropriately allocating costs to those imposing them, excluding demand would not achieve this. As a consequence it would be difficult to argue that the modification would any better achieve the applicable BSC objectives if demand is excluded
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	April 2003	There is no clear evidence to suggest that there should be a delay in implementing this modification.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	No	It is unclear that there are any justifiable reasons for phasing the introduction of a scheme that addresses a process that is currently cross subsidising costs imposed by the impact of losses.

Q	Question	Response	Rationale
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	No Clear Preference	It is unclear from the Modification Group Report and modelling which zonal groupings would best meet the BSC objectives.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should be used, AC or DC based load flow modelling?**	**AC/DC** No Clear Preference	It is unclear from the Modification Group Report and modelling which zonal groupings would best meet the BSC objectives. However, we would favour the approach which best represents the costs actually imposed upon the system.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		The impost of Magnox's internal systems would not be significant. It is unclear from the information provided to date as to the impact upon longer term operations and investment decisions
12	**Do you have any other views you wish to express about Modification Proposal P75?**	Please state other views	

P75_ASS_028 – EIUG

Consultation on Mod.s P75 & P82 – Introduction of Zonal Transmission Losses

We understand the need for these modifications to be considered on their own merits, but have decided to make a single response as there are a number of serious concerns that apply to both proposals.

EIUG questions the need to introduce charging for transmission losses on a zonal basis. We believe that the attention currently being given to this issue is out of all proportion to the alleged 'problem', given that losses account for such a small proportion of NGC's costs, and a declining one at that. Even if there is a case to be made for locational losses for generation, which we doubt, it is not obvious why this principle should necessarily apply for demand. We are aware of no evidence that UK industry would re-locate in response to changes in transmission price signals. Introducing zonal transmission losses would therefore create winners and losers amongst individual industrial consumers, depending on the historical accident of their existing location, but no net benefit for consumers as a whole.

It is clear from the evidence presented at the Transmission Loss Factors Modification Group meeting on 24th September that a marginal loss approach such as P75 would result in exaggerated locational signals. It would be perverse to introduce a modification – ostensibly on the grounds of allocative efficiency – that resulted in such a distortion. This is less of a concern for a zonal average approach such as P82, which would cause smaller deviations from current charges. In this respect, P82 is preferable to P75.

We understand that a move to zonal losses would have an impact on the outcome of NGC's transmission charging review, as TNUoS charges are themselves zonally based. This might result in TNUoS charges between zones being levelled off and a reduction in the incentive for consumers to manage load in order to avoid TRIAD charges, with consequences for NGC at times of at times of peak demand when the system may be under stress.

We therefore urge that both modifications be rejected, but note that of the two proposals, P82 would be the least damaging.

Yours sincerely,

Jeremy Nicholson,

Director

P75_ASS_029 – Alcan Primary Metal – Europe

Respondent Name	Alcan Primary Metals Europe
BSC Party	**No**
Role of Respondent	Major industrial demand site and small distributed generator
Responding on behalf of	Alcan Primary Metals Europe

Q	Question	Response	Rationale
1	**On the basis of your views on subsequent questions, do you believe that one or both of the following better achieve Applicable BSC Objectives;** **Modification Proposal P75,** **An Alternative Proposal to P75?**	**Neither – retain status quo.**	The proposal for zonal transmission losses would introduce locational signals to which some participants, such as distributed generation, could not respond – despite being directly affected. Under such a regime, existing distributed generators would have to be appropriately compensated for any adverse commercial impact – particularly any windfall losses. Furthermore, calculating losses on a fully marginal basis would exacerbate the inequities introduced by zonal transmission losses with the likelihood of significant windfall losses and gains for some participants.
2	**If your answer in one involved more than one possibility, which of the above do you believe better achieves Applicable BSC Objectives to the greatest degree?**	N/A	The status quo should be maintained.
3	**If a zonal Transmission Losses Scheme were to be introduced, do you believe that TLFs calculated prior to the period in question, rather than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?**	**Yes**	Firstly, note that we do not support the introduction of zonal losses (and the associated non-zero TFLs) for the aforementioned reasons. Nevertheless we provide the following comment. Ex-post TLFs expose market participants to risks over which

Q	Question	Response	Rationale
			they have no control. This is a bad principle on which to base settlement. Ex-ante TLFs would provide more stability, less uncertainty and could be implemented at a lower overall cost to the industry and, ultimately, to end customers. TLFs should be should be published annually or bi-annually in advance of the April/October energy contracting rounds.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	**BSC year**	Half hourly based TLFs would introduce added complexity and significant extra costs and is unnecessary. A full, and public, cost-benefit analysis should be carried out before any such arrangements are seriously considered. TLFs calculated ex-ante on an annual basis would provide less uncertainty for participants and would minimise design, implementation and operational costs.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact approach**	This would presumably represent the lowest cost approach and should be used provided it does not compromise the accuracy or credibility of the transmission loss factors beyond acceptable levels.
6	**If a zonal Transmission Losses Scheme were to be introduced, would the exclusion of demand lead to the Applicable BSC Objectives being better achieved?**	**Yes**	The ability for demand side to respond to locational transmission loss signals is limited and should be excluded from any new arrangements for locational transmission losses. This would also facilitate the exclusion of small, distribution connected, generation from punitive and inappropriate locational price signals - thereby promoting renewable generation in the resource rich locations in

Q	Question	Response	Rationale
			the north. **We strongly support retaining the status quo for demand side market participants.**
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**Zonal transmission losses are not supported**	Any such scheme would need to be coordinated with BETTA and any changes to the structure of transmission charges presently being debated as part of the CUSC transmission access standing group (TASG) and NGC's charging review. Also, it is imperative that any changes should be in due consideration of, and coordinated with, Government thinking on Renewables and CHP targets.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve the Applicable BSC Objectives? If so, what timescale for full implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	**25 years**	The introduction of locational transmission losses will give rise to significant windfall gains and losses – particularly for participants in the North and in the South. This would have a material impact on the commercial performance of existing participants. Any adverse commercial impact should be compensated for otherwise the timescale for implementation should be aligned with the commercial lifetime of existing capital investments – a minimum of 25years.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	**No preference**	Special consideration should be given to the treatment of distributed generation to ensure that any new zonal definitions encourage and financially incentivise its connection and operation. Excluding demand-side from any new arrangements for locational transmission losses would help to achieve this.
10	**If a zonal Transmission Losses Scheme were to be introduced, what approach to TLF production should**	**DC**	Provided the errors introduced as a result of not fully considering reactive power are small and do

Q	Question	Response	Rationale
	be used, AC or DC based load flow modelling?		not affect the accuracy of the calculation process then a DC approach should be used. A full and transparent cost-benefit assessment should be carried out.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your organisation in respect of both systems and operations?**		For Alcan's Lynemouth site, initial estimates are that additional costs are likely to be in the region of 6.5% of the value of energy export. This will have material impact on the commercial viability of all aspects of the Alcan operation and is damaging to Government objectives to encourage distributed generation.
12	**Do you have any other views you wish to express about Modification Proposal P75?**		Distributed generation provides support to the local distribution network and should, therefore, be insulated from national locational signals. Zonal transmission losses take no account of the local absorption of distributed generation. Such signals ought to be aimed, primarily, at transmission connected generators. In some areas of the country the effect of locational loss factors would be to suggest that distributed generation increases transmission system losses but, in other circumstances, the same distributed generator is deemed not to be a user of the transmission system. Given Government's commitment to support embedded generation, there needs to be some mechanism through which distributed generation located in demand zones can be exempted from inappropriate zonal loss signals.

Q	Question	Response	Rationale
			For distributed generators, arrangements could be made such as to enable the TLF value to be set at zero. This would ensure that Government initiatives to promote distributed generation are not adversely affected by the proposal for locational losses and would allow the proposal to focused on transmission connected generators. Alternatively, the demand side could be excluded from the local transmission signals on the basis of their relative inability to respond to such signals. Furthermore, we have concerns over the apparent lack of co-ordination between transmission losses issues and transmission access and charging issues. Specifically, we are concerned not only with the introduction of locational signals but also with the potential 'over-signalling' of location through the introduction of locational arrangements for *both* transmission access *and* for losses. A serious concern to us is also the impact of locational pricing on wider Government objectives – particularly the potential impact on Government targets for renewable and CHP generation. We request that the group (TLFMG) make the DTI aware of the proposals and there likely impact on these targets. The introduction of this proposal would seriously discourage distributed generators, CHP and renewables from locating in the renewable rich North and would also reduce the possibility of

Q	Question	Response	Rationale
			industrial development in the region.

P75_ASS_030 – NERA (late response)

Memorandum

TO: **Roger Salomone, Elexon**

FROM: **Graham Shuttleworth**

SUBJECT: **Scaled Cost Benefit Analysis**

DATE: **7 November 2002**

I enclose a summary of the results of the scaling process described in the P75/P85 Assessment Report in section 9.1.1. It builds on our previous cost benefit analysis of the original P75 and P82, with and without 4-year phasing. For the most part, we have estimated costs and benefits explicitly, using responses to the consultations. (Some of the cost data may be different from that available when we wrote our first report.)

In some cases, we had not previously made any estimate (eg for P75 alternative, which only emerged at the last TLFMG meeting). Where data is missing, we used scaling factors to derive results from other modifications and alternatives, ie:

P75 Alternative:

Benefits = 90% of the benefits of P75 with 4-year phasing
Costs = average of P75 and P82
Risk = 90% of P75 with 4-year phasing

P82:

Benefits = 50% of the benefits of P75 Alternative

P82 Alternative (with 4-year phasing):

Benefits of P82 discounted in the same ratio as for P75 and P75 with 4-year phasing

We estimated that 4-year phasing reduces the cost of risk by 15% (hence a scaling factor of 85%), by comparing the NPVs of two 15-year streams of costs with and without phasing in years 1 to 4.

The attached table shows the effect on cost benefit analysis for a 10-year and a 20-year period.

Table 1: Comparison of Different Proposals: 10-Year NPVs

NPV of the Benefits (6% discount rate, over 10 years) Discount rate - 6% Discount period - 10 years	P75 no phasing (1)		P75 4 yr phasing (2)		P75 alt 4 yr phasing (3)		P82 no phasing (4)		P82 4yr phasing (5)
NPV 2002-2003	£m	% of (1)	£m	% of (2)	£m	% of (3)	£m	% of (4)	£m
BENEFITS									
Savings from dispatch	6.8	82%	5.6	90%	5.0	50%	2.5	82%	2.0
Benefits of shifting demand from South to North	-3.0	92%	-2.8	90%	-2.5	50%	-1.2	92%	-1.1
Benefit of reallocating generation (hypothesis 1)	10.1	100%	10.1	90%	9.1	50%	4.5	100%	4.5
Benefit of reallocating generation (hypothesis 2)	14.2	100%	14.2	90%	12.8	50%	6.4	100%	6.4
Total Benefits	28.1		27.1		24.4		12.2		11.8
COSTS									
Capital Investment in IT - NGC, Elexon, NETA agent	1.7		1.7		*1.3*		0.8		0.8
Capital Investment in IT - particpants	40.3		40.3		*27.6*		14.9		14.9
BSC agent, NGC, Elexon operational costs	2.3		2.3		*1.7*		1.2		1.2
Participant's transaction costs	29.6		29.6		*20.3*		11.0		11.0
Increased cost of capital due to market risks	7.0	85%	6.0	90%	5.4		3.1		2.6
Total Costs	80.9		79.9		56.3		30.9		30.5
NET BENEFIT	-52.8		-52.7		-31.9		-18.7		-18.7

Items calculated as a (shown) percentage of the figure in the column to the left are shaded thus:
Costs in column (3) shown in italics are calculated as the average of the figures in columns (2) and (4)

Table 2: Comparison of Different Proposals: 20-Year NPVs

NPV of the Costs (6% discount rate, over 20 years) Discount rate - 6% Discount period - 20 years	P75 no phasing (1)		P75 4 yr phasing (2)		P75 alt 4 yr phasing (3)		P82 no phasing (4)		P82 4yr phasing (5)
NPV 2002-2003	£m	% of (1)	£m	% of (2)	£m	% of (3)	£m	% of (4)	£m
BENEFITS									
Savings from dispatch	13.1	91%	11.8	90%	10.7	50%	5.3	91%	4.8
Benefits of shifting demand from South to North	-2.4	90%	-2.2	90%	-2.0	50%	-1.0	90%	-0.9
Benefit of reallocating generation (hypothesis 1)	25.8	100%	25.8	90%	23.2	50%	11.6	100%	11.6
Benefit of reallocating generation (hypothesis 2)	51.7	100%	51.7	90%	46.5	50%	23.3	100%	23.3
Total Benefits	88.1		87.1		78.4		39.2		38.8
COSTS									
Capital Investment in IT - NGC, Elexon, NETA agent	1.7		1.73		*1.3*		0.8		0.8
Capital Investment in IT - particpants	40.3		40.3		*27.6*		14.9		14.9
BSC agent, NGC, Elexon operational costs	3.6		3.6		*2.7*		1.8		1.8
Participant's transaction costs	46.2		46.2		*31.6*		17.1		17.1
Increased cost of capital due to market risks	22.5	85%	19.2	90%	20.2		10.0		8.5
Total Costs	114.2		110.9		83.4		44.6		44.1
NET BENEFIT	-26.1		-23.8		-5.0		-5.4		-5.3

Costs in column (3) shown in italics are calculated as the average of the figures in columns (2) and (4)
Items calculated as a (shown) percentage of the figure in the column to the left are shaded thus: