Issue	Revision
0.1	DRAFT

Summary Report on Entry Capacity Baseline Workshops

28 September 2007

nationalgrid

Contents

General Introduction

Background

1 On 27 July, Ofgem issued an open letter announcing a further consultation on NTS entry capacity baselines. A link to the open letter is provided below.

http://www.ofgem.gov.uk/Networks/Trans/GasTransPolicy/Documents1/Further%20consultation%20on%20NTS%20entry%20capacity%20baselines.pdf

2 In order to commence this process, National Grid NTS agreed to conduct a series of three workshops during August and September. The workshops were subsequently organised and chaired by the Joint Office. This document is intended to summarise the content and output of the workshops. All referenced documentation and minutes of the workshops are available on the Joint Office website, via the following link:

http://www.gasgovernance.com/Code/Workstreams/TransmissionWorkstream/2007Meetings/

Workshop 1: 14 August 2007

Objectives

3 The objectives of the first workshop were to review the process that had been undertaken to set the current obligated entry capacity levels and to set out the timeline to review associated topics e.g. capacity substitution.

National Grid NTS Presentation – "Background to National Grid's Baseline Analysis"

4 National Grid NTS initially outlined the methodology that had been used to set the Transmission Price Control Review (TPCR) 2002-2007 baselines. The method applied was to set the baselines at 90% of the maximum physical capability of each ASEP, ignoring interactions between ASEPs. In setting aggregate baselines of 9755 GWh/d, it was recognised that this was in excess of the physical capability of the system.

5 In reviewing the baselines during TPCR 2007-2012, a number of issues were raised:

a. Prevalence for short term bookings
b. Lack of flexibility to deal with changing capacity demands
c. Should baselines be at a more aggregated level than nodal?
d. Should modelling be based on supply substitution or load absorption?
e. Should baselines exceed the physical capability of the system (at peak)?

National Grid NTS detailed and discussed all of the above points and the subsequent network analysis requested by Ofgem.

6 Based, in part, upon this analysis Ofgem decided upon:

a. Entry point specific baselines (nodal)
b. Modelling based on supply substitution
c. Baselines, in Ofgem's opinion, being set to reflect the physical capability of the system
d. Baselines not being less than the amount of obligated capacity already sold

e. A reduction in the amount of capacity held back until the shorter term auctions from 20% to 10%.
f. Introduction of an obligation to substitute capacity in response to auction signals

Ofgem Presentation – "Further Consultation on NTS Entry Baselines"

7 Ofgem explained the reasons behind the further consultation on NTS Entry Baselines and re-iterated their reasons for revising baselines:

a. Baselines to reflect the physical capability of the network
b. Reducing the risk of consumers facing high buy back costs
c. Recognising that gas flow patterns are changing
d. Addressing concerns in relation to sterilised capacity

8 Ofgem then described the method by which the final baseline numbers were derived:

a. Assume 2005 10YS for the 2008/09 network
b. Model "1 in 20 winter peak"
c. On supply side model the three 2005 10YS scenarios "Transit UK", "Auctions+" and Global LNG
d. Assess capability on a nodal basis – to identify "free increments" above Base Flows. Free increments being the maximum additional flow that could be accommodated at each entry point without leading to a system constraint
e. 100% of the highest free increment in a zone allocated to ASEPs within a zone based on the 2005 10YS flows for 2008/09
f. A few final adjustments were made to take account of particular circumstances

9 It was further explained that the final proposals for baselines were part of a total package. The other key elements of the package were:

a. Cost of capital
b. Capex allowance
c. Pensions and tax allowance
d. Revenue drivers
e. Buy back allowance and exposure
f. Other incentives and obligations – of particular relevance are the Obligations of Capacity Substitution and Transfer & Trade to reduce the risk of capacity sterilisation and the risk of inefficient investment

Industry Comments and Debate on Baseline Setting

10 There was significant debate on the method and assumptions behind setting the Baselines. The majority of the points were responded to and clarifications provided in the meeting, with further ideas on setting Baselines encouraged. In addition the scope of the Ofgem further consultation on Baselines was questioned. Ofgem re-iterated that the focus of their further consultation would be on the Baseline issue, but it was recognised that Baselines formed part of the overall TPCR package, therefore it might be necessary to revisit other aspects, such as the buy back allowance.

Timeline for Reviewing Associated Issues

11 National Grid NTS presented a timeline to correspond to the dates published in Ofgem's open letter and to take into account a review of other items that may need to be addressed, such as charging, as a result of the Baseline further consultation. Of

particular note was the potential for the AMSEC auction to be delayed until the outcome of the Baseline further consultation was complete.

12 Overall the workshop participants seemed to think that although the timeline was challenging, it reflected a pragmatic approach. The only area where it was considered inappropriate was with regard to the development of the enduring Trade and Transfer regime. The workshop participants thought that this activity should not start until after this year's Trade and Transfer auction had been completed. National Grid NTS accepted this point and agreed to re-work the timeline. An updated timeline is provided in Annex 1.

Workshop 2: 17 August 2007

Objectives

13 The objectives of the second workshop were to consider alternative methods of setting the Baselines and to consider the issue of "spare / sterilised" capacity (pertinent to the debate on substitution).

National Grid Presentation – "Baseline Re-consultation"

14 National Grid NTS initially, as a reminder, recapped on how the new Baselines had been set. This description went into significant detail illustrating how the analysis was performed. This led to Baselines of 8814 GWh/d. The 8814 GWh/d is made up of 7118.8 GWh/d of 'baseline' entry capacity plus incremental obligated capacity of 1695.4 GWh/d at the following entry points, Barton Stacey, Milford Haven, Garton and the Isle of Grain. However, the 8814 GWh/d does not include incremental obligated entry signalled during the September 2006 QSEC auction, which equated to approximately 1300 GWh/d. The Licence obliges National Grid NTS to withhold 10% of the 'baseline' entry capacity for shorter term auctions. The 10% therefore applies only to the 7118.8 GWh/d.

15 When Ofgem set the Baselines, they did consider three methods of distributing the 'unallocated' capacity:

a. 10YS forecast flow for 2008/09
b. "Base flow" adjusted for any extra sold capacity
c. 2002-2007 TPCR Baseline figures

16 National Grid NTS demonstrated the outcome of using the three methods described above. Overall the aggregate Baseline figure did not vary significantly however individual ASEP allocations were in some cases materially affected.

17 National Grid then suggested an alternative approach to the initial allocation of the aggregate figure of 8814 GWh/d:

a. Initially allocate the maximum capacity sold going forwards as at August 07 (8210 GWh/d)
b. Adjust for incremental capacity sold in 2006 long term auctions (1310 GWh/d), which means that now only 6900 GWh/d of the original 8814 GWh/d has been allocated.
c. Allocate the 20% capacity held back for shorter term auctions at ASEPs that have sold out, as it was not possible for shippers to book this capacity in long term auctions. This affects Cheshire, Easington, Hornsea and Isle of Grain and allocates a further 359 GWh/d.

d. This would leave 1554 GWh/d to be allocated.

18 In considering how to allocate the remaining 1554 GWh/day, National Grid NTS put forward three key principles. Baselines should:

a. reflect physical capability
b. not exceed previous obligated levels (as capacity is effectively being rationed compared to the previous obligations)
c. be broadly commensurate with buy-back target

19 National Grid NTS presented a table of the current Baselines at a zonal level. If it was assumed adhering to these Zonal limits would meet the above principles it could be seen how the remaining1554 GWh/d would be allocated at a Zonal level.

20 National Grid NTS invited views on the information and analysis presented and also asked for written representations ahead of the third workshop.

Industry Reaction

21 There was a healthy debate on the analysis put forward by National Grid NTS. The main points raised in the discussion were:

a. It should not just be about allocating the aggregate 8814 GWh/d; the starting point of 8814 GWh/d should also be open for debate. Ofgem confirmed that this would form part of the further consultation.
b. There was a need to have sensitivity analysis on the potential increase in buy back costs as a result of Baselines above the 8814 GWh/d
c. It was suggested that the previous 20% held back for the short term should be allocated to all ASEPs
d. It was felt that it would be necessary to take account of the results of the 2007 September long term auctions

National Grid NTS Presentation – "Treatment of Spare / Sterilised Capacity"

22 National Grid NTS gave this presentation that explored policy measures associated with a further consultation on Baselines, which broadly seek to address the treatment of spare / sterilised capacity. The elements discussed were:

a. Capacity substitution
b. Trade and Transfers
c. 10% capacity held back for the shorter term
d. IECR
e. Charging

23 As part of this debate Ofgem helpfully clarified their understanding of "sterilised capacity". Capacity is potentially sterilised when demand for capacity is signalled in the vicinity of ASEPs where capacity is unsold. The incremental demand could use the network capability associated with that unsold capacity but it is sterilised unless National Grid NTS is not relieved of its obligations with respect to that unsold capacity.

24 National Grid NTS put forward 5 options that considered the potential implementation of capacity substitution and enduring Trade & Transfers. The options also addressed whether it was appropriate for more than 10% of the Baseline capacity to be excluded from substitution (as part of the methodology). The options ranged from a very dynamic

capacity market, as detailed in Option 1 “Fast and Furious” to a much more stable regime in Option 5 “Driving Miss Daisy”.

25 A number of questions were asked by workshop participants and there was a general desire for the options to be worked up to the next level of detail. National Grid NTS requested further written comments and feedback ahead of the third workshop. In particular, comments on whether the full range of options had been captured and whether industry participants had an initial preference for one of the options.

Informal Consultation Responses

26 Following the second workshop, National Grid NTS had requested written responses on the content discussed in the first two workshops. The aim was to obtain feedback from industry participants that would assist in developing options and informing any analysis to be discussed in the third workshop.

27 Seven responses were received to the informal consultation from the following parties:

a. E.ON UK plc
b. Centrica Storage Limited
c. BG Gas Services Limited
d. Statoil
e. ExxonMobil Gas marketing Europe Limited
f. Scottish Power Energy Management Limited
g. Excelerate

28 A brief summary of the responses received and answers to particular questions raised is provided in Annex 2. All of the consultation responses are available on the Joint Office website.

29 A further consultation response from Excelerate was provided on the 19 September. This is also included in Annex 2.

Workshop 3: 12 September 2007

Objectives

30 The objectives of the third and final workshop were to:

a. respond to any issues raised in the informal consultation
b. explore the different ways of allocating the 8814 GWh/day
c. consider the capital expenditure and buy back implications of having aggregate Baselines above 8814 GWh/day
d. further develop the capacity substitution options

31 To support discussions and to respond to a previous request, National Grid NTS had published an investment update.

National Grid NTS Presentation – “Update on Possible Baselines”

32 National Grid NTS gave a brief synopsis of the first two workshops in relation to the topic of Baselines.

33 The responses to the informal consultation were then discussed. However the responses did not provide any basis for consensus and no particular methods were proposed for allocating the baselines. Although there was a desire to consider both how the “cake was cut” and the “size of the cake”.

34 National Grid NTS presented 4 ways to allocate the 1554 GWh/day that had been identified as unallocated capacity at the end of Workshop 2:

a. On 2002-2007 TPCR Baselines
b. 2005 10YS
c. 2006 10YS
d. Maximum flow experienced at each ASEP over last 2 winters

35 Following this analysis, two alternative methods were explored that started at the 8814 GWh/d level rather than the unallocated 1554 GWh/day. These methods looked at using historical flows or adding back the 20% to each ASEP that was previously held back for shorter term auctions. Both of these approaches were not constrained by the Zonal levels that exist with the current Baselines. Therefore the buy back implications, if either option was pursued, would need to be explored.

36 The issue of increasing Baselines above the 8814 GWh/d was then addressed. In terms of capital expenditure, if the revenue drivers agreed as part of the 2007-2012 TPCR were applied and Baselines were increased to the pre-2007 TPCR levels, this would result in approximately £275m of additional capital expenditure being required.

37 Alternatively considering the potential incremental buy back risk of higher baselines, some preliminary analysis was shown. The analysis indicated that if the baseline at Teesside was increased to the pre-2007 TPCR level i.e. 70 mscm/d, this could lead to a potential £90m per annum (mean £20m per annum) incremental buy back risk. The modelling undertaken assumed that any flow increase at Teesside was balanced against a reduction at Milford Haven. A similar level of risk would also exist with increasing the Baseline at Barrow to the pre-2007 TPCR level.

Industry Debate

38 A number of points and requests for further information and analysis were raised by workshop participants. In summary these were (with responses):

a. Would all options discussed be included in the Ofgem consultation?
   - This would depend on the full analysis conducted by National Grid NTS
b. Without knowing the outcome of the substitution debate, it would be difficult to assess the merits of the various options.
   - This would need to be considered by Ofgem as part of their further consultation.
c. Could information be provided on whether the network had become tighter over the last price control review?
   - This is difficult to assess, particularly within the limited timescales, and not felt essential for the further consultation
d. More transparency on system capability and how this has changed over time and is forecast to change with future planned investments
   - Additional information has been published by National Grid NTS on the increase in obligated entry capacity levels over the current Price Control period
e. Information on network bottlenecks and investment required to relieve them

- Within the timescales of producing this report, this has not been possible, however Ofgem may request further capital expenditure analysis as part of their consultation

f. The sensitivity of buy back risk with higher aggregate Baselines
   - Within the timescales of producing this report, this has not been possible, however Ofgem may request further buy back analysis as part of their consultation

g. Will the September 2007 auction results be included in the analysis?
   - National Grid NTS will provide an addendum to this report to include the QSEC auction signals

National Grid NTS Presentation – "Treatment of Spare / Sterilised Capacity"

39 National Grid NTS summarised the Licence requirements with respect to substitution and indicated that National Grid NTS was working towards implementing substitution for June 2008 (in accordance with the direction received on 5 September from the Authority). It was also discussed that Ofgem had confirmed that the requirement to only hold back the 10% of Baseline capacity for the shorter term auctions would remain, however they would keep this under review.

40 A brief synopsis was then provided of the consultation responses. Overall there was not a general preference for one of the options presented as part of Workshop 2. However several responses suggested that more than 10% of capacity should be held back for the shorter term.

41 National Grid NTS presented a further development of Options 2, 3 and 4, providing greater detail to that discussed in Workshop 2. The main issues that all of the options face is how to deal with future short term bookings e.g. a single quarter. Should the capacity before this point be considered sterilised or should other mechanisms be applied? One solution proposed was that Shippers should be able to "surrender" the capacity and receive remuneration linked to the avoided investment.

42 Generally there was support to further develop the different elements of the Options, but not necessarily as distinct options. This would allow the individual elements to be debated and selected.

Summary

43 National Grid NTS has conducted a process to examine the setting of Baselines and associated topics. This process has involved full stakeholder engagement through both workshops and written responses.

Baselines

44 The outcomes of this process are:

a. a greater understanding of the process used by Ofgem in setting the 2007-2012 TPCR Baselines
b. a suite of alternative methods to allocate the aggregate Baseline figure of 8814 GWh/day. A summary of these methods is provided in Annex 3.
c. a preliminary view on the implications of aggregate Baselines above the 8814 GWh/day

45 The next steps in the process are for Ofgem to take forward the models developed and to determine any further information required in order to undertake a formal industry consultation.

Associated Topics

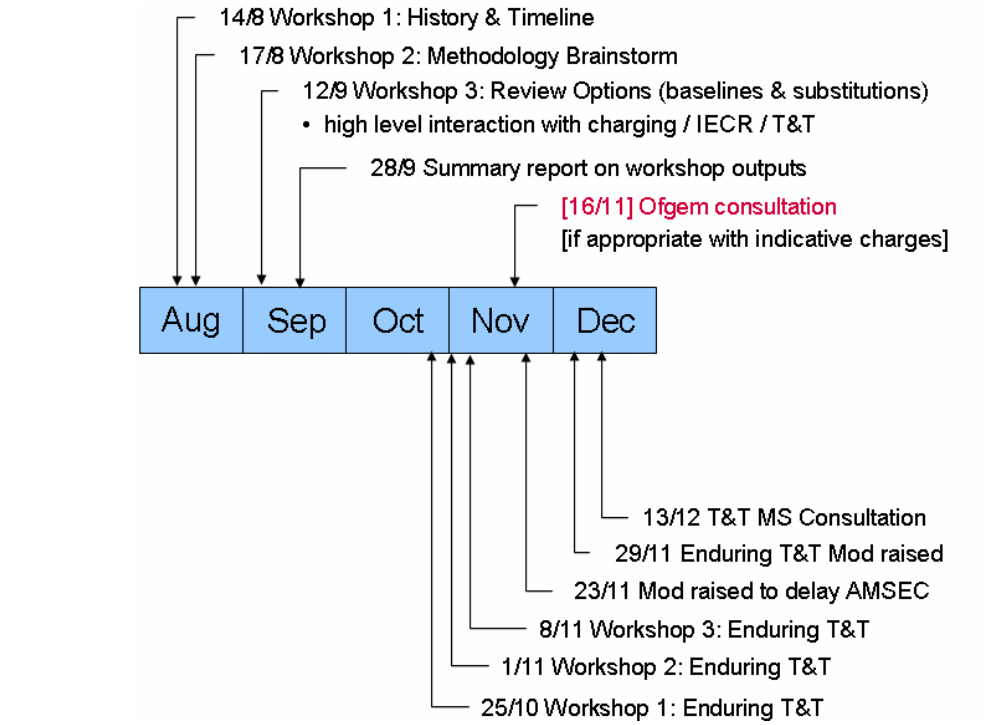
46 A timeline has been developed (Annex 1) which sets out the timetable to consider topics associated with a potential revision of Baselines.

47 A number of the workshop participants have suggested that certain associated elements, for example substitution and the 10% capacity held back for the shorter term, should form part of the consultation on Baselines. This will be a matter for Ofgem to consider.

48 The three workshops considered 5 options, which initially covered both substitution and transfer and trades. However in the final workshop only substitution options were considered. No consensus was reached in the workshops, however the discussions and comments provide a sound basis to take forward the work in these areas. For convenience Annex 4 details the 5 options considered.

Annex 1: Timeline

Part 1



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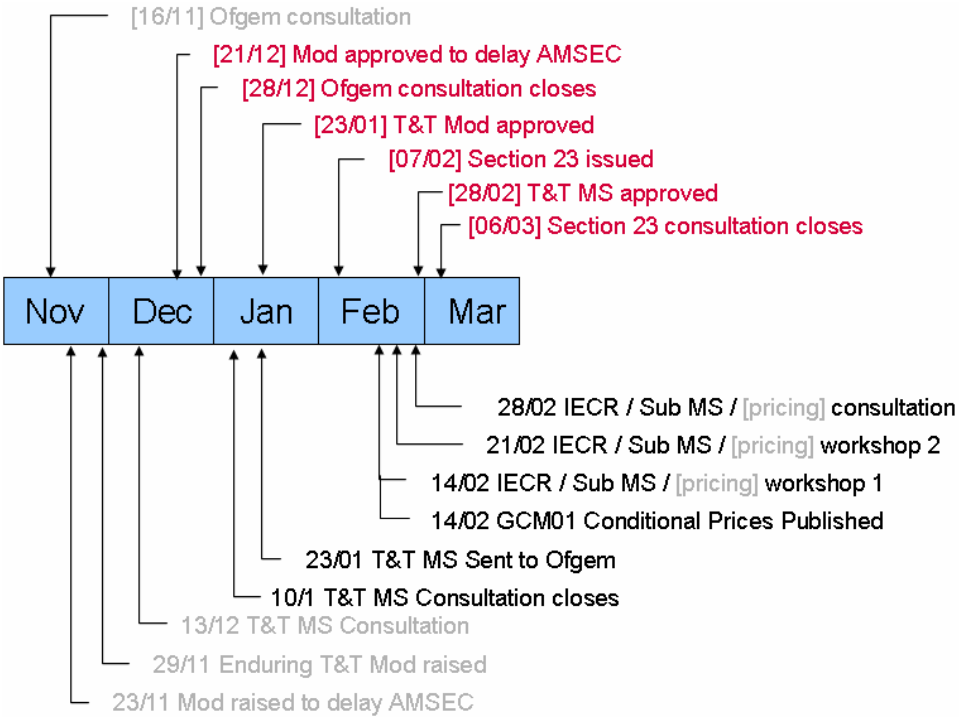
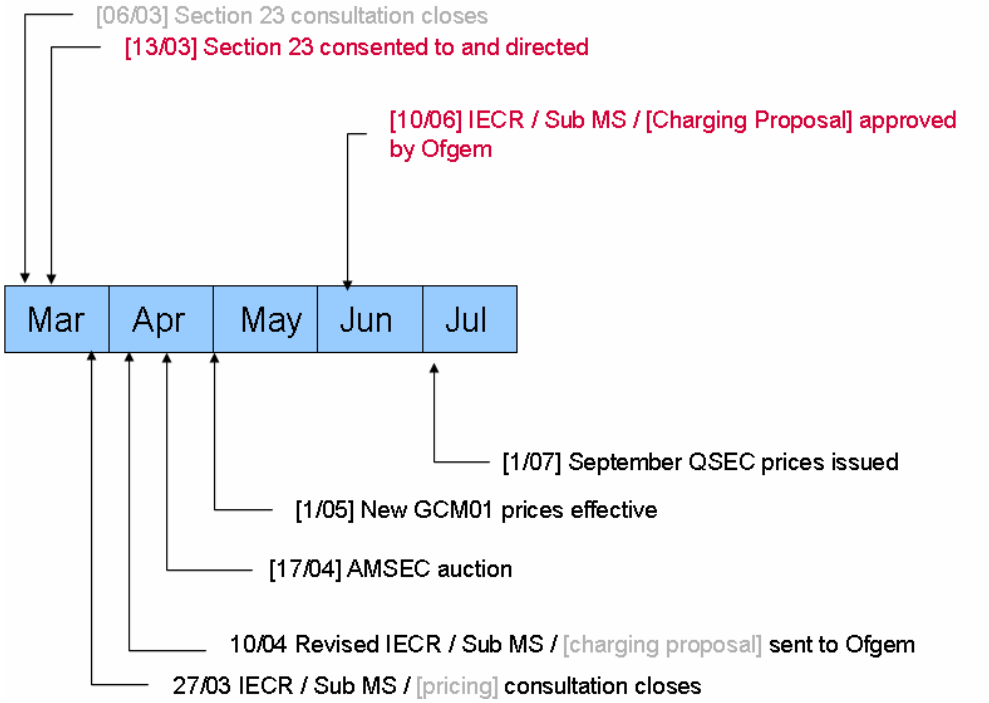


Part 3


[06/03] Section 23 consultation closes
[13/03] Section 23 consented to and directed
[10/06] IECR / Sub MS / [Charging Proposal] approved by Ofgem
Mar
Apr
May
Jun
Jul
[1/07] September QSEC prices issued
[1/05] New GCM01 prices effective
[17/04] AMSEC auction
10/04 Revised IECR / Sub MS / [charging proposal] sent to Ofgem
27/03 IECR / Sub MS / [pricing] consultation closes

Annex 2: Consultation Responses

Representations were received from the seven respondents listed below.

E.ON UK plc (EON)
Centrica Storage
Statoil (UK) Ltd (STUK)
Scottish Power (SP)
Excelerate Energy (two responses) (EE)
BG Gas Services Limited (BG)
Exxon Mobil Gas Marketing Europe (EM)

Party	Issue	Response Quotes	National Grid NTS ("NG") Response
1 – Baseline Setting / Allocation Methodology			
SP	Basis for setting Baselines	1.1 - We believe that the logical starting point for setting baselines is the physical capability of individual ASEPs, and historic usage. We find it hard to understand the precise methodology used in the recent redefinition of the baselines, and have seen severe impacts on current baselines for certain types of ASEP at the expense of others. Although the long term auction process is designed to send out signals of intent with regard to future use, we believe that it is inappropriate to disregard the importance of both ongoing physical usage and shorter term auctions. Although we have had a number of years of activity under the IECR, there are ASEPs which obtained connection agreements under the previous regime. Deemed capacity availability was per the previous baselines and there was no need to book long term capacity. It would appear that capacities agreed in connection agreements along with short term auction signals and existing physical use have been ignored under the revised baselines.	NG agrees that physical capability and historic usage are useful starting points for determination of baselines. However, the NTS as a whole is physically incapable of delivering simultaneously the maximum physical capability of each ASEP. Baselines must therefore, take account of overall system capability with an appropriate balance of baselines and buy back risks. Although historical usage can be useful it will not be a good indicator in all cases. Historical usage could lead to high baselines and sterilised capacity at declining ASEPs. Hence historical usage must be tempered by projections of long term usage (via auctions and/or planning). As one of the aims of the TPCR was that baselines should reflect the physical capability of the network, this led to an aggregate reduction in Baselines from the 2002-2007 level. NG therefore considers it appropriate when rationing capacity that a limit of the previous obligated level is applied to each ASEP.
CSL	Basis for setting Baselines	1.2 - With regard to allocating the unallocated capacity we agree that there is a need to take into account physical capability and	

		that it needs to be broadly commensurate with the buy back target, we do not, however, believe that new baselines should be constrained to not exceed previous obligations.	
CSL	Scope of revision of Baselines	1.3 - CSL believes that the scope of this re-consultation must include a review of the aggregate level of baseline capacity as well as the allocation of capacity.	The precise scope of the re-consultation on Baselines is ultimately for Ofgem to decide. NG has however, in its consultation, covered both the allocation of capacity using the Baselines agreed as part of the TPCR and some analysis on the aggregate level of baselines. We note however, that Ofgem have set Baselines at a level that they believe reflects the physical capability of the network, which as discussed above was one of their aims. Therefore to now increase aggregate Baselines would seem to go against this principle. In addition an increase in aggregate Baselines would be likely to lead to other aspects of the TPCR having to be revisited. This would then suggest that the review process would take longer.
Eon	Basis for setting Baselines	1.4 - The process of allocating an individual ASEP with a baseline figure, whether it is within a zone or not, is clearly a difficult task; quite simply because it involves allocating a scarce resource, which inevitably results in 'winners' and 'losers' depending on where shippers hold capacity. With each new determination of baselines, comes another round of 'winners' and 'losers'. One way to potentially minimise the effects on individual ASEPs would be to consider introducing zonal baselines. This is not something we would necessarily advocate as the impact on the NBP are unclear, but the concept may warrant further exploration by the industry to gauge interest.	A zonal baseline is an interesting concept that could simplify processes. However, this was consulted upon as part of the TPCR process and discounted.
EE	Basis for setting Baselines	1.5 - We believe that it is important that any revised baselines take into account the degree of change from previous baseline levels that applied from 2002-2007. We believe that the use of both the 2005 and 2006 Ten Year Statement in any allocation methodology is inappropriate because neither of these Ten Year Statements took the Excelerate GasPort project into account. As you are aware the Gasport project operates on short term market signals. This "fast to	In developing the models of how Baselines could be set, we have tried to take on-board all feedback received and used a variety of factors, such as previous Baselines and historical usage. However, we note Excelerate Energy's view that their model does not fit comfortably with the regime introduced as part of the TPCR.

		market" approach is very different to the traditional long term planning horizons and methodology used by National Grid.	
BG	Basis for setting Baselines	1.6 - The issue of substitution methodology cannot be considered in isolation from the aggregate level of baselines. NG has asked for comments on how to allocate the 1554 GWhd of unallocated capacity. However this ignores the question of whether the aggregate level of the baselines is correct. There has been a significant shift from a regime where NG had high baselines but no substitution. If substitution is limited, and this is coupled with new lower baselines, this means that NG is facing much lower risk than in the previous regime. Therefore if substitution is limited to resolve the problems outlined above, it needs to be accompanied by higher baselines to maintain the same level of risk.	See 1.3 and 1.5. Substitution is based on the physical capability of the network and therefore is unaffected by the actual level of Baselines. Therefore we disagree with the view that if substitution is limited this should be accompanied by higher baselines to maintain the same level of risk. However from a User's perspective, we can understand the desire to see the complete package and therefore have progressed the debate on substitution and other associated topics in parallel with the further consultation of Baselines.
STUK	Supply Demand Scenarios	1.7 - In the presentation given by NGG it was explained that the demand level was set using the three '1 in 20' peak demand scenarios from the Transporting Britain's Energy process. What remains unclear are the assumptions used to set these demand scenarios and how they relate to the behaviour of ASEPs. As was highlighted in the meeting it is important to ensure the demand level is set correctly as this will affect the levels of capacity that can/should be released.	Peak demand scenarios are detailed in the TYS. The supply level is largely dictated by peak consumer demand which is more predictable and stable than the behaviour of bi-directional points. A general assumption applied in the modelling is that bi-directional points will not be exiting gas from the system on a peak demand day. We have no experience to date to suggest otherwise.
STUK	Supply Demand Scenarios – Impact of DNOs	1.8 - Certainly since the original analysis was performed there have been changes accepted which will alter the regime in which the Distribution Networks operate. These changes may alter the nature of demand response. One such change is the change to the Interruption regime. Can NGG confirm what assumptions are made regarding interruptible sites in the demand levels and how the changes to the interruptible regime will impact on the setting of the Supply and Demand level.	DN, and overall, consumption is not significantly volatile compared to entry flows, so developments in the exit regime should not significantly impact upon demand. How DN interruptions are managed is an issue for DNOs. They feed through their demands to NG in their annual forecasts which NG uses in its analysis.
STUK	Supply Demand Scenarios – Bi-directional flows	1.9 - During the last extraordinary meeting of the Transmission Workstream where NGG presented the methodology used to set the baselines, STUK asked what assumptions were made	See 1.7. The level of peak demand for 2007/08 with a 1 in 20

		regarding the direction of bi-directional flows. The answer given in the meeting was that the representatives of NGG assumed that all bi-directional flows would be flowing gas into the network during a '1 in 20' peak gas demand scenario. STUK would welcome more analysis regarding this assumption. Historical data illustrates that bi-directional sites have not consistently flowed gas to the network at times of peak demand.	winter is significantly higher than the highest level actually experienced, which is 450 mcm/d in January 2003. Therefore although it may be correct that on cold days some bi-directional points may exit gas from the system, this is not proven, or anticipated, under peak conditions.
STUK	Supply Demand Scenarios - availability	1.10 - Under the Winter Outlook process certain assumptions are made regarding the availability of Supply during the winter period. One such assumption is that because of the aging UKCS infrastructure only 90 percent of supply would be available in a 1 in 20 scenario. STUK would therefore like to further understand the appropriateness of using an assumption of 100% availability when setting the baseline levels and implications of taking a reduced supply availability into account. STUK do not consider that taking the average of the resultant figures over the three supply scenarios can offer an appropriate means of calculating baselines. The three supply scenarios differ significantly in their approach to understanding possible supply of gas to the UK. Averaging resultant figures over the three scenarios cannot result in a realistic reflection of potential supplies.	The Winter Outlook considers security of supply particularly the scenario where an emergency situation may arise as a result of inadequate gas supplies. It is appropriate that a cautious approach is taken, i.e. <100% availability, in this case. Baselines set an obligation on NG to make that capacity available simultaneously at all ASEPs, an event that will normally be feasible. Hence analysis and baseline setting should assume 100% availability of upstream deliveries. NG has put forward a number of options on how Baselines could be set. The original method applied was chosen by Ofgem.
SP	Use of Zones	1.11 - We have reservations about accepting the current zoning methodology. Whilst we understand the value of grouping nodes within a zone from a system operation perspective, we believe that a further distinction relating to type of ASEP should be taken into account.	The use of zonal limits, where ASEPs utilise common infrastructure, is a pragmatic approach to setting Baselines and examining buy back risks. Distinguishing between types of ASEPs within a zone would represent a significant shift within the regime and would probably require the development of differentiated products with distinct rights. It would also be necessary to ensure that any measures were not unduly discriminatory.
2 – Security of Supply			

SP	Impact on flexibility of operations	2.1 - From a security of supply perspective, we also believe sufficient capacity should be available at individual ASEPs to allow maximum withdrawal and ensure optimal flexibility for the system.	Where capacity bookings have been made or incremental capacity triggered, capacity will be made available to these levels. However where User commitment does not exist, it would seem inappropriate to simply reserve all of this capacity and sterilise the associated capability that could have been made available at other ASEPs.
ExM	Need for flexibility	2.2 - We support the requirement for the System to be managed in an economic and efficient manner but we think there is a risk that the flexibility for shippers to bring gas into the System from various sources will be lost if capacity investment is too rigidly restricted and there is no 'slack' in the system at all. Therefore a balance must be struck that allows shippers a level of certainty about the capacity available to be booked on a long or short term basis at any given entry point whilst at the same time allowing National Grid NTS to substitute capacity rather than invest in additional pipe when it is appropriate to do so.	NG will develop proposals that satisfy its licence. The licence does not envisage “slack” and the requirement for NG to use reasonable endeavours to substitute capacity naturally will lead to a tighter system. The form in which the substitution obligation is implemented will have a significant impact on the availability of capacity in the short and long term. NG will undertake a full and comprehensive consultation on the implementation.
STUK	Emergency	2.3 - The impact of the proposed changes on security of supply cannot be understated. If there is sub-optimal infrastructure to transport the gas throughout the network, this could directly lead to a system emergency with associated consequences. Even if a 1 in 20 supply scenario is not experienced, if insufficient capacity is made available to allow gas to flow to the UK, Ofgem have previously stated the cost to consumers of gas not being made available to the wholesale markets to be billions of pounds.	
Eon	10% / 20% rule	2.4 - We would strongly advocate a move back to the 20% of capacity held back rule. This would allow much more flexibility for capacity holdings to be optimised closer to when the capacity is actually needed. Forcing shippers to commit to buying large amounts of long-term capacity which ultimately may not necessarily be needed is not always the most efficient option and although trades and transfers aims to mitigate this inefficiency, the process simply requires shippers to go through the administrative burden and expense of regularly offering it back up for sale for trade and transfer in short term auctions. We believe, as a result, that the market could be much optimised better by a move back to the ‘20%’ rule.	NG agrees that increasing the amount of capacity held back would increase flexibility and hence help some specific developments that rely on short term capacity bookings. However, increasing the level to 20% would also potentially sterilise more capacity that would otherwise be available to the wider market. Although a change to the Licence would be required to hold back more than 10% from the QSEC auction it may be possible to exclude a different proportion from the obligation to substitute. This will be considered as part of the consultation on capacity substitution.

BG	10% / 20% rule	2.5 - One way of ensuring that there was sufficient capacity for the short term would be to increase the percentage of capacity held back for the AMSEC auctions to more than the previous figure of 20% given that in the old regime unsold QSEC was guaranteed to be available in the AMSEC auctions; with substitution this is no longer the case. Alternatively there could be a maximum of capacity that is available for substitution in addition to any rules concerning retention of capacity for the AMSEC auctions. This would help ensure there was a level playing field between different sources of gas for the UK.	
ExM	10% / 20% rule	2.6 - We also have concerns about "all available capacity being subject to substitution", if the definition of "available" is taken to be all capacity which has not been sold in long term auctions. We believe that there should be a sensible definition of what is 'spare' capacity because we think it is risky to assume that all capacity that is unsold at the present time will never be needed at that entry point at some time in the future. …… It may therefore be appropriate to increase the 10% of withheld capacity and to exclude this from the substitution process so that smaller projects could be assured of being able to secure entry capacity.	See 2.2 & 2.3
EE	10% / 20% rule	*2.7 - a sufficiently large proportion of that [Teesside] capacity is held back for shorter term auctions including day ahead auctions;*	See 2.2 & 2.3
ExM	Stranding	2.8 - Whilst we believe that shippers who are undertaking large investment projects can and should signal their capacity requirements through long term user commitment substituting all unsold capacity away from an entry point could jeopardize smaller future developments which would be unable to pass an NPV test for incremental capacity at an entry point where capacity is currently available. This may have the effect of stranding indigenous gas and preventing UK gas producers from developing small fields or maximizing the use of offshore infrastructure.	NG understands the issue put forward, however under the current regime new / incremental developments should signal long-term commitment in the QSEC auction. Where this is not possible there can be no guarantee of capacity being made available. However, the trade and transfer obligations and the 10% capacity held back, provide additional flexibility to acquire capacity outside of QSEC.

BG	Stranding	2.9 - BG is concerned that Substitution increases the risk of stranding UKCS gas reserves. New UKCS fields will not necessarily be able to book capacity in a timely manner in the long term QSEC auctions before substitution has occurred, which is the only way to guarantee that capacity will be at an entry point in the future. Nor will such fields be able to book sufficient capacity to trigger the release of incremental capacity under the IECR rules, once substitution has occurred. The reasons for this are *[see complete response for detail on each topic*]. **Uncertainty** **Lead time** **Field life and Plateau** **Economics of small fields / incremental investments** The Substitution mechanism may create a set of commercial rules which will inhibit the exploitation of remaining UKCS reserves. This could have a significant impact on gas supplies to the UK.	
3 – Process / speed of reform			
ExM	Timing of introduction of reform	3.1 - Our caution is that the approach to this work must continue to keep in mind the marginal nature of the new services envisaged relative to the base services already in place. It is important that key principles established in 2002 are not undermined. Also, any new arrangements that optimize investment on the network and which increase competition in capacity must be thoroughly tested for potential adverse effects on UK security of supply. We think it appropriate to approach substitutability on a measured basis and allow for relevant new market information to emerge.	NG agrees that the consequences of a change to Baselines and the introduction of capacity substitution processes could be substantial and agrees that any change should be measured and controlled. However, NG is obliged through its licence to develop processes to specific deadlines. Should Ofgem consider delays are appropriate to allow greater review, then this would be for Ofgem to determine. The current review is part of the process to further consult on baselines and capacity processes. Involvement of all Users is therefore, encouraged. Before any change can be implemented industry will be consulted on any necessary changes to NG's licence, UNC Mods and on NG's proposed entry capacity substitution methodology. (See also 3.4 below).
EE	Timing of introduction of reform	3.2 - We have reviewed the comments made by shippers following the August workstreams and the discussion at the 12th September session and do not believe that the implications of substitution are fully understood by market participants. The operation of Substitution is complex and can cause major asset stranding. A full understanding of the implications of Substitution is fundamental to any consultation process.	

STUK	Timing of introduction of reform	3.3 - Ensuring that the network is managed in an efficient and economic manner is clearly of benefit to Shippers, Suppliers and the consumers in the UK. As the level and allocation of entry capacity is clearly a highly important aspect of the UK Gas Transmission network regime it is therefore essential that prior to any changes being made the affects are considered carefully. Only once the potential regime is understood and the affects can be ascertained can a logical and rational decision be made by the participants whether an option is going to be of benefit.	
STUK	Due Process	3.4 - It has been STUKs view for a considerable period of time that the potential impact of these changes is so great on the wholesale markets and in the future on security of supply that an Ofgem Impact Assessment is required. Any analysis provided by NGG through this process could aid Ofgem in the production of an Impact Assessment which would then allow them to make an informed decision on Implementation.	The need for an Impact Assessment will be determined by Ofgem. NG will provide network analysis as appropriate to support the review of baselines.
BG	Upstream/ international impact	3.5 - any reform of the entry capacity regime needs to take into account its effect on the overall UK gas market, not just on transportation costs. BG does not consider that sufficient thought has been given to this aspect. BG understands and supports the aim underlying the proposals, namely ensuring that NG only invests in entry capacity where it is efficient to do so. However both NG and Ofgem need to recognise that entry capacity is only a means to an end, namely the means to enable gas producers and importers to move their gas to market. The cost of entry capacity is relatively small compared to the cost of gas from a consumer point of view.	See 2.2. NG agrees that it is important to fully consider the wider implications of changes to the entry capacity regime. The decision on the scope of the further consultation on Baselines lies with Ofgem.
BG	General	3.6 - Firstly the rules on Substitution and Transfer & Trade cannot be considered in isolation from other aspects of the entry capacity regime, for example baselines or charging methodology (including rules on over-recovery of revenues). Expectations about the likely availability of capacity and its cost will inevitably drive shippers' behaviour when bidding in the various entry capacity auctions,	NG is obliged through its licence to develop processes to specific deadlines. Where practicable NG will coordinate activities to ensure related issues are considered in parallel. Also see 1.6.

		and therefore impact the nature of any “market signals” which National Grid receives. Therefore BG’s comments are conditional on the understanding that shippers will have the opportunity to comment on the whole “package” of changes to the entry capacity regime. This will enable shippers to analyse the various trade-offs within the package, and respond accordingly.	
EE	Upstream/ international impact	*3.7 - Excelerate believes that the new regime will require Capacity Substitution arrangements that take into account the Excelerate business model and the interconnectivity of UK and US markets as a result of the LNG trade.*	Any proposals from NG for capacity substitution will be subject to full industry consultation.
EE	Change / certainty	*3.8 - Ofgem must provide shippers with the confidence that long term investment plans of which they were aware and actively supported will not be undermined by fundamental regime changes.* It is undesirable to have sudden changes in conditions where users have to adapt from a situation where, in the words of a National Grid representative at the 12th Sept workshop, "it was irrational to buy long term capacity at terminals with a very high baseline" to operating with significantly reduced baselines. This approach will also reduce the general level of regulatory shock which is an important factor in the efficient functioning of competitive markets.	NG is responding to specific obligations in its licence to develop substitution processes and has worked with Ofgem to determine appropriate baselines. Previous “rational” actions in long term auctions may appear to be “irrational” due to regime changes; however this is no reason to maintain the status quo. Although NG does agree that changes should be subject to full industry consultation, signalled well in advance and where appropriate supported by an impact assessment.
BG	Change / certainty	3.9 - lack of certainty of entry capacity can be a major issue for those supplying gas to the market. If inappropriate entry capacity rules mean that gas that would have come to the UK market no longer does so, there is a very real risk that the impact of high gas prices on consumers may far outweigh any benefits to consumers from lower transportation costs. This issue has not been sufficiently addressed so far; for example Ofgem does not appear to have done a cost benefit analysis of its proposed changes to the entry capacity regime.	
STUK	Change / certainty	3.10 - To allow economic and efficient investment decisions to be made by the market then stability is essential. Lack of stability will	

		result in a risk premium being built into the financing of projects and/or deter investment.	
BG	Change / certainty	3.11 - it is worth noting the potentially significant changes that have occurred to the entry capacity regime. Under the 2002-2007 Price Control there was a widespread understanding (encouraged by Ofgem) that there would be stability to the regime for entry capacity, in particular for entry capacity baselines. Changes to baselines would be as a result of shippers booking capacity. The set level of baselines meant that shippers had the assurance that a given level of capacity would always be available to the market. If capacity was not sold out shippers had several opportunities to book it. At any one entry point shippers only had to worry about likely flows into that terminal, and hence likely usage or bookings of entry capacity	
4 – Specific ASEPs			
EE	Teesside ASEP	*4.1 - Excelerate's business model is to respond to commodity pricing signals, which means that short term – daily – capacity availability is key. The basic building block for such capacity is the entry capacity baseline. Excelerate came to Teesside because NGG said capacity was abundant. Any new Teesside baseline must recognize this.* *Excelerate believes that the new regime will require at least a sufficiently high entry capacity baseline at Teesside properly calculated to include Excelerate's flow rates*	NG agrees that baseline values will need to be set in a manner that avoids undue discrimination. However, NG considers that to provide special arrangements for specific ASEPs (or category of ASEP) could be considered discriminatory. Processes should be equally applicable to all ASEPs. The specific requirements of Excelerate's Gas Port, some storage operators and other intermittent Users are not dissimilar to that of marginal / incremental off-shore field developments. In this respect the amount of capacity held-back from the substitution process will be an important aspect of the substitution consultation. In addition Ofgem have made it clear that they will keep the 10% capacity held back for shorter term auctions under review. (See also response to 5.1 below).
EE	Intermittent	*4.2 - Excelerate's overriding concern is to remind Ofgem and NGG that they have not adequately addressed the specific requirements of Excelerate's GasPort and other intermittent users of the NTS which do not exhibit the same operating characteristics as conventional NTS users.*	
SP	Bi-directional	4.3 - Clearly, the patterns of usage of entry capacity vary widely between different types of ASEP. Primarily, there is a distinction between the way capacity is used at storage ASEPs, particularly	

		those which have third party access exemption, and import terminals. A mechanism should be in place to make optimal usage of any capacity that is not being used at these storage sites (on a necessarily shorter-term basis), rather than adopting an approach which creates winners and losers in a way which could be deemed discriminatory. We believe that the allocation of unallocated capacity should take into account the differences between types of ASEP and the difficulties for certain ASEPs referred to above, to avoid some of the anomalous outcomes and potential discrimination to which we refer.	
EE	Teesside data	*4.4 - NGG used 2005 TBE figures – prior to Excelerate flows – as a basis for the baseline calculations in 2006. We understand that NGG forecasts 22MCMD CATS gas + 11MCMD for Excelerate for winter 07/08. For subsequent winters, with Excelerate flowing up to 16.5MCMD, NGG appears to forecast only 16.5MCMD for CATS gas. These forecasts appear to be too low and not reflective of the actual flows that can reasonably be expected to flow down CATS and hence we would ask NGG to confirm these forecasts with the CATS operator.* *Any substitution of capacity must still maintain a minimum zonal aggregate baseline, for Northern Zone around 200 - 210MCMD.*	In preparing our supply forecasts for Teesside we do not currently assume that the CATS pipeline will be filled to full capacity. Like most offshore pipelines it is connected to numerous UKCS fields with no connection to other UK offshore pipelines or the Norwegian network. Consequently the flow through CATS is limited by the delivery of the UKCS fields connected to it. Supply intelligence regarding these fields form the basis for our forecasts. It is important that we plan along these lines; if not our supply forecasts would represent offshore supply capacity and would grossly overstate the true availability of offshore supplies. Supply forecasting for Teesside is also complicated by: The direct supply of gas from CATS to Teesside power station; The possibility of flows from Excelerate's Teesside GasPort facility The longer term possibility of other LNG importation facilities. Historically, our UKCS supply forecasts for Teesside have proved to be robust and predicted that UKCS supplies through CATS would be in decline from 2002/3. Longer term we anticipate further decline in UKCS supplies

			through CATS. As part of the TBE process NG has not received feedback to suggest that the assumptions made are inappropriate.
5 – Discrimination / competition			
SP		5.1 - The result is that some ASEPs are now in a highly unfavourable position with respect to long term capacity holdings in comparison with those established post 2002. Any new trades and transfers/substitution methodology introduced could exacerbate that disadvantage.	NG has rights and obligations set in its licence in respect of entry capacity baselines. It is important therefore, that NG and Ofgem agree appropriate values. In setting these values it will be necessary to ensure that there is no undue discrimination. In addition, the licence sets out obligations with respect to capacity substitution. The basis of substitution is to ensure NG makes use of baseline capacity in advance of investment where that baseline capacity is deemed to be 'spare'. Hence the key issue is to determine how much capacity, if any, should be excluded from the substitution process and held over for shorter term auctions to support the market sectors referred to by SP/BG and EE. See also response issue 2; "Security of Supply".
BG		5.2 - if the changes go through, the entry capacity regime will favour those who are able to book for several years in the long term (QSEC) auctions…..this may not be desirable from a UK wholesale gas market point of view. The different proposals on Substitution affect the scale of this impact on shippers. Changes to the commercial rules governing entry capacity that restrict the ability of UKCS gas to enter the system would not, prima facie, appear to be conducive to encouraging competition in the wholesale market……. In particular BG is concerned that the effect of the proposals will be to favour large scale projects, in particular import projects, simply because of their ability to book large quantities on a long term basis.	
EE		*5.3 - Levels of entry capacity baseline must not be set using a methodology that is discriminatory in any way. It must give an opportunity to attract all sources of gas such as LNG from international spot markets and not just ones where gas is a by-product of high value and profitable oil.*	
EE		*5.4 – At present the entry regime unfairly favours long term users. Ofgem therefore needs to accommodate users such as Excelerate in its entry regime.*	NG disagrees that the present regime "unfairly favours long term users". Long term users have certainty of the availability of capacity, but pay an appropriate price, including a commitment in respect of provision of incremental capacity. This approach provides the necessary investment signals for NG to develop an economic and efficient system.

		Excelerate believes that the entry capacity regime for gas should also reflect a tailored approach. In other words, Ofgem needs to address the capacity requirements of Excelerate's particular operational model which furthers the energy needs of the UK and promotes Ofgem's own statutory objectives under section 4 of the Gas Act, namely (i) Ofgem's principal duty to protect consumers by promoting competition in the supply of gas; and (ii) Ofgem's duty to have regard to security of supply.	In addition the TPCR has introduced new obligations of substitution and trade and transfer which provide additional means to acquire capacity. See response to 5.1 above. See response issue 2; "Security of Supply".
EE	Primary duty	5.5 - the new baselines should take into account the primary duty of National Grid to facilitate competition in the supply of gas as indicated by Ofgem in their June Open Letter. We believe that National Grid must develop its planning methodology to recognize terminals where the gas flow can increase as distinct from those where decline in the UKCS means that there is no prospect of gas flows above a certain level (which may be significantly less than the baseline). Further, the government is in the process of enacting legislation to facilitate innovative, "fast to market" projects and failure to take this into account is likely to stifle investment in the energy sector and act as a disincentive to competition.	NG undertakes a comprehensive planning process initiated with the TBE process. The quality of NG's planning forecasts are therefore, highly dependent upon information provided by Users, and upstream parties. However, the key factor for system planning is commitment made by Users through long term auctions. In their letter of 16 July giving approval to the Incremental Entry Capacity Release Methodology Statement Ofgem state that "if NGG choose to make such an investment in the absence of clear auction signals, our presumption would be that any investment had not been efficiently incurred". Hence under the present regime NG would require compelling evidence before investing to provide capacity to support fast to market projects.
6- Limits on Substitutions			
Eon	NPV test	6.1 - We do not feel it is necessarily appropriate to have the same NPV test as for the QSEC auctions. Our initial thoughts are that no NPV test or a different NPV test should apply, although we would like to see more evidence on the impact this could have in terms of capacity actually being moved through substitution.	NG notes the comments from Eon and also the reservations put forward by ExM and STUK (6.2 and 6.3). This will form part of the substitution consultation.
ExM	NPV test	6.2 - We have concerns about the removal of the NPV test. It is our understanding that it is the signal for investment at a given entry point, supported by bidding which passes the NPV test,	NG agrees that it is through the existing NPV test that NG is obliged to release incremental capacity and will initiate appropriate investment. NG believes that the financial

		which is the trigger for National Grid NTS to investigate whether or not the capacity requirement could be fulfilled by substitution rather than by investment, therefore if the NPV test is removed we do not understand how the substitution process will be triggered. Also, if, following such an investigation, it is discovered that the capacity cannot be provided by substitution, how will investment at that entry point be signalled without an NPV test? If a lower NPV test is introduced (as suggested in Options 2&3) does this mean that a two-tiered system would operate, whereby a high test would be applied where investment is needed and a lower test applied where substitution would apply? If so how would shippers know in advance whether or not substitution could be applied and which test they would need to pass in order to guarantee the capacity they require?	commitment provided by Users in passing the NPV test is not intended to underwrite the specific investment (which may be zero in the event of substitution). Users use NTS assets which have a cost associated with them whether they are incremental or existing assets. Other than for new ASEPs, subject to an individual auction, NG does not understand how a User can know whether incremental capacity will be met by investment or substitution. Hence, where a User genuinely wants incremental capacity bidding against a lower "substitution NPV test" runs the risk of not being allocated the incremental capacity due to there being no spare capacity available for substitution.
STUK	NPV test	6.3 - STUK would expect that some form of NPV test is needed to give the participants an appropriate level of information and transparency to allow them to adequately bid in the Entry Capacity Auctions. If there is no NPV test, we do not understand how a Shipper would be able to know what level they would be required to bid to signal the release of incremental entry capacity.	It is only after bids have been analysed that substitution opportunities can be confirmed. At this stage it may be appropriate to offer a "refund" or allow revised capacity commitments (e.g. reduced duration) to the successful Users whose incremental requests are satisfied through substitution. However, all of the above aspects will form part of the substitution consultation. Several of these aspects have already been discussed in the development of the substitution options discussed in the workshops.
EE	Exchange rate cap	*6.4 - NGG's current methodology of one to one exchange rates in the Northern Zone should remain in place*	In enacting the substitution and transfer and trade obligations, NG must take account of the physical capability of the network; where this allows a 1:1 ratio to be applied; NG will seek to do so.
EE	Exchange rate cap	*6.5 - Capacity must be efficiently used. If, for example, 20 MCMD at one entry point only provides 2 MCMD at another ASEP in a different zone, then this should not be allowed as the drawback resulting from a loss of 20 MCMD is greater than the benefit of the 2 MCMD.*	NG shares the concerns expressed regarding capacity destruction. Unlike Transfers and Trades any capacity substitution is permanent. Hence NG believes that an initial limit should apply for substitution, this limit will need to be determined through the consultation process.
STUK	Exchange rate cap	6.6 - The risk of capacity destruction occurring through high exchange rates impacting on security of supply and the free flow	

		of gas to the UK market requires careful study. NGG has raised the prospect of an exchange rate cap to mitigate some of this risk. STUK believes a cap of this kind may help to reduce the likelihood of inefficient network operation resulting from the transfer of capacity from location to location. The exact nature and level of any potential cap should be the subject of economic analysis to inform the discussion.	
7 – Risk			
EE	Impact of new investment	*7.1 - The September 2006 consultation talked about an analysis of risk of buy-back. Did this take place? NGG has issued figures which show little buy-back and these figures predate a £1.3 billion investment programme to increase capacity from Easington and provide capacity for Milford Haven and Isle of Grain. It is not clear if there is a realistic risk of buy-back actions being required as a result of the greater diversity in supply sources. NGG has not published any combinations of flows to support their analysis that there are credible scenarios that lead to high buy-back costs.*	Buy back is an important consideration in any amendment to the existing Baseline levels. At the final workshop NG provided an indication of the implication of reverting to the previous Baseline at Teesside and experiencing flows at this level. The analysis indicated a material increase in buy back risk.
STUK	Level of risk	7.2 - One of the implications of the level of supply will be the risk of buy back actions by the System Operator. Greater clarity is required on the level of this risk and the costs of any associated actions.	See 7.1. As part of TPCR, NG agreed with Ofgem a buy back allowance commensurate with the level of Baselines. Further buy back analysis against new assumptions and higher Baselines may be specified as part of the further consultation.
8 – Information			
Eon	Provision of data / examples	8.1 - the industry has not yet seen any significant data to help them work through the options, so it would be extremely useful if NG could come to future Transmission Workstreams with concrete worked examples, as per trades and transfers.	NG will seek to make examples and further information available at future Transmission Workstreams.
EE	Provision of data / examples	*8.2 - In the 2006 LTSE there were successful NPV bids at Easington, Fleetwood, Cheshire with a significant level of capital expenditures associated with these bids. We would like to understand which entry zones the Fleetwood and Cheshire*	In response to this request NG published: • An Investment update on 4 September.

		projects will be in and what will be the impact of these projects on existing zonal capacity. *In addition, it would be helpful if NGG explained what investment was being made (both level and timing) and how this impacts on the overall level of baseline capacity and the buy-back risk. Any new baselines will have an impact for winter 08/09 which is only one year ahead of a possible increase in capacity at Easington which could have an impact on Northern Zone capacity. Similarly, what investment would be made for a successful entry capacity bid at Isle of Grain in the September 2007 auctions?*	• A profile of NG's capacity release obligations on 17 September Investment plans in respect of successful bids at the Isle of Grain ASEP, or elsewhere, will only be confirmed after the analysis of the results of the QSEC auctions.
EE	Briefing document	8.3 - Rather than publish a conclusions report in respect to Substitution, we believe it would be more appropriate for National Grid to produce a briefing document that explains it properly and sets out real worked examples as to how it may operate.	In terms of substitution, this report represents a summary rather than a conclusion. As part of the on-going substitution consultation, we will endeavour to provide as much information as possible to ensure that all industry participants fully understand how the process would work and what the implications would be.
EE	Network Data	8.4 - we also believe that the market needs to have more understanding about the location of constraints as the 2008/9 and 2009/10 NTS capacity expansion projects (that follow the 2006 long term auctions) are completed. Given the possible introduction of Substitution in June 2007, it is the NTS as it will operate in 2010 that we need to focus on and we, as yet, have little data on the capacity and constraints that will apply at that time.	See 8.2.
STUK	Analysis	8.5 - STUK believe it is essential that any decision to implement any particular solution on Substitution of Entry Capacity or Transfer and Trades is taken with as much knowledge as is possible. STUK would encourage both NGG and Ofgem to conduct as much analysis as possible on the effects of any proposed regime. For example it would be helpful in the consideration of the NGG suggested options if as much information, detail and analysis could be provided by NGG showing their view of both the positive and negative effects as soon as possible.	The process to revise baselines and any proposals from NG for capacity substitution will take account of all available relevant information. NG will consider whether further useful information can be produced and made available.
CSL	Audit	8.6 - we believe that to provide the requisite assurance that the aggregate level of baseline capacity reflects the appropriate	NG is satisfied that any modelling that it has provided to Ofgem to support determination of Baselines is robust. If

		balance of risk and reward, the modelling work must be subjected to external audit	Ofgem wish to initiate external auditing of this work then NG would cooperate fully.
9 – Preferred Option			
Eon	Preference	9.1 - at the moment we are tentatively leaning towards the NG suggested Options 1 or 2 for substitution. However, unlike trades and transfers, the industry has not yet seen any significant data to help them work through the options, so it would be extremely useful if NG could come to future Transmission Workstreams with concrete worked examples, as per trades and transfers.	NG acknowledges the diverse range of preferences. Respondents do not feel able to fully commit to any option but there is greater inclination to limit the scope of substitutions, at least in the short term. Options will be further developed and consulted upon.
ExM	Preference	9.2 - The capacity substitution proposal in Option 4 seems to offer a workable solution, however shippers bidding to pass the NPV test, whose capacity requirements were subsequently met by capacity substitution may be considered to have paid too much for their capacity and a refund mechanism for the affected shipper(s) might be appropriate to balance revenue recovery to target.	
STUK		9.3 - STUK have considered the high level options provided by NGG and believe that at this time all options should be discussed provided they can be developed to meet certain standards. Those standards are as follows *[see response letter for detail]* : Transparency, Stability, Reduction in Capacity Levels, Timing and Period of Auctions and Measurable.	
BG	Preferred option	9.4 - BG would favour options that do not make substitution too easy. At the least substitution should require the same types of test as the trigger of release of incremental capacity. This would indicate either Option 4 or Option 5 of the Options presented.	
10 – Transfers and Trades			
Eon	Scope	10. 1 - We believe that the future proposals should be based largely around the principles advocated in E.ON UK's previous Modification Proposals 150A & 151A – i.e. integration into existing auctions. This could be achieved through a change to the capacity	NG agrees that it is desirable to avoid creating additional auction rounds and integrating transfer and trades into existing auctions is worthy of further development.

		allocation rules by NG, as opposed to introducing yet more auction rounds.	
Eon	DSEC auction	10.2 - It could be argued that in order to optimise use of the NTS, the trade and transfer process needs to be much more dynamic than currently proposed. As such, we believe NG should go further and include DSEC auctions in the scope of the 'enduring' arrangements. As the process for DSEC would be largely based on the same functionality for AMSEC / RMSEC, it would seem wasteful not to use the opportunity to include DSEC auctions. This does not necessarily mean that DSEC trade and transfer should be implemented at the same time, but its introduction could be implemented at a later scheduled date after a "test and learn" period when the process would apply to RMSEC and AMSEC auctions only.	NG agrees that extending transfers and trades to daily auctions would increase the flexibility of the NTS to be used as Users need it. However, NG believes that applying transfer and trades to DSEC would be very challenging with significant impact on systems. In particular, analysis that currently takes several days would need to be condensed to within day. The viability of a daily process will be further considered in the development of the enduring trade and transfer process.
EE	Scope	*10.3 - Proposals for any enduring trade and transfer mechanisms must also apply to day ahead auctions and maintain the philosophy currently adopted under Mod 0169 with priority for within zone transfers that recognise the common use of capacity;* *Any transfer of unsold capacity should apply to all auctions including the day ahead.* *If an ASEP is sold out on a day ahead auction basis there should be a transfer in of unsold capacity from within the same zone to meet any additional demand for capacity on that day.*	
Eon	Ad-hoc transfers	10.4 - In addition, we still feel that there is a valued market for ad-hoc shipper-to-shipper trading of sold capacity between ASEPs – i.e. an extension of the current bilateral entry capacity trading arrangements. As with current bilateral trades, we believe this should be an option open to shippers at any time, and should not necessarily be limited, to or involve, auctions. We envisage that NG's role would be limited to providing an exchange rate and adjusting capacity holdings accordingly. It would be for shippers to negotiate and agree between themselves the price they wish to pay for the capacity.	Ad hoc trades appear a sensible request, however a detailed assessment would need to be conducted to ensure that it could be accommodated within an enduring solution and would not lead to unexpected consequences.

ExM	option	10.5 - With regard to trades & transfers we also support the proposal offered in Option 4 since we believe that this offers the right mix of flexibility & stability and we think it appropriate to have a limit on exchange rates, otherwise sterilised capacity may result.	NG notes the expressed preference. With regard to exchange rates we believe that, for capacity trades, it might be appropriate for the individual selling User to agree whether an exchange rate is satisfactory or not. However, for transfers, where capacity destruction may occur, a cap may be appropriate.
11 – Miscellaneous			
Eon	Spare capacity	11.1 - We agree with the assertion in the NG presentation that a precise definition of "spare" and "sterilised" capacity is required to move this issue forward, although this does not mean that we would necessarily support any measures to deal with it. Currently, our firm view remains that "spare capacity" is fundamentally incompatible with the Transportation Model and any attempt to include it as an afterthought is inappropriate. As stated in our response to Ofgem's impact assessment on the Transportation model. We believe the results of the NTS GCM 06 consultation sent a very strong message from the industry that inclusion of spare capacity into the charging model is simply not needed or desired.	The definition, and inclusion, of "spare" capacity may vary for differing processes. NG accepts the views put forward in the consultation on NTS GCM 06 and is considering how to move the issue forward. However, for transfer and trades or substitutions, an issue is whether unsold capacity is "spare" or should be excluded from substitution processes. (See also 2.6).
EE	Clearing auctions	*11.2 - The obligation on NGG to have a zero priced clearing auction of firm capacity undermines the long term booking of capacity. Shippers acted rationally in not booking long term capacity and they should not be prejudiced as a result.*	NG has an obligation to use all reasonable endeavours to offer for sale all obligated entry capacity in at least one clearing auction. NG has previously considered that this obligation is satisfied through a zero priced clearing auction, but is considering whether this is still appropriate in the new regime and in respect of EC Regulation 1775/2005.
SP	Flexibility	11.3 - We have referred to the nature of storage operations above – we also believe that most of the flow of capacity under the trades and transfers/substitution methodology will be away from the storage sites on the system to the entry points, but not necessarily in the most expedient way because of the "block"	The appropriateness of zones for capacity transfers is an issue for consideration, although some Users see value in retaining them. Unless Transfer and Trades is incorporated into daily

		nature of the capacity product. We also see a benefit from a more flexible approach to transferring capacity allocations between entry points (particularly import terminals) across the system than the current zonal methodology allows.	auctions (see 10.2) then the transfer quantity will be monthly “blocks”.
EE	Spare capacity	*11.4 - Any assessment of the level of sold capacity should take into account the level of actual gas flows, reflecting capacity sold at the day ahead and within a day stage.*	The process to revise baselines will take account of all relevant information.
STUK	Auction timings	11.5 - The timing of any auction regime and period for which capacity is made available could radically alter the effectiveness of the regime. STUK wish to understand further the implications of the proposed regimes and understand the likely effect on bidding behaviour.	Any changes to the auction regime will be fully consulted upon with Users.
BG	UIOLI	11.6 - Consideration should also be given to the issue of Use it or Lose it. For example capacity may be substituted to a recipient terminal, taking capacity away from the donor terminal. If the substituted capacity is not used however, there is no means for shippers at the donor terminal to access the unused capacity, even though they would have been able to do so if the capacity had not been substituted. It would be ironic if Substitution led to increased sterilisation of capacity.	This is an issue that would warrant further consideration in the development of the enduring trade and transfer process.

Annex 3: Summary of Baseline Options

The aggregate level of baselines set by Ofgem as part of the TPCR Final Proposals was 8814 GWh/d. This aggregate figure sets out the total amount of entry capacity obligations on National Grid NTS by the end of the 2008/9 formula year. It should be noted that this figure includes some incremental obligated entry capacity signalled for release in long-term entry capacity auctions held prior to September 2006 (90 GWh/d at Barton Stacey, 420 GWh/d at Garton, 650 GWh/d (rising to 950 GWh/d) at Milford Haven and 235.4 GWh/d at Isle of Grain).

The following table shows how these capacity obligations build up over time:

NTS Entry Point	As at			
	Apr-07	Oct-07	Oct-08	Jan-09
Bacton	1,783.4	1,783.4	1,783.4	1,783.4
Barrow	309.1	309.1	309.1	309.1
Easington	1,062.0	1,062.0	1,062.0	1,062.0
St. Fergus	1,670.7	1,670.7	1,670.7	1,670.7
Teesside	361.3	361.3	361.3	361.3
Theddlethorpe	610.7	610.7	610.7	610.7
Glenmavis	28.5	28.5	28.5	28.5
Partington	174.6	174.6	174.6	174.6
Avonmouth	179.3	179.3	179.3	179.3
Isle of Grain	175.0	175.0	410.4	410.4
Dynevor Arms	8.0	8.0	8.0	8.0
Hornsea	164.1	164.1	164.1	164.1
Hatfield Moor (storage)	14.9	14.9	14.9	14.9
Hatfield Moor (onshore)	0.3	0.3	0.3	0.3
Cheshire	285.9	285.9	285.9	285.9
Hole House Farm	131.6	131.6	131.6	131.6
Wytch Farm	3.3	3.3	3.3	3.3
Burton Point	73.5	73.5	73.5	73.5
Milford Haven	0.0	650.0	650.0	950.0
Barton Stacey	172.6	172.6	172.6	172.6
Garton	420.0	420.0	420.0	420.0
Burton Agnes (Caythorpe)	0.0	0.0	0.0	0.0
Winkfield	0.0	0.0	0.0	0.0
Blyborough (Welton)	0.0	0.0	0.0	0.0
Tatsfield	0.0	0.0	0.0	0.0
Albury	0.0	0.0	0.0	0.0
Palmers Wood	0.0	0.0	0.0	0.0
Fleetwood	0.0	0.0	0.0	0.0
Total	**7,628.8**	**8,278.8**	**8,514.2**	**8,814.2**

Within the workshops, two alternative approaches to re-setting baselines were discussed:

- Options for 're-cutting of the cake' (i.e. keep the aggregate the same, i.e. 8814 GWh/d)
- Vs setting higher baselines (aggregate greater)

This Annex details the approaches which National Grid NTS considered as part of the first option discussed above, i.e. 're-cutting of the cake'.

In order to derive alternative baselines, it was proposed that certain basic principles should be applied. The alternative baselines should:

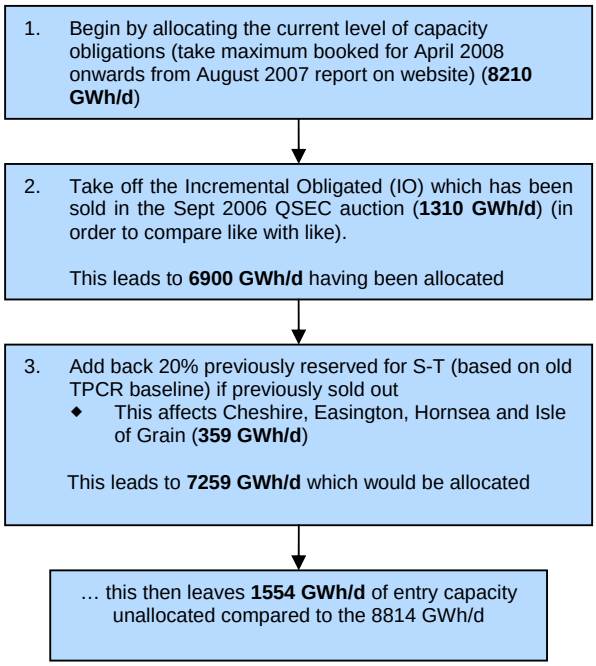
- take account of physical capability;
- be constrained to not exceed previous obligations (unless additional capacity was sold during the 2007 AMSEC auction following the baseline change); and
- be broadly commensurate with the buy back target.

Therefore, based on the above, National Grid NTS believe that the zonal constraints on the availability of entry capacity identified as part of the price control need to be observed.

For information, the baselines set as part of the TPCR Final Proposals showed the following zonal distribution:

Zonal Totals	Current Baseline
GWh/d	GWh/d
East Coast	4,465
Easington Area	1,661
South East	2,193
Theddlethorpe	611
West UK	958
Northern Triangle	2,370
North West	666
South West	355
Total	**8,814**

In order to derive alternative baselines, the starting principle applied was that no baseline should be set below the current capacity obligation for that point for the 2008/9 formula year. In order to achieve this, the following process was undertaken:



Four different ways of splitting the remaining 1554 GWh/d were then discussed:

- On the previous obligated level;
- Using 2005 TYS forecast flow for 2008;
- Using 2006 TYS forecast flow for 2008; or
- Based on Max flow seen over 2 winters, 2005/6 and 2006/7.

Using these four different approaches, leads to the following alternative baselines:

	Obligated Allocation	Split on Old obligated levels	Split on Av 2005 TYS	Split on 2006 TYS	Split on Max flow over Winters 2005/6 and 2006/7
ASEP	**GWh/d**	**GWh/d**	**GWh/d**	**GWh/d**	**GWh/d**
Avonmouth	0	147	154	188	121
Bacton	1,119	1,671	1,655	1,600	1,663
Barrow	309	374	349	342	352
Barton Stacey	120	209	200	166	235
Burton Point	55	87	67	70	110
Cheshire	214	337	334	275	214
Dynevor Arms	6	8	8	8	8
Easington (incl. Rough)	1,062	1,062	1,062	1,062	1,062
Garton	420	420	420	420	420
Glenmavis	0	9	16	16	8
Hatfield Moor (onshore)	0	0	0	0	0
Hatfield Moor (storage)	15	15	15	15	15
Hole House Farm	104	119	142	167	153
Hornsea	175	175	175	175	175
Isle of Grain	453	522	538	593	530
Partington	0	124	123	154	189
St Fergus	1,437	1,590	1,631	1,644	1,627
Teesside	328	397	373	368	381
Theddlethorpe	489	595	595	595	595
Wytch Farm	3	6	7	7	5
Milford Haven	950	950	950	950	950
Fleetwood	0	0	0	0	0
Total	**7,259**	**8,814**	**8,814**	**8,814**	**8,814**

During the workshops, it was suggested that the 20% of the previous TPCR baseline held back for the shorter-term auctions should be added back for all entry points (as no entry point had previously had the opportunity of securing that entry capacity).

Applying this instead of step 3 above leads to an aggregate of 8400 GWh/d being allocated, which leaves 414 GWh/d of entry capacity unallocated (compared with the 8814 GWh/d), as per the following table:

Sensitivity	Current Baseline	Proposed Starting point	Difference
ASEP	**GWh/d**	**GWh/d**	**GWh/d**
Avonmouth	179	30	-150
Bacton	1,783	1,468	-316
Barrow	309	452	142
Barton Stacey	173	120	-53
Burton Point	74	55	-19
Cheshire	286	188	-97
Dynevor Arms	8	16	8
Easington	1,062	1,062	0
Garton	420	420	0
Glenmavis	29	20	-9
Hatfield Moor (onshore)	0	1	0
Hatfield Moor (storage)	15	26	11
Hole House Farm	132	104	-28
Hornsea	164	175	11
Isle of Grain	410	453	43
Partington	175	43	-132
St. Fergus	1,671	1,677	6
Teesside	361	480	119
Theddlethorpe	611	658	47
Wytch Farm	3	3	0
Milford Haven	950	950	0
Fleetwood	0	0	0
Total	**8,814**	**8,400**	**-414**

Whilst this remaining capacity has not been split between the entry points, this could be apportioned using one of the methodologies suggested above.

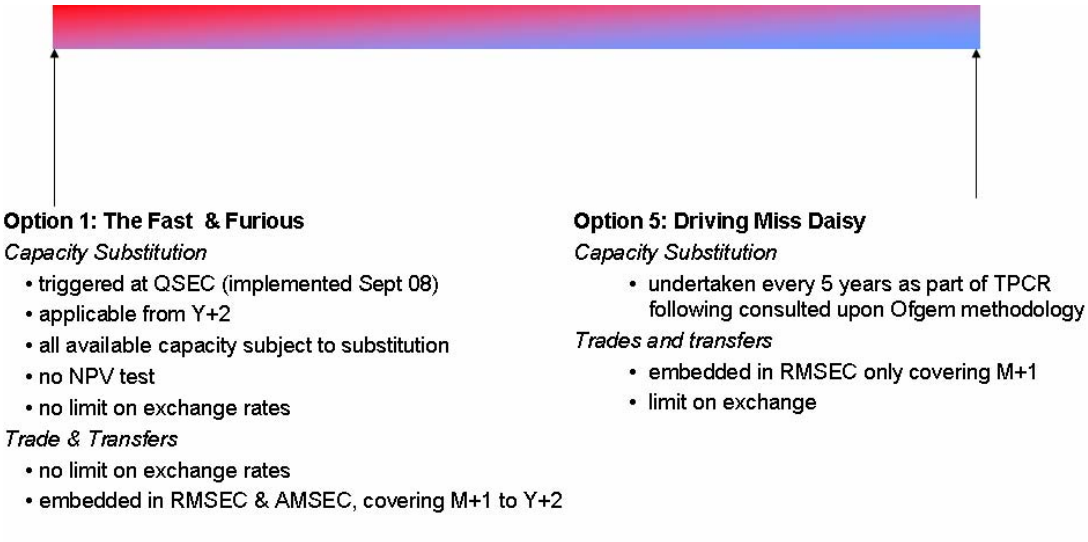
In addition, as an alternative starting position, the historical flow which has been observed over the last two winters could be used (subject to being constrained not to exceed the old TPCR baseline). Also adjusting this for the current level of capacity obligations leads to 7802 GWh/d being allocated, leaving 1012 GWh/d of entry capacity unallocated:

Sensitivity	Current Baseline	Proposed Starting point	Difference
ASEP	**GWh/d**	**GWh/d**	**GWh/d**
Avonmouth	179	84	-95
Bacton	1,783	1,308	-475
Barrow	309	322	13
Barton Stacey	173	120	-53
Burton Point	74	55	-19
Cheshire	286	146	-140
Dynevor Arms	8	32	24
Easington (incl. Rough)	1,062	1,062	0
Garton	420	420	0
Glenmavis	29	59	31
Hatfield Moor (onshore)	0	0	0
Hatfield Moor (storage)	15	20	5
Hole House Farm	132	104	-28
Hornsea	164	175	11
Isle of Grain	410	420	10
Partington	175	195	20
St Fergus	1,671	1,437	-233
Teesside	361	401	40
Theddlethorpe	611	489	-122
Wytch Farm	3	3	0
Milford Haven	950	950	0
Fleetwood	0	0	0
Total	**8,814**	**7,802**	**-1,012**

Again whilst this remaining capacity has not been split between the entry points, this could be apportioned using one of the methodologies suggested above.

Annex 4: Substitution and Transfer & Trade Options

Range of Options
A range of options were considered within the boundaries shown in the diagram below.



Expansion of Substitution Options
The different elements within the substitution options identified were then considered separately:

When should substitution take place?
It was proposed that substitution should be linked to the QSEC auction, at present this would mean that substitution would take place in September 2008. However as the obligation would become effective on the 2 June 2008, it would be necessary to consider how, or if it would be appropriate, for substitution to apply to separate auctions held for new entry points.

What capacity should be able to be substituted?
The options in this area largely range from all capacity that has not been booked and that is not held back for the shorter term to devising a sliding scale mechanism to determine this value. In considering the sliding scale, two parameters were proposed the level of capacity bookings and the degree of historical usage.

How to deal with limited future bookings i.e. one quarter?
One of the challenges in considering how capacity substitution should be applied is dealing with limited capacity bookings in the future. In effect these could act to sterilise all capacity at this level prior to the booking. A number of options were discussed on how this could be addressed:

- Accept that this booking is a signal that capacity prior to this booking is required and therefore is not “sterilised”
- Remunerate National Grid NTS to cover the buy back risk associated with the limited booking
- Alter the nature of the substitution obligation to make substitutions time limited

- Place a minimum limit for capacity bookings e.g. above one quarter on capacity bookings in long term auctions
- Provide a surrender mechanism allowing the Users that have booked the capacity in question to surrender the holding and be remunerated for it.

Exchange Rates
There was a general consensus in the previous consultation on the substitution methodology that there should be a limit on exchange rates to avoid capacity destruction. In order to set an appropriate limit further information via examples should be considered.

NPV Test
In terms of considering the application of an NPV test, the range of options varied from no NPV test through to the same NPV test as used for the release of incremental capacity. There was a significant differences in views, with support at either end of the spectrum.

Allocations
With regard to the allocation of capacity within the QSEC, a model was proposed that undertook the allocations in three tranches:

- Obligated capacity bids
- Incremental capacity bids that meet the IECR test
- Incremental capacity bids that fail to meet the IECR test

In order to differentiate the “substitution” bids in the third tranche it was proposed to rank the bids against the full IECR test i.e. bid value compared with estimated project value.