Responses from P82 Assessment Consultation

Consultation issued 2 October 2002

Representations were received from the following parties:

No.	Company	File Number	No. of Parties Represented
1.	Enfield Energy Centre Ltd	P82_ASS_001	1
2.	Dynegy	P82_ASS_002	1
3.	Major Energy Users Council (MEUC)	P82_ASS_003	0
4.	Corus Group	P82_ASS_004	0
5.	Lakeland Power	P82_ASS_005	1
6.	Aquila Networks	P82_ASS_006	1
7.	Edison Mission Energy	P82_ASS_007	2
8.	InterGen (UK) Ltd	P82_ASS_008	4
9.	NGC	P82_ASS_009	1
10.	Innogy	P82_ASS_010	7
11.	AES Drax	P82_ASS_011	1
12.	British Energy	P82_ASS_012	3
13.	BOC PGS UK	P82_ASS_013	1
14.	Scottish Power	P82_ASS_014	3
15.	Teeside Power Ltd	P82_ASS_015	1
16.	Great Yarmouth Power Ltd	P82_ASS_016	1
17.	Scottish and Southern	P82_ASS_017	4
18.	Energywatch	P82_ASS_018	1
19.	Powergen	P82_ASS_019	12
20.	Immingham CHP LLP	P82_ASS_020	1
21.	Chemical Industries Association	P82_ASS_021	0
22.	British Gas Trading	P82_ASS_022	2
23.	Humber Power Ltd	P82_ASS_023	1
24.	TotalFinaElf Gas and Power Ltd	P82_ASS_024	1
25.	LE Group	P82_ASS_025	6
26.	SEEBOARD Energy	P82_ASS_026	1

27.	Magnox Electric	P82_ASS_027	1
28.	Energy Intensive Users Group	P82_ASS_028	1
29.	Alcan Primary Metal - Europe	P82_ASS_029	0

P82_ASS_001 – Enfield Energy Centre Ltd

Respondent Name	Enfield Energy Centre Limited
BSC Party	**Yes**
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 P82, An Alternative Proposal to P82?**	**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**	
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 systems and operations?**		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 specifications easy to

Q	Question	Response	Rationale
			accommodate.
12	**Do you have any other views you wish to express about Modification Proposal P82?**	Please state other views	

P82_ASS_002 – Dynegy

Respondent Name	Dynegy UK Limited
BSC Party	**Yes**
Responding on behalf of	List all Parties (inc. respondent)

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 P82, An Alternative Proposal to P82?**	**Modification**	The modification increases cost reflectivity while not imposing excessive price swings on participants, thus better fulfilling the relevant objectives, particularly in relation to efficiency. The modification will also provide some longer term signals about the location of new generation, which would also improve the efficiency of the UK's electricity market in the longer term.
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)	Ex-ante allows players to hedge their risk and price their contracts accordingly. It is very rare for people to not know the price of a service until after they have consumed the product or service. If the calculation is ex-post, the generators are more likely to add a higher premium to prices in order to cover the potential risk of high loss charges. This will not be efficient and could result in suppliers trying to secure higher profits on the basis of potential charges.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;**	Please state preference	The charges should be annual as there is little change in the location of demand or generation

Q	Question	Response	Rationale
	Settlement Period **BSC Year** **Other?**		though the year so an approximate charge could be calculated which would be relatively cost reflective.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state preference	Intact as it is consistent with the approach of the P82 modification
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**	Dynegy has some sympathy with customers' arguments about the lack of responsiveness of customers to locational signals, but that does not mean that customers should not face some price signals. It would appear that this modification strikes a good balance between cost reflectivity, and the associated locational signals, and charges that are not penal or erratic.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**		Next 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?**		Phasing does not better facilitate the objectives. If the modification is more efficient, helps with the economic operation of the system and does not distort competition, then it should be implemented in a timely manner.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be**		Whichever NGC feels to be most cost reflective.

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** (delete as appropriate)	Due to its simplicity.
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?**		None.
12	**Do you have any other views you wish to express about Modification Proposal P82?**	Please state other views	It would be helpful if Ofgem could gather its thoughts on the transmission issues as a whole, so that change can be made in a timely manner rather than via a piece meal approach.

P82_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

P82_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**
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 P82, An Alternative Proposal to P82?**	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 Other?**		BSC Year (April – March)

Q	Question	Response	Rationale
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**		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 1st 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?**	10 years using the Beta approach	The Beta approach is less complicated than the '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 approach to TLF production should**	**AC/DC**	No preference

Q	Question	Response	Rationale
	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 P82?**		See covering email.

P82_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

P82_ASS_006 – Aquila Networks

Please find that Aquila Networks Response to P82 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 Energy

Respondent Name	Cathy McClay
BSC Party	**Yes**
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 P82, An Alternative Proposal to P82?**	**Modification**	Please see responses to questions 3 and 4. EME believes that P82 best achieves BSC objectives. An alternative involving phasing would also better meet the 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?**	**P82**	EME believes that the original modification 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**	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.
4	**If a zonal Transmission Losses Scheme were to be introduced what**	Annual TLFs	EME considers that an ex-ante annual TLF will provide the

Q	Question	Response	Rationale
	time period should TLFs apply to; **Settlement Period** **BSC Year** **Other?**		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.
7	**If a zonal Transmission Losses Scheme were to be introduced, when**	As soon as possible	In making the decision about implementation date the impact

Q	Question	Response	Rationale
	should such a scheme be implemented?		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 and hence loss factors 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. Although an ac load flow can be more accurate than a dc load flow

Q	Question	Response	Rationale
			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 P82?**	Please state other views	

P82_ASS_008 – InterGen (UK) Ltd

Respondent Name	Chris Ridgway
BSC Party	See below for list
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 P82, An Alternative Proposal to P82?**	**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 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?**		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.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to; Settlement Period BSC Year**	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.

Q	Question	Response	Rationale
	Other?		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?**	Intact	No strong preference but we would agree that the intact network seems most appropriate for 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**	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 required.	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 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.

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 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. These costs would be less under P82 than P75 since TLF's would only vary once a year and would be more easily forecast. It is unlikely that the introduction of P82 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 P82?**	Please state other views	1) P82 attempts to address a relatively small perceived issue of inaccurate cost allocation with no cost – benefit analysis of the

Q	Question	Response	Rationale
			proposal. 2) We expect that the implementation and on-going costs of P82 are considerably less than that of P75. Given that there are inaccuracies in both approaches, the lower cost method is preferable. 3) 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. 4) 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. 5) The TLF's calculated in P82 do not over recover the true costs of losses which is one of the major failings of P75. 6) The intention to send locational signals is misguided. Such signals for generation already exist through TNUOS charges. If they don't work as intended neither will zonal losses.

P82_ASS_009 – NGC

Respondent Name	Malcolm Arthur
BSC Party	**Yes**
Responding on behalf of	National Grid

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 P82, An Alternative Proposal to P82?**	**Modification**	We believe that P82 better meets the Applicable BSC objectives by correctly allocating transmission losses.
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**	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-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

Q	Question	Response	Rationale
			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 and costly 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?**	**BSC year**	As it is proposed with P82 that the TLFs are calculated using ex-ante networks, demand and generation and averaged over the year, there should be a single zonal TLF calculated per BSC year.
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 was 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

Q	Question	Response	Rationale
			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 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 2 years**	Phasing would ease the implementation of the Transmission Losses Scheme. When introducing ICRP 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 P82 might have an impact of TLF=3% at the extremes of the system; a TLF of 2½%, applied to a 100% base-load 1kW generator at an energy price of 20£/MWh equates to an impact of 2½% × 1kW × 8760hr × 20£/MWh = 4.38 £/kW. Hence a two-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 2 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

Q	Question	Response	Rationale
			be identical. Using the same zones would also ease the definitions and administration associated with trading sites.
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-

Q	Question	Response	Rationale
			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.
12	**Do you have any other views you wish to express about Modification Proposal P82?**		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.

P82_ASS_010 – Innogy

Respondent Name	Bill Reed
BSC Party	**Yes/~~No~~**
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 P82,** **An Alternative Proposal to P82?**	**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) P82 better meets the applicable BSC objectives. However, an alternative to P82 based on the calculation of losses over shorter time periods would provide sharper short term locational signals and would better meet the applicable objectives. The signals will not provide a fully economic solution until they are based on the marginal costs of losses. In addition, the PTI analysis has shown that TNUoS zones are more cost reflective and are capable of providing sharper locational signals for generation.
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 requires the calculation of losses for a 12 month period prior to the applicable "settlement year". For most demand this may not provide significant problems, but it may be appropriate to consider greater temporal differentiation to allow energy intensive loads and generation, which shows greater price elasticity, to respond to signals.

Q	Question	Response	Rationale
			An alternative based on seasonal or monthly calculation of losses should provide better locational signals and sharpen the incentive to reduce overall losses. It may also be appropriate to consider whether the calculation of losses occurs closer to the relevant settlement period.
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)	An ex ante scheme would improve system efficiency and enable parties to hedge the cost of losses without exposing parties to unhedgeable risks.
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**	P82, by definition requires the loss factors to apply for the applicable BSC year. As noted above, it may be appropriate to consider greater temporal disaggregation of losses.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	Please state preference	In an ex ante approach, the network, by definition, must be a model of the 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 P82 is explicit in retaining the current proportion of losses allocated to demand. Excluding demand would dilute any locational signals and may be unduly discriminatory in that it does not treat all market participants equally, in particular embedded and 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**	The scheme should be introduced as soon as practicable.

Q	Question	Response	Rationale
		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 **None**	Phasing would simply prolong the inefficiencies that currently exist to the detriment of minimising system costs.
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**	P82 by definition applies losses for generation and demand to GSP Groups. However, zones should be defined in a manner that best reflects the zonal differentiation of losses in order to provide "accurate" locational signals. On this basis is may be appropriate to apply P82 to TNUoS zones for generation output.
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, an AC model will better reflect the actual functioning of the system, and is usually employed in planning studies.
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

Q	Question	Response	Rationale
			(e.g. demand, CHP, renewable)) The introduction of zonal losses will remove the current cross subsidies in the market place. If the locational signals are sufficiently effective they should reduce the overall cost of losses on the system for the benefit of all parties.
12	**Do you have any other views you wish to express about Modification Proposal P82?**	Please state other views	No

P82_ASS_011 – 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 P82, An Alternative Proposal to P82?**	Alternative	P82 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...". system. Greater certainty is afforded by the ex-ante approach.
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.

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 demand and generation	Using GSP groups for both demand and generation should lead to alignment of BSC variables 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 P82?** 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'. P82, based on marginal loss calculations, gives some participants a 'benefit' by effectively allocating to them a negative loss.		

P82_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 P82,** **An Alternative Proposal to P82?**	**Modification** **Alternative** (delete as appropriate)	We do not believe P82 better facilitates the relevant BSC objectives for the following reasons: The introduction of zonal marginal TLF calculated on a ex-ante Basis represents an increased market risk which existing users will find difficult 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 less stable short-run signals. The lack of stability/predictability of TLF's calculated ex-ante on an annual 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 P82 might be seen to better facilitate the BSC objectives would be through the introduction of appropriate long term risk mitigation measures

Q	Question	Response	Rationale
			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)	The ex-ante TLF calculation is only one element of P82 and it does not seem to us to be sensible to single this out as an issue for review in isolation. Our view on P82 is given above. Nevertheless we would stress the need for objectivity and predictability in any form of ex-ante calculation otherwise transmission users will be unable to react efficiently.
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 P82 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 being better achieved?**	**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
			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 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 avoid 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 wrong many times.

Q	Question	Response	Rationale
			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?**		There will need to be changes to our risk management and pricing systems. Such a change without the risk mitigation discussed in our response and the TLFMG report would clearly represent a largely unmanageable risk and a step change in asset value for British Energy.
12	**Do you have any other views you wish to express about Modification Proposal P82?**	Please state other views	We have the following additional comments. The consultation documents 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

Q	Question	Response	Rationale
			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 other suggestions unless they are clearly agreed by the group. The arguments set out in section 4.3.1 appear us to be divorced from any assessment against BSC objectives. 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 strengthens the arguments for risk management arrangements such as phasing.

P82_ASS_013 – BOC PGS UK

Please find below BOC PGS UK response to the above.

BOC attended the open mod session run by Elexon on 24 September this was most helpful in understanding the issues in this complex issues.
BOC does not agree that either of the mods should be accepted because:-

* 1/2 losses and inherent imbalance charges will increase complexity and the possibility of befuddling the customers and increasing the barriers to competition.
* The locational signals are likely to force NGC to abandon the triad charging method which provides a good economic signal, a lower level signal over many more hours is less likely to be responded to.

I hope you find this response helpful.

Best wishes

Hugh

P82_ASS_014 – 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 P82, An Alternative Proposal to P82?**	**No**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 would better achieve the Applicable BSC Objectives. Indeed, as noted in our responses to the questions below, we believe that certain fundamental aspects of P82 would jeopardise the achievement of these Objectives as compared to the current baseline. We do not support either Modification Proposal P82 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 period in question, rather**	**No**	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 would better achieve the Applicable BSC Objectives. However, were such a scheme to be implemented, the use of ex ante loss factors

Q	Question	Response	Rationale
	than after (i.e. ex-ante, rather than ex-post) would lead to the better achievement of Applicable BSC Objectives?		would avoid the volatility of ex post loss factors and hence would remove one of the risks to efficiency posed by that uncertainty. Overall, however, we believe that the market shock caused by the introduction of a zonal losses scheme of this type (see our answer to Q7-8), the inefficient and arbitrary geographical allocation of losses consequent on the use of the calculation methodology proposed for P82 (see our covering letter), and distortions created by zonal averaging (see our answer to Q9), would not better achieve the Applicable BSC objectives than the current baseline.
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	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 would better achieve the Applicable BSC Objectives. However, if such a scheme were to be introduced using ex ante calculation of TLF's, then the temporal granularity should be that for which the model inputs may be forecast with the greatest accuracy and for which the model outputs are the least volatile, for best achievement of Applicable BSC Objectives (b) and (c), and which best lends itself to efficiency in implementation and administration of the balancing and settlement arrangements, for best achievement of Applicable BSC Objective (d). On this basis the most suitable time period for P82 would be BSC Year, provided that the TLF's were published in good time. The proposed publication date of 1 December should be satisfactory. However we do not believe that this would better achieve the Applicable BSC Objectives than the current baseline - the scheme may not necessarily improve on the current baseline at meeting Applicable BSC Objective (b), and would jeopardise the achievement of Applicable BSC Objective (d).
5	**If a zonal Transmission Losses Scheme were to be introduced what**	Intact	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 would better achieve the Applicable BSC

Q	Question	Response	Rationale
	network should be used; **Intact** **Indicative** **Other?**		Objectives. If such a scheme were to be introduced using ex ante calculation of TLFs then the calculations should use an intact network. The modelling results have shown that the TLF's are sensitive to NGC's actions, although such changes to TLFs are not within the control of parties. The use of an indicative network in an ex ante calculation would introduce inaccuracies and expose participants to the consequences of NGC's assumed 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 P82 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 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**	April 2008	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 would better achieve the Applicable BSC Objectives.

Q	Question	Response	Rationale
	implemented?		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 generation 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 implementation should be employed?** **4 years** **10 years** **15 years** **25 years** **Other?**	5 or 10 years, depending on implemen-tation date	ScottishPower does not believe that a zonal transmission losses scheme as proposed in P82 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 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

Q	Question	Response	Rationale
			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 P82 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 P82 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). 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

Q	Question	Response	Rationale
			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 P82 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 P82 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 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

Q	Question	Response	Rationale
			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 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.

Q	Question	Response	Rationale
			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 P82?**	Please state other views	ScottishPower is concerned that the implementation of P82 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 P82 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 achievement of Applicable BSC Objectives (b) and (c).

P82_ASS_015 – 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**
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 P82, An Alternative Proposal to P82?**	**Modification - 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. It is possible, however, that with an appropriate phasing-in arrangement which allows participants to manage the risks of largely unpredictable volatility, the negative aspects of P82, in terms of industry costs, could be outweighed by the marginal benefits claimed for the scheme. Such an approach would be appropriate, given the long term investment nature of the industry. As regards the preferred phasing approach, please see our comments below in response to question 8 below.

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?**		
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 achievement of Applicable BSC Objectives.	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 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

Q	Question	Response	Rationale
			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 adequately investigated and that before an averaging period is chosen, further studies should be undertaken: consideration should also be given to setting a "maximum	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 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 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

Q	Question	Response	Rationale
		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.	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 criteria which are set out in the BSC and which would provide a robust basis for the future.

Q	Question	Response	Rationale
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 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

Q	Question	Response	Rationale
			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. 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

Q	Question	Response	Rationale
			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 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

Q	Question	Response	Rationale
			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" 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

Q	Question	Response	Rationale
			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 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.

Q	Question	Response	Rationale
			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 used, AC or DC based load**	**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 modelling load flows based on power tracing, developed by the University of Durham. Furthermore, we understand that this approach

Q	Question	Response	Rationale
	flow modelling?		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 requirement of its customers and other contractual requirements.	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
		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 P82?**	Please state other views	

P85_ASS_016 – Great Yarmouth Power Ltd

Respondent Name	Ian M. Mullins
BSC Party	**Yes**
Responding on behalf of	Great Yarmouth 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 P82,** **An Alternative Proposal to P82?**	**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)
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** **Other?**	Please state preference	Intact

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** (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 systems and operations?**		Current industry systems have a standard and uniform approach to transmission losses that facilitates accurate notification of positions to the BM to avoid balance exposures. Any new system that

Q	Question	Response	Rationale
			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 P82?**	Please state other views	

P75_ASS_017 – Scottish and Southern Energy

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 P82 contained in your note of 2nd October 2002, our comments and answers to the twelve questions listed are as follow:-

(See attached file: P82 - SSE Consultation Response.doc)

Regards

Garth Graham
Scottish & Southern Energy plc

Respondent Name	Scottish and Southern Energy plc
BSC Party	**Yes**
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 P82, An Alternative Proposal to P82?**	**No change to the existing regime**	We do not believe that Modification Proposal P82 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 P82 or any other form of zonal Transmission Losses scheme. We would refer you to our comments at the P82 Definition phase. These comments still remain valid in respect of this latest consultation on 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?**	**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 Objectives?**	**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.
4	**If a zonal Transmission Losses**	BSC Year	As noted in our response to Q1

Q	Question	Response	Rationale
	Scheme were to be introduced what time period should TLFs apply to; **Settlement Period** **BSC Year** **Other?**		above, we believe that the existing arrangements a better way of achieving the applicable BSC Objectives. The use of a BSC year would reduce the risk 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 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

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 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 P82 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. 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.

Q	Question	Response	Rationale
			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 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

Q	Question	Response	Rationale
			generation assets compared to portfolio generators. 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 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).

Q	Question	Response	Rationale
			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 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

Q	Question	Response	Rationale
			can be mitigated, via remedial action, if appropriate. In regard to the matter of the cost/ benefit analysis associated with this Modification P75, 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. Even under P82 this £3M 'benefit', when measured against the additional cost to market parties of systems development, coupled with the cost of employing a TLF 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 P82?**		In respect of the methodology to apply, in regard to Marginal Transmission Losses Factors, we believe that scaling, such as in P82, would be preferred. 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

Q	Question	Response	Rationale
			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 P82 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. 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

Q	Question	Response	Rationale
			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. 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. 9. Finally there should be no significant reform of NETA ahead of BETTA.

P82_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 P82, An Alternative Proposal to P82?**	Neither	energywatch does not consider that either P82 or a P82A would better achieve the applicable BSC objectives. energywatch does not consider that P82 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 P82 better meets applicable objective (c). energywatch is concerned that the additional complexity of the calculation of TLFs under P82 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 P82, energywatch does not consider that the proposal would better meet applicable objective (d).
2	**If your answer in one involved more than one possibility, which of the above do you believe**	n/c	No comment.

Q	Question	Response	Rationale
	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 (Qualified)	energywatch does not support the introduction of a zonal losses scheme. However, in the event that zonal losses are introduced we would prefer the P82 approach where TLFs are calculated ex ante approach.
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 a 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 P82 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.
8	**If a zonal Transmission Losses Scheme were to be introduced, would phasing better achieve**	Inconclusive	energywatch is concerned that phasing proposals may be overly complex and hence would not better meet applicable BSC objective (d). However, we do

Q	Question	Response	Rationale
	the Applicable BSC Objectives? If so, what timescale for full implementation should be employed? **4 years** **10 years** **15 years** **25 years** **Other?**		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 grouping is 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 P82?**	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 P82 would outweigh the costs of P82. 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 important to highlight the interaction between P82 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

Q	Question	Response	Rationale
			P82. However, should a zonal losses scheme be introduced we would prefer the introduction of P82.

P82_ASS_019 – Powergen

Respondent Name	Powergen UK plc
BSC Party	Yes
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 P82,** **An Alternative Proposal to P82?** Our proposed alternative would be as per P82 original except that: TNUoS zones would apply for generation rather than GSP Groups. Monthly TLFs would apply rather than Annual TLFs Ex ante calculation of monthly TLFs using data from relevant month in the previous year. 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 (albeit in a less satisfactory form than P75 because it attenuates the marginal values) will provide 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.
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 alternative as specified under Q1**	The problem with P82 is that the annual averaging and ex ante approach ensure that the annual TLFs are much less representative of real losses on the system than the ex post, per settlement period approach suggest under the original P75 proposal. It is therefore appropriate to improve the resolution in deriving TLFs by applying monthly TLFs and using

Q	Question	Response	Rationale
			TNUoS zones for generation. See further comments below.
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)	The results of the modelling work seem to suggest that the benefits of added accuracy of the ex post, application of TLFs, is currently outweighed by the added costs and perceived risks of such an approach. 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 such as those described in the P75 original suggested approach.
4	**If a zonal Transmission Losses Scheme were to be introduced what time period should TLFs apply to;** **Settlement Period** **BSC Year** **Other?**	**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 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 one year. For any possible future ex post approach we would suggest application of daily TLFs.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact (historic)**	With the lower level of accuracy inherent in the P82 approach, 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 would be treated differently from generation plant in the same area

Q	Question	Response	Rationale
			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**	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 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

Q	Question	Response	Rationale
			The issue was described in the prospectuses of 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 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 the 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

Q	Question	Response	Rationale
			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 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 representative of actual losses compared to TNUoS zones. This 'lack of representative' TLFs (i.e. TLF drift') is likely to become worse over time as 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**	**DC**	With the lower level of accuracy inherent in the suggested P75 ex

Q	Question	Response	Rationale
	approach to TLF production should be used, AC or DC based load flow modelling?		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 reviewing 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 P82?**		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. The use of a 0.5 scaling factors and TLMO factors rather than just the TLMO factors with the P75 fully marginal approach results in a non uniform adjustment to reflect so called 'fixed losses'. They suggest that such attenuation of marginal loss signals to approximately recover actual losses is intrinsically more cost 'cost-reflective'. We do not agree with that view. Nevertheless if the attenuation factor is set to achieve the right level of losses, the TLFMG should consider evidence submitted by NGC at the seminar on 14 September 2002, which suggested that 'fixed losses' represent 30% of total losses.

1.1 BSC Modification Assessments P75 and P82

1.2 Supplementary Comments by Immingham CHP LLP

1.3

1.4

1.5 Introduction

1.6

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

1.8

1.9 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.

1.10

1.11 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:

1.12

- 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.

1.13

1.14 Market-wide Arguments

1.15

1.16 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.

1.17 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.

1.18

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.

1.19

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.

1.20 Technology-specific arguments

1.21

1.22 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.

1.23

1.24 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.

1.25

1.26 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.

1.27

1.28 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.

1.29

1.30 Costs vs Benefits

1.31

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.

1.32

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.

1.33 Process Issues

1.34

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**
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 P82, An Alternative Proposal to P82?**	**We consider that the existing BSC rules better meet the applicable objectives.**	If P82 is to be implemented, it is important that it is significantly modified. In particular, demand, CHP and renewables should be specifically excluded from a revised losses scheme and current arrangements should be retained for them.

Q	Question	Response	Rationale
		None of the proposals discussed by the TLFMG better meet them. **An Alternative, though only in preference to P82 Original, is suggested in this response. We also consider that the P82 Alternative with phasing is consider-ably superior to P75.**	If these participant groups are not to be exempted, a phasing scheme should be adopted – see answer to Q7.
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**	An ex-ante calculation of zonal transmission losses would provide the more stable investment environment relative to other options being considered and all ex post options. In particular, an annual ex-ante zonal calculation would sharpen the locational signal, cause least detriment to risk management and mitigate the increase in the additional costs

Q	Question	Response	Rationale
			likely to be passed through to the end user.
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**	An annual zonal approach is the least unstable of all the options considered by the TLFMG. Above all an annual ex-ante zonal approach would have the least detrimental impact of all the options for change in terms of limiting a party's ability to hedge its position.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**	**Intact**	The Intact approach is based on the whole theoretical transmission system and ignores operational aspects such as line outages, whilst Indicative is based on a snap-shot of the system configuration at a particular time. We believe that the Intact approach gives more stable signals and allows the effects of line outages to be dealt with separately as part of NGC's incentives.
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**	Demand for the most part, with the limited exception of certain large industrial loads, 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. [A further factor: the introduction of zonal differentiation could reduce the current signals to load manage, primarily driven by Triad

Q	Question	Response	Rationale
			avoidance.] Taking these factors together we believe that the current proposals would create a cost signal which would not enable any meaningful response, and which might undermine current signals that incentivise efficient usage. The priority should be to establish signals for siting decisions for new generation.
7	**If a zonal Transmission Losses Scheme were to be introduced, when should such a scheme be implemented?**	**Any change should be implemented 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.**	The synchronisation with the financial year is essential to mitigate the impact on existing contracts. The effect of implementing any of the change proposals would be in effect to impose a tax on many existing players or to provide a windfall gain. This position would be inequitable. Arguably applying new loss factors to existing projects could have some marginal impact on mothballing decisions but in the main is unlikely to influence operational decisions. We do not consider that such change would impact significantly on the current level of losses, and therefore timing is not pressing. NGC has seen a material reduction in losses on its system over recent years and the benefits have decreased since the introduction of NETA as transmission losses have decreased from approximately 1.8% to 1.4%. and these are expected to reduce further without any further change to current loss factors as Northern coal fired generation is retired. We believe that the potential further gains are limited by the large degree of heat related losses

Q	Question	Response	Rationale
			which are fixed. We return to this issue in the context of our comments on costs vs benefits in response to Q12. Furthermore, the associated transmission investment has already been incurred and changes in generation flows could only distort the basis on which historic transmission investment decisions have been taken. Two other timing issues: The losses change proposals should be integrate with other proposed changes to introduce transmission access, to review transmission charging and to implement BETTA. Without a coordinated change approach, there is likely to be double counting or conflicting cost signalling messages. The government's energy policy review is also considering externality pricing, and decisions on locational issues need to be taken into account with other changes in pursuit of wider policy goals.
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?**	**Fifteen years**	A phased approach is essential for existing and consented investment. Existing investments and sunk costs could be stranded by either of the two Modification Proposals. Since these sunk costs are typically long term and irreversible, this scenario could undermine efficiency by harming long term cost recovery and disincentivising future investment, and it is a prerequisite that a mitigation scheme should be integral to any change pursuant to either P75 or P82.

Q	Question	Response	Rationale
			A fifteen year phasing period gives participants a reasonable planning timeframe.
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**	We would strongly support the use of GSP groups rather than TNUoS zones for two reasons: First the use of TNUOS charging zones as zonal groupings for generation entails reliance in the BSC on parameters that are external to the BSC and under a different governance regime. Second TNUoS zones are also subject to change, increase uncertainty and therefore risk. Furthermore if demand and supply zones are not the same, the scope for gaming would be increased. For example, in an overlap area between demand and supply zones, it may be possible to configure accounts and re-cycle energy round the accounts to take the difference in losses as a profit.
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**	While an AC approach is more accurate in theory, it also requires more judgements to be applied. We believe that a DC approach is more appropriate to the averaged approach inherent in 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 significantly detrimental without transitional implement-ation.**	Immingham CHP is a 720MW CHP generation site with interdependent demand of about 40MW.
12	**Do you have any other views you wish to express about Modification**	**See our covering**	

Q	Question	Response	Rationale
	Proposal P82?	**letter to this pro forma.**	

P82_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**
Responding on behalf of	THE CHEMICAL INDUSTRIES ASSOCIATION, REPRESENTATIVE OF LARGE INDUSTRIAL CONSUMERS

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 P82, An Alternative Proposal to P82?**	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 Other?**	N/A	

Q	Question	Response	Rationale
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 approach to TLF production should be used, AC or DC based load flow**		

Q	Question	Response	Rationale
	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 P82?**	Please state other views	Please see attached text.

P82_ASS_022 – 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**
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**	**Modification P82**	The stability of the TLFs under P82 will provide better long term signals for investment than P75. It has been stated that the move to zonal transmission

Q	Question	Response	Rationale
	Applicable BSC Objectives; Modification Proposal P82, An Alternative Proposal to P82?		losses has been much heralded and that a zonal losses scheme will provide a more appropriate allocation of costs of transmission losses. Whilst we accept the former we have yet to see conclusive evidence that a zonal losses scheme will correctly and efficiently allocate costs of losses to those that cause them. We remain concerned that the expenditure for implementing either of the proposed losses schemes will far outweigh the actual benefits that can be achieved. Any locational signals achieved from a losses scheme will only play a small part in any new investment decisions made by demand or generation. It is issues such as planning and the development of Government policy on issues such as renewable and embedded generation which will be a greater driver for these investment decisions. We do not believe that it has been demonstrated that P82 or any alternative does better achieve the Applicable BSC objectives. 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**	**Yes**	Calculation prior to the period will provide the opportunity for parties to

Q	Question	Response	Rationale
	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?		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. 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?**		BSC year
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used;** **Intact** **Indicative** **Other?**		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?**	Please state preference	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

Q	Question	Response	Rationale
			could be accommodated by the extended implementation time frame.
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. This is an average based upon our understanding of the remaining life of existing generation and demand assets.
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 demand and generation**	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 £0.5 -£1.5m
12	**Do you have any other views you wish to express about Modification Proposal P82?**		We believe that P82 would adversely impact on the following areas: renewables and CHP introduction of BETTA

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

P82_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/**
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 P82, An Alternative Proposal to P82?**	**Alternative**	P82, given alternative arrangements for phasing the introduction of such a scheme, may better facilitate the Applicable BSC objectives. Issues with the proposal however, require further investigation to give certainty that P82 would better achieve the Applicable 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?**		
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 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. Ex-post calculation of TLF's requires an estimate of the actual TLF to be applied and reduces any potential for 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?**		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**	Intact	The choice of network should be

Q	Question	Response	Rationale
	Scheme were to be introduced what network should be used; **Intact** **Indicative** **Other?**		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. 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**	Yes	To give long-term certainty / efficient investment decisions, the introduction of any transmission losses scheme should be phased

Q	Question	Response	Rationale
	implementation should be employed? **4 years** **10 years** **15 years** **25 years** **Other?**		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 "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**	Identical Zones for Generation	Any difference in the treatment of Generation and Demand in any transmission losses scheme

Q	Question	Response	Rationale
	used; **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	and Demand	(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 P82?**	Please state other views	Refer to attachment.

P82_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 P82, An Alternative Proposal to P82?**	**Alternative**	P82, given alternative arrangements for phasing the introduction of such a scheme, may better facilitate the Applicable BSC objectives. Issues with the proposal however, require further investigation to give certainty that P82 would better achieve the Applicable 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?**		
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 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. Ex-post calculation of TLF's requires an estimate of the actual TLF to be applied and reduces any potential for 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?**		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

Q	Question	Response	Rationale
			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. 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

Q	Question	Response	Rationale
			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 "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

Q	Question	Response	Rationale
			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 P82?**	Please state other views	

P82_ASS_025 – LE Group

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 P82,** **An Alternative Proposal to P82?**	**Modification Yes.**	We believe that P82 offers a practical approach to the allocation of the costs of transmission losses and provision of stable long term locational investment signals. This should better achieve BSC objectives (b) and (c) by encouraging more efficient siting and use of generation and by allocating the costs of transmission losses more accurately to those who cause them and thereby removing cross-subsidies which are anti-competitive. In addition to the above, we believe that the proposed methodology for P82 is an efficient means of applying zonal transmission losses and is therefore consistent with BSC Objective (d).
		Alternative Yes.	The change to zonal transmission loss factors could have a significant impact on some participants which would cause short term competitive disadvantage. These risks could be mitigated by phasing in the proposed TLFs over a number of years in order to allow participants to take account of any additional costs in their contracts. We would support therefore an alternative modification with a phased implementation of TLFs over a period of 4 years.
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**	**Alternative**	We believe that the Alternative modification described above better achieves the BSC objectives than the original proposed modification as it

Q	Question	Response	Rationale
	greatest degree?		minimises any competitive disadvantage that may result in the short term due to the impact of changing to the new TLFs.
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 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

Q	Question	Response	Rationale
			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.
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 both demand and generation**	The application of any existing zonal groupings 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

Q	Question	Response	Rationale
	GSP Groups for demand, TNUOS charging zones for generation, Other?		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 given that the calculation for P82 is only required to be calculated once a year 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 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 P82?**	Please state other views	

Q	Question	Response	Rationale
	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 born 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.		

P82_ASS_026 – SEEBOARD Energy

Respondent Name	Dave Morton
BSC Party	**Yes**
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 P82, An Alternative Proposal to P82?**	**Modification**	We believe that P82 better achieves applicable BSC objectives than the status quo. - it allocates costs more efficiently than current arrangement - redistribution of losses would lead to more efficient dispatch of generation, more efficient investment and location of generation and demand.
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 participants exposure to volatile cash-out prices.
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	Annual varying TLFs represent least volatile option.
5	**If a zonal Transmission Losses Scheme were to be introduced what network should be used; Intact**	Intact	We accept conclusions of group that an intact network is preferable.

Q	Question	Response	Rationale
	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?**	**No**	We believe that exclusion of any group would result in distortions in the market and, therefore, would not better achieve the 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 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 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 used;** **GSP Groups for demand and generation,** **GSP Groups for demand, TNUOS charging zones for generation,** **Other?**	GSP Groups for demand and generation	We agree with considerations of TLFMG on this issue.
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 accept findings of TLFMG that a DC study is appropriate for P82.
11	**If a zonal Transmission Losses Scheme were to be introduced what would be the impact on your**		At this stage we are unable to accurately assess these impacts. Further information is required to

Q	Question	Response	Rationale
	organisation in respect of both systems and operations?		carry out this request.
12	**Do you have any other views you wish to express about Modification Proposal P82?**	Please state other views	

P82_ASS_027 – Magnox Electric

Respondent Name	Nigel Burrows
BSC Party	**Yes / ~~No~~**
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 P82,~~ An Alternative Proposal to P82?**	**Modification Alternative: Modification Proposal P75**	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?**	**Modification Proposal P75**	
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 time period should TLFs apply to; Settlement Period BSC Year Other?**	**Settlement Period**	Consistency with current BSC arrangements. Any reduction in resolution beyond this level would result in a dilution of the cost signals to system users.
5	**If a zonal Transmission Losses**	**Intact**	Based on evidence presented in

Q	Question	Response	Rationale
	Scheme were to be introduced what network should be used; **Intact** **Indicative** **Other?**		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.
9	**If a zonal Transmission Losses Scheme were to be introduced, which zonal groupings should be used;** **GSP Groups for demand and generation,**	**No Clear Preference**	It is unclear from the Modification Group Report and modelling which zonal groupings would best meet the BSC objectives.

Q	Question	Response	Rationale
	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/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 P82?**	**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

P82_ASS_029 – Alcan Primary Metal – Europe

Respondent Name	Alcan Primary Metals Europe
BSC Party	**No**
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 P82, An Alternative Proposal to P82?**	**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 they have no control. This is a bad principle on which to base

Q	Question	Response	Rationale
			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 the north. **We strongly**

Q	Question	Response	Rationale
			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 a significant proportion 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 P82?**		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.