



22nd December 2006

Mr. Julian Majdanski  
Joint Office of Gas Transporters  
Ground Floor Red  
51 Homer Road  
Solihull  
West Midlands  
B91 3QJ  
[enquiries@gasgovernance.com](mailto:enquiries@gasgovernance.com)

**Re: Urgent Modification Proposal 0128: Amendment of Entry Capacity Baselines**

Dear Mr Majdanski,

I wanted to send a detailed letter regarding the fact that Excelerate Energy does not support the implementation of Modification Proposal 0128.

Although National Grid (NG) has accepted in principle Ofgem's final Transmission Operator price control proposals, we do not agree that the revised ASEP baseline quantities should be offered for sale in the forthcoming AMSEC auctions in February 2007. We believe adopting this Modification would represent an unfair re-allocation of risk from NG to users at Teesside, a situation that we do not believe was envisaged when Ofgem published their final proposals in early December 2006.

NG could have raised a non-urgent mod at any time in the last year to align the level of AMSEC capacity sales in February 2007 with the new baselines effective 1 April 2007 (whether higher or lower), but they chose not to do so. The baselines proposed by Ofgem for the new Licence include a significant reduction at Teesside, around 25% below the level of flows forecast for this winter and less than 50% of the existing baseline. It is unreasonable for NG to aim to shift the balance of risk in this way after seeing Ofgem's final proposals. In addition, in the Mod proposal, NG have not provided any evidence that a significant buy-back risk exists in relation to Teesside and experience over the last 4 years suggests that there is no such risk (see Appendix 2).

Excelerate launched its project to bring additional volumes of LNG to the UK in May 2006, with the aim of flowing gas in January 2007, responding to the market signals generated by the competitive UK gas market. Given this timetable, Excelerate Energy has had no opportunity to purchase capacity for winter 07/08 and, with the implementation of this modification, such capacity would no longer be available given that existing flows this winter have already exceeded the proposed Teesside baseline.

We do not believe NG needs to make such an urgent modification that was not signalled in any of its documents or in network code or price control discussions, for example its Statement of Transportation Charges published in September 2006 (Appendix 1). A reasonable person will have assumed that the AMSEC sales in the February auctions are based on the licence in place at that time, in the same way that prices are based on the prices in force at that time.

We do not believe that there is any evidence of significant buy-back risk from “Northern Triangle” (St Fergus-Glenmavis-Teesside-Bacton) entry points in the past 4 years during the winter period as shown in the report from NG in December 2005, elements in relation to entry buy-back are in Appendix 2.

Going forward to winter 2007/8, we would have expected there to be a reducing risk of Northern Triangle buy-back as a result of a number of factors:

- Flows have declined from the 2003/4 peak
- Additional NTS capacity has been built (from St Fergus) and is being built (cross-pennine pipeline linking the NTS south of Teesside with Barrow)
- New UK sources of gas are landing at Easington (Ormen Lange), Bacton (BBL and IUK), Isle of Grain (Phases 1 and 2) and Milford Haven (Dragon and South Hook) with investment of > £1 billion. This should significantly reduce the pressure on Northern Triangle capacity.

The above is further discussed in Appendix 3.

The latter point is a key one in that the decline of UKCS flows at St Fergus, Teesside and Barrow is attracting new supplies to the UK, substantially all of which are landing in the South of the UK, close to demand and south of any Northern Triangle constraints. To our knowledge, the only material incremental source of gas within the Northern Triangle is the Excelerate gas landing at Teesside, the volumes of which return Teesside flows to those of 2002/3. It is possible that additional Norwegian gas may flow into St Fergus but this will be utilising existing offshore infrastructure and onshore processing that has capacity as a result of significant declines in flows from the giant UKCS gas fields developed in the 1980's and 90's.

Given this, we do not believe that NG and hence the shipping community generally, has significant buy-back exposure in winter 07/08 and winter 08/09 and hence there is no need for reduction in baselines for these winters.

If there is evidence of buy-back risk as a result of the existing Teesside baseline in summer 07 and summer 08, then we believe that is best mitigated by reduction to the volumes of capacity that NG has to make available at Teesside during these summer months.

Below we set out our general views about the inapplicability of the proposed urgent modification and identify an alternative way forward to protect the interests of NG and Shippers without damaging winter competition in gas supply.

### **Alternative Proposal**

Excelerate Energy believes that the sales of capacity in the AMSEC auctions in February 2007 should be based on the current baseline volumes. This would cover sales from 1 April 2007 to 31 March 2009. If NG is able to demonstrate a significant buy-back exposure during the summer periods (1 April 2007 to 30 September 2007 and the same period in 2008), then a lower level of sales could be adopted for this period. That would be reasonable.

If the Ofgem – NG Licence/Price Control process means that it is not possible to adjust the Teesside baseline upwards to reflect actual gas flows, then there should at least be an undertaking from NG to introduce arrangements to allow firm capacity transfers between entry points, with St Fergus capacity worth significantly more than 1 unit of Teesside capacity given its geographical position and forecast excess capacity over actual gas flows.

**Extent to which implementation of the Proposed Modification would better facilitate the Relevant Objectives**

*Gas Transporter Licence Standard Special Condition A11.1*

- (a) *the efficient and economic operation of the pipe-line system to which this licence relates;*

Mod 0128 does not facilitate the efficient and economic operation of the NTS as NG has not identified the level of risk from having AMSEC sales based on the current Teesside baseline and historic experience since 2002 indicates that there is not a material risk.

If approved, the Modification will also be running counter to the need of the UK to encourage new sources of gas to come to the UK:

*“The UK economy faces a major challenge; our indigenous gas supplies are in decline and we are moving towards increasing dependence on gas. To manage this challenge, new gas supply infrastructure is needed to increase Great Britain’s capacity to import, store and transport gas efficiently. A regulatory environment that enables the development of timely and appropriately sited infrastructure projects is therefore vital.”*

***Ministerial Energy Statement of Need for Additional Gas Supply Infrastructure, 16<sup>th</sup> May 2006***

- (b) *so far as is consistent with sub-paragraph (a), the coordinated, efficient and economical operation of (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or more other relevant gas transporters;*

If implemented, Mod 0128 may encourage Teesside gas to flow directly into the North of England DN to avoid NTS capacity constraints, this is not in the interests of a liquid NBP market and is counterproductive to an efficient overall system.

- (c) *so far as is consistent with sub-paragraphs (a) and (b), the efficient discharge of the licensee's obligations under this licence;*

Such an Urgent Modification is not necessary to efficiently discharge NG’s obligations under its licence. NG could have raised a modification to align AMSEC sales in February 2007 to the new licence baselines but chose not to do so until it had seen Ofgem’s final proposals. The decision to leave consideration of this until that time was a decision freely made by NG and it should bear the consequences.

(d) *so far as is consistent with sub-paragraphs (a) to (c) the securing of effective competition:*

(i) *between relevant shippers;*

In respect to Teesside, by having a baseline less than forecast flows during winter 07/08, this will be highly damaging to a functioning market and to competition amongst shippers.

(ii) *between relevant suppliers; and/or*

In respect to Teesside, Excelerate Energy is bringing a new source of gas to the UK market to support competition between gas suppliers. Excelerate Energy has had no opportunity to buy firm entry capacity for winter 2007/8 since it approved its project (May 2006). As such, the reduction of capacity proposed will reduce the volumes of Excelerate Energy gas able to come to UK in winter 07/08 and, as a result, be harmful to competition between suppliers.

(iii) *between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers;*

No comment

(e) *so far as is consistent with sub-paragraphs (a) to (d), the provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards (within the meaning of paragraph 4 of standard condition 32A (Security of Supply – Domestic Customers) of the standard conditions of Gas Suppliers' licences) are satisfied as respects the availability of gas to their domestic customers; and*

Excelerate Energy has agreed to co-operate fully with the DTI in relation to emergency arrangements for winter 07/08. If no NTS capacity is available then the UK market's reputation will suffer and it may not be possible to take the risk of bringing LNG to Teesside. Domestic consumers would suffer increased risk as a result of Excelerate ships being unable to offload gas into the NTS.

(f) *so far as is consistent with sub-paragraphs (a) to (e), the promotion of efficiency in the implementation and administration of the network code and/or the uniform network code.*

No comment

**The implications of implementing the Modification Proposal on security of supply, operation of the total system and industry fragmentation**

The Modification will be harmful to security of supply in sending a signal to Excelerate Energy that its gas is not wanted in the UK market. This would also damage the reputation of the UK market in terms of regulatory stability.

*"...we continue to believe that well-functioning markets are the most effective mechanism for ensuring adequate investment in gas infrastructure"*

*DTI Consultation on Security of Supply, 16<sup>th</sup> October 2006*

**The implications for Transporters and each Transporter of implementing the Modification Proposal, including**

**a) implications for operation of the System:**

By reducing the baseline at Teesside, there will be lower volumes of gas able to enter the NTS at Teesside which is not in the interests of efficient system operation given the generally favourable location of Teesside as a gas entry point (compared to St Fergus which is not seeing any baseline reduction).

**b) development and capital cost and operating cost implications:**

No implications

**c) extent to which it is appropriate to recover the costs, and proposal for the most appropriate way to recover the costs:**

No comment

**d) analysis of the consequences (if any) this proposal would have on price regulation**

No comment

**The consequence of implementing the Modification Proposal on the level of contractual risk of each Transporter under the Code as modified by the Modification Proposal**

The risk to NG would reduce as a result of the >50% reduction in capacity that would have to be offered in the 2007 AMSEC auction at Teesside compared to the level of capacity expected to be offered under the present UNC auction rules.

**The high level indication of the areas of the UK Link System likely to be affected, together with the development implications and other implications for the UK Link Systems and related computer systems of each Transporter and Users**

No implication

**The implications of implementing the Modification Proposal for Users, including administrative and operational costs and level of contractual risk**

NG has not demonstrated any significant increased risk to Users as a result of the existing baselines at Teesside being used in the February 2007 AMSEC auctions, particularly taking into account the following factors:

- Decline of Northern Triangle flows since the 2003/4 peak
- Additional NTS capacity has been built (from St Fergus) and is being built (cross-pennine pipeline linking the NTS south of Teesside with Barrow)
- New UK sources of gas are landing at Easington (Ormen Lange), Bacton (BBL and IUK), Isle of Grain (Phases 1 and 2) and Milford Haven (Dragon and South Hook) with investment of > £1 billion. This should significantly reduce the pressure on Northern Triangle capacity.

Whilst there may be a theoretical increased risk, this has to be weighed against the benefit of additional volumes of gas in 07/08 which may not be available if there is no NTS capacity available. In addition, by reducing the baseline to less than forecast utilisation in 06/07 winter, the modification will create a great deal of confusion in the February 2007 auctions in respect to Barrow, St Fergus, Glenmavis and Teesside entry points. This is particularly so because the rules for capacity transfer and exchange rates have yet to be agreed and the proposed February 2007 prices are to be based on the existing "Transcost" prices. This will be harmful to the efficient functioning of the market.

#### **The implications of implementing the Modification Proposal for Terminal Operators, Consumers, Connected System Operators, Suppliers, producers and, any Non Code Party**

Terminal Operators at Teesside will see a dramatic reduction in their ability to bring forward the gas supplies that the UK market needs. There will also be adverse consequences for Teesside industry which has grown up on the back of gas landed at Teesside.

#### **Consequences on the legislative and regulatory obligations and contractual relationships of each Transporter and each User and Non Code Party of implementing the Modification Proposal**

The Modification will send a signal that the NTS capacity regime is highly unstable and unattractive for new gas supplies which will damage the UK market.

#### **Analysis of any advantages or disadvantages of implementation of the Modification Proposal**

##### **We have identified the following advantages:**

- Reduces risk to NG in respect to NTS operations in the Teesside area.
- Reduces the possible buy-back risk from gas flows at Teesside by a >50% reduction in Teesside baseline

##### **We have identified the following disadvantages:**

- Reduces the baseline at Teesside to significantly below the expected flows during 06/07 and 07/08
- Sends a signal that the UK market does not want new sources of gas and in particular, cannot accommodate the Excelerate volumes in winter 07/08
- Increases risk to Teesside users in a way that could not reasonably have been predicted

- Creates the likelihood of enormous market confusion in the February 2007 AMSEC auctions as a result of:
  - Insufficient capacity at Teesside
  - Potential to trade capacity between St Fergus, Glenmavis, Barrow and Teesside at unknown prices and exchange rates
  - Sales in February 2007 based on existing prices at St Fergus Teesside and Barrow, all of which are expected to increase significantly if the new 'transportation model' basis of charging is implemented

**The extent to which the implementation is required to enable each Transporter to facilitate compliance with safety or other legislation**

No implication, save for the adverse consequences to safety as a result of increased security of supply risk by discouraging new gas at Teesside

**The extent to which the implementation is required having regard to any proposed change in the methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence**

No comment

**Programme for works required as a consequence of implementing the Modification Proposal**

No comment

**Proposed implementation timetable (including timetable for any necessary information systems changes)**

No comment

**Implications of implementing this Modification Proposal upon existing Code Standards of Service**

No Comment

**Further Comments/Summary**

Excelerate suggests that an alternative modification is developed which reduces the risk of buy-back without reducing the winter capacity baseline and, in addition, NG brings forward proposals for capacity transfers.

In May 2006, we launched our project to bring gas to the UK in January 2007. It is disappointing that the proposed capacity reduction has come at us via an urgent modification within a few days

Mr. Julian Majdanski  
22 December 2006  
Page 8



of NG seeing Ofgem's final proposals for new baselines. We do not believe this had to be the case and hope that a compromise can be reached that continues to make the UK an attractive place to bring gas.

Yours faithfully,

A handwritten signature in black ink that reads "Rob Bryngelson".

Rob Bryngelson,  
Executive Vice President and Chief Operating Officer

## Appendix 1

### National Grid Statement of Gas Transmission Charges September 2006

#### The Statement of Gas Transmission Transportation Charges

Effective from 1 October 2006

#### 10 Appendix B NTS SO Baseline Entry Capacity

Table 15 below details the NTS SO baseline entry capacity GWh/day identified in National Grid NTS's GT Licence (Special condition C8B, Schedule A, Table A2) and used as the basis for determination of minimum annual quantities to be offered. All quantities identified are for a 12-month period from April to March inclusive.

Table 15 NTS SO Baseline Entry Capacity (GWh/day)

Terminal	2006/7 – 2020/21
<b>Coastal Terminals and LNG Importation</b>	
Bacton	1,745
Barrow	712
Easington/Rough	1,062
Isle of Grain	218
Milford Haven	0
St Fergus	1,677
Teesside	761
Theddlethorpe	848
<b>Onshore Fields and Connections</b>	
Burton Point	55
Hatfield Moor	1
Hole House Farm	26
Wytech Farm	3.2
<b>Storage Sites</b>	
Barton Stacey	0
Cheshire	214
Garton	0
Glenmavis	99
Hatfield Moor	54
Hornsea	175
Partington	215
<b>Constrained LNG</b>	
Avonmouth	149
Dynevor Arms	50
<b>New Entry Point</b>	
Fleetwood	0

#### 11 Appendix C(i) AMSEC Entry Capacity

Obligated system entry capacity offered in Annual System Entry Capacity auctions is determined in accordance with paragraph 14(5)(g) of part 2 of Special Condition C8B of National Grid NTS's GT Licence. For periods that are subject to a QSEC allocation, then supply can be further expanded in accordance with National Grid NTS's IECR statement.

National Grid will conduct the MSEC auctions (next to be held in February 2007) and will publish the quantity of System Entry Capacity being offered for each month in the Capacity Period in respect of each Aggregate System Entry Point along with reserve prices in an invitation letter to the community. The letter will also be sent by E-Mail (RGTA distribution list) and fax (business hours operational list) and will be posted on the National Grid web site under Gas/Operational Data/Capacity Auctions.

## Appendix 2 – Entry Capacity Buy-back Performance 2002/3 to 2004/5

### Taken from National Grid December 2005 Report (on Ofgem website)

#### 2.3 Entry Capacity Buy-Back

##### 2.3.1 Purpose

Under the price control regime established within the NTS licence, National Grid NTS is funded to provide a series of baseline output measures of entry capacity for each system entry point. The baseline output measures are based on the maximum physical capability at each system entry point and are referred to as National Grid NTS's transmission asset owner (TO) baseline output measures. National Grid NTS is obliged to offer 90 per cent of these output measures for

sale as system operator (SO) level entry capacity rights – this is referred to as the "Initial NTS SO baseline capacity." Shippers can purchase NTS system entry capacity up to the level of gas they wish to flow in a variety of auctions run by National Grid NTS.

The capability of the NTS to accept gas flows into the system can change throughout the year. This can be due to a number of factors such as maintenance outages (planned in the summer when gas demand is low), unplanned outages to pipelines and other assets such as compressors and the pattern of supplies and demands.

Where National Grid NTS is unable to deliver the entry capacity it has sold and which shippers are intending to use, National Grid NTS is required to buy that entry capacity back from shippers at the market price. Ofgem incentivises National Grid NTS to reduce the costs associated with buying back firm entry capacity that it is unable to make available on the day.

The performance measure under the scheme is calculated as the capacity constraint management costs that National Grid NTS incurs in buying back entry capacity less the revenue that we earn from some types of entry capacity products including on the day sales of firm capacity, interruptible NTS entry capacity, sales of non-obligated incremental firm entry capacity, locational sell actions, physical renomination charges and also revenue from overrun charges.

Ofgem considered that there was potential substitutability between locational gas balancing actions taken on the On the day Commodity Market (OCM) to remedy localised network constraints and buying back entry capacity rights (which may initiate increases in flows at other entry points). From April 2004 the costs/revenues from locational gas balancing actions were included in the entry capacity buy-back performance measure.

### 2.3.2 Parameters

Entry Capacity Buybacks	Incentive Parameters					Performance		
	Target	Benefit Cap	Benefit Collar	Upside Sharing Factor	Downside Sharing Factor	Net Cost	Retained Benefit	Shipper Benefit
2002/03	£35.0m	£30.0m	(£12.5m)	50%	35%	£13.2m	£10.9m	£10.9m
2003/04	£10.0m to £20.0m	£30.0m	(£12.5m)	50%	35%	(£2.0m)	£6.0m	£6.0m
2004/05	£18.0m	£30.0m	(£12.5m)	50%	35%	(£13.9m)	£16.0m	£16.0m

### 2.3.3 Performance in the period

Within each formula year, outturn costs have been below the target level. However, given that the target levels were set to be reflective of costs that were likely if Seasonal Normal Demand (SND) levels were experienced, this out performance was largely driven by the warmer weather conditions which resulted in lower than expected supply levels.

#### 2002/03

The introduction of the revised Entry Capacity Buy-back incentive scheme coincided with other changes to the entry capacity regime. The most notable change was the obligation in the GT Licence to offer for sale a specified minimum quantity of entry capacity rights throughout the year – the initial NTS SO baseline entry capacity. These changes, introduced around the time of the commencement of the incentive framework, meant that there was little practical experience available of the effect of this level of potential sales when the target buy-back costs were set. Considerable uncertainty therefore existed over the potential level of exposure, presenting a substantial challenge for National Grid NTS.

To meet this challenge, investment in additional modelling expertise was made with a view to better understanding the key cost drivers, and subsequently in management action to reduce the risk exposure.

The analysis confirmed the expectation that buy-back costs are highly unstable, and highly dependent on market conditions. An extensive risk management programme was undertaken in the form of forwards and options tenders, to limit the exposure to spot buy-back prices. In addition, operational practices were carefully scrutinised with a view to optimising the physical capability of the network to meet demands for entry capacity. One particularly significant review was that of maintenance practices which highlighted potential areas where changes to working arrangements could reduce or negate the risk of a buy-back occurring. These changes included a fundamental review of the nature, type and volume of planned routine maintenance, 24 hour working where the reduction in buy-back risk justified the additional costs, and where a compressor station contains more than one unit, and provided it is safe to do so, only taking one unit out of service leaving the remaining units available to be run.

Forward and option contracts were used as a buy-back risk management tool for the first time in 2002/03. As a new product, it was important that the industry was clear as to their structure and purpose. A number of briefings were carried out, for example at the Operational Forum, and comprehensive documentation was issued to all users so that maximum participation could be encouraged.

Four forward tenders were conducted between April 2002 and June 2002 and 11 option tenders between April 2002 and February 2003. These tenders were based on a standard forward and option product during 2002/03.

These activities helped to reduce the buyback requirement on days where entry capacity had to be bought back, the number of days on which buy-backs had to occur and the average price paid, with reduced exposure to spot prices. This operational strategy approach also mitigated against the potential requirement for consecutive days of buy-back.

A requirement to buy-back capacity occurred on 33 days during 2002/03. On these days the procured options were exercised where possible and then, if necessary, the prompt market was used to fulfil the obligations with regard to the buy-back quantity.

These initiatives combined to deliver an outcome in 2002/03 below the target performance and resulted in the retained out-performance share of £10.9m, with shippers also benefiting to the same extent, which will ultimately be reflected in lower consumer bills than would otherwise be the case.

#### 2003/04

In 2003/04 total buy-back costs reduced primarily due to the following drivers:

- Continuation of the initiatives put in place in 2002/03;
- Buybacks were required on only eight days.
- Greater use was made of options over forwards, providing efficiencies where the necessity of a firm requirement was less than certain. This included an alternative option structure which was introduced for the summer of 2003 that allowed exercise over a range of months rather than the single month contract that was introduced in 2002/03;
- Lower supplies were seen at key points during the year (primarily in the north) driven in part by a number of offshore failures.
- Reinforcement of the northern part of the system gave rise to incremental improvement in the delivery of capacity.

These drivers gave rise to a net incentive revenue of £2m, giving a £12m saving against the target, shared equally between National Grid NTS and the Shippers.

## 2004/05

The performance in 2004/05 was dominated by a £13.4m revenue stream relating to the sale and release of Non-Obligated Incremental Entry Capacity. Whilst no costs were actually incurred, the release of this extra capacity did increase National Grid NTS's risk exposure. A further £4.4m of Non-Obligated Incremental Entry Capacity auction revenue was secured for 2005/06, the risk for which National Grid NTS still faces, but there are no expectations for further material revenues from this mechanism.

This, twinned with improvements from the initiatives mentioned above and fortuitously lower than expected northern flows due to offshore maintenance (only four days required buybacks), led to a net revenue position against this incentive, delivering a retained share of the performance of £16m, with an equivalent sum shared back to the Shippers.

To date, the winters during the current price control period have been mild (e.g. 2004/05 winter was 6<sup>th</sup> warmest on record and highest throughput was 418mcm, well below peak 1:20 demand conditions). Therefore, corresponding beach supplies have generally been well below expected levels (declining fields has obviously also impacted on this) which has reduced the potential for constraints at the entry points. In addition, high flows at supply points have generally not been sustained over long periods (mainly due to changes in demand and also an increase in level of unplanned offshore outages). However, National Grid NTS faced the risk in each year between 2002/03 and 2004/05 that throughput was going to be at least at SND (Seasonal Normal Demand) and associated supply levels would increase the potential for further capacity constraint management costs.

Going forward the gas market will change dramatically as UKCS production drops and imports rise hugely, which will increase the uncertainty of supply patterns and the level of risk to National Grid NTS of capacity constraints.

## Appendix 3

### Northern Triangle

#### 1. Background

The following is taken from National Grid's 2006 Ten Year Statement published on 15 December 2006:

The interconnected nature of the NTS means that it is appropriate to consider entry point capability in terms of zones, in which, the entry points contained within each zone will tend to make use of common sections of infrastructure to transport gas from entry to market. Within the zones, the maximum and minimum capabilities can be used to flex gas inputs such that the range of required network capability can be understood.

A key goal of this form of sensitivity analysis is to understand which supplies are most likely to be turned down if other entry points are being optimised such that an aggregate supply and demand match can be maintained. This will be an area for further consideration over the coming year.

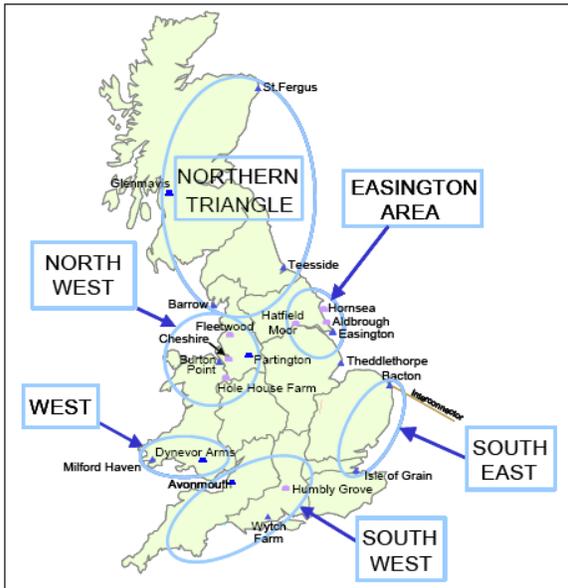
The zones identified for investment sensitivity analysis include:

- South East – includes Bacton and Grain, both use common infrastructure away from the Bacton area.
- Easington area – Includes Easington, Rough, Aldbrough and Hornsea, all use common routes out of the Yorkshire area.
- Northern Triangle – includes St Fergus, Teesside and Barrow, all of these northern supplies need to be transported down either the East or West coast of England to get to market.
- West UK – this zone enables sensitivity analysis around potential supplies from Milford Haven.
- North West Corridor – includes storage at Fleetwood and Cheshire.

An example of this approach is that the analysis of the Northern Triangle could consider higher flows from the St. Fergus and Teesside entry supplies whilst reducing the other supplies to create a demand balance for the day being considered.

This analysis has been undertaken due to the uncertainty regarding the location, timing and quantity of gas delivered to the UK. It will assist in evaluating the potential investment that would provide the required combination of capacities. This type of analysis is also merited in part because imports from sources such as LNG and Storage have the potential to be more flexible than conventional beach terminals hence the system could be subject to greater variation of supplies in shorter time scales.

FIGURE 5.3B – Zonal Evaluation of Investment Requirements  
Source – National Grid



National Grid identifies that the flows within the Northern Triangle need to be considered together as they share common infrastructure.

## 2. Northern Triangle – Historic Flows

Hence, in relation to baselines at St Fergus, Barrow and Teesside it is necessary to consider the flows at these entry points, both historic and forecast, together with investment made in recent years in order to increase the physical capability of the NTS to move Northern Triangle gas.

First, what have the flows been in the past 3 years for which published data exists (from Ten Year Statements). These are set out below and in a summary table, with the forecast and actual flows during the current winter.

TABLE A3.3A – Actual NTS Entry Flows on the Maximum Supply Day of Gas Year 2003/04 (mcm/d)

Terminal	Maximum Day 29 <sup>th</sup> Jan 2004	2003 Peak Forecast	Highest Daily for 2003/04
Bacton inc I/C	105	125	117
Barrow	42	48	45
Easington (exc. Rough)	21	30	26
Onshore	0	0	0
Point Of Ayr	3	4	5
St Fergus	122	143	139
Teesside	36	37	40
Theddlethorpe	26	37	30
<b>Sub Total</b>	<b>356</b>	<b>423</b>	<b>403</b>
Storage Withdrawal	82	131	83
<b>Total</b>	<b>438</b>	<b>554</b>	<b>487</b>

TABLE A3.3A – Actual NTS Entry Flows on the Maximum Supply Day of Gas Year 2004/05 (mcm/d)

Terminal	Maximum Day 24 <sup>th</sup> Feb 05	2004 Peak Forecast	Highest Daily for 2004/05
Bacton incl I/C	101	116	114
Barrow	31	38	35
Easington (excl Rough)	15	22	21
Onshore	0	0	0
Point of Ayr	3	4	5
St Fergus	141	148	145
Teesside	26	33	37
Theddlethorpe	21	31	25
<b>Sub Total</b>	<b>338</b>	<b>392</b>	<b>382</b>
Storage Withdrawal	76	113	77
<b>Total</b>	<b>414</b>	<b>505</b>	<b>487</b>

TABLE A3.3A – Actual NTS Entry Flows on the Maximum Supply Day of Gas Year 2005/06 (mcm/d)

Terminal	Maximum Day 2 <sup>nd</sup> Feb 2006	2005 Peak Forecast	Highest Daily for 2005/06
Bacton incl. I/C	114	130	121
Barrow	19	29	30
Easington (excl Rough incl. Langed)	17	17	49
Isle of Grain	12	13	17
Point of Ayr	1	2	5
St Fergus	123	146	131
Teesside	31	28	34
Theddlethorpe	27	23	30
<b>Sub Total</b>	<b>344</b>	<b>388</b>	<b>417</b>
Storage Withdrawal	69	119	69
<b>Total</b>	<b>413</b>	<b>507</b>	<b>486</b>

Terminal	Current baseline		Proposed baseline From 1 April 07		Maximum gas flows MCM					
	Gwh/d	MCM	Gwh/d	MCM	03/04	04/05	05/06	06/07		
					Actuals				Forecast	
							Winter To date	Base	Max	
St Fergus	1,677	154	1,671	154	139	145	131	117	118	145
Glenmavis	99	9	29	3						
Teesside	761	70	361	33	40	37	34	35	31	44
Barrow	712	66	309	28	45	35	30	25	23	23
<b>Northern Total</b>	<b>3,249</b>	<b>299</b>	<b>2,370</b>	<b>218</b>	<b>224</b>	<b>217</b>	<b>195</b>	<b>177</b>	<b>172</b>	<b>212</b>

For 06/07, the Base flow is as defined in the NG 2006 10 YS. The Max represents the maximum flow including imports.

The Winter to Date figures are taken from National Grid's EOD Reports (Teesside on 5<sup>th</sup> Oct, St Fergus on 12<sup>th</sup> Dec, Barrow on 13<sup>th</sup> Nov).

### 3. Northern Triangle - Forecasts for 06/07

The following is taken from National Grid's 2006/07 Winter Outlook Consultation Report published in September 2006.

21. Our UKCS supply forecast remains unchanged from that shown in the July document, as summarised in Table 1.

**Table 1 – 2006/07 UKCS Maximum Forecast by Terminal**

Peak (mcm/d)	2005/06		2006/07
	Forecast	Highest	Forecast
Bacton	83	78	75
Barrow	29	30	24
Easington	17	20	16
Point of Ayr	2	5	2
St Fergus <sup>10</sup>	110	98 <sup>11</sup>	94
Teesside	28	34	30
Theddlethorpe	23	30	26
<b>Total</b>	<b>292<sup>12</sup></b>	<b>295</b>	<b>267</b>

Given the winter 05/06 total of 131 MCMD at St Fergus, it is reasonable to assume that flows of Norwegian gas were around 33 MCMD (131 MCMD – UKCS max of 98 MCMD). This would imply a St Fergus max of around 127 MCMD in 2006/7 if there was no change in the level of Norwegian flows (ie all Langeled was incremental Norwegian), based on 33 MCMD in addition to UKCS total of 94 MCMD.

In addition to UKCS flows, National Grid identified that there would also be imports of gas at St Fergus and Teesside, as follows:

#### **Norwegian gas – St Fergus and Easington**

#### Norwegian imports

35. A new Norwegian pipeline known as Langeled has been laid from the Sleipner platform in the Norwegian North Sea to Easington.. With construction now complete, commissioning gas flows are expected soon and commercial operations are due to commence in October. The pipeline has a capacity of 25 bcm per year (74 mcm/d), almost tripling the total available capacity for Norwegian gas to come directly into the UK. The second leg of the Langeled pipeline, connecting the Ormen Lange field to the Sleipner platform, is scheduled to be completed in 2006 for operation in 2007/08.
36. Incremental gas volumes from Norway in 2006/07 will depend upon either incremental production from Norwegian gas fields, or the diversion to the UK of Norwegian supplies that would otherwise have been exported to Continental Europe. We have received mixed views on the prospects for Norwegian imports in the course of the consultation. Some believe that there is scope for a material increase in the level of gas from Norway. This would be through a combination of de-bottlenecking of the offshore system in Norway, incremental production from existing fields and gas swaps between Norwegian producers and other gas suppliers into Continental Europe. Conversely, others believe that any incremental production will be marginal, and that further flows to the UK could lead to reduced imports through the Belgian Interconnector.
37. On balance, the responses have confirmed that our base case assumption of 48 mcm/d for Norwegian imports in 2006/07 (an increase of around 15 mcm/d from 2005/06) is reasonable. We have therefore maintained this assumption within the base case. For the reasons highlighted above, there is clearly a good deal of uncertainty around this assumption.

#### **Gas from Excelerate Energy GasPort at Teesside**

44. Excelerate Energy have recently obtained planning permission for works associated with their project to deliver up to 11 mcm/d of LNG at Teesside using Excelerate's 'Energy Bridge' shipboard re-gasification technology. Their latest expectation is for first gas flows in early January 2007.

#### **Observations on historic flows and forecast for 2006/07**

The maximum flow recorded from System Entry Points in the Northern Triangle of the NTS appears to have been in year 2003/04. Whilst insufficient data is in the public domain to identify if these flows were on the same date it is reasonable to assume that there is less 'stress' in the Northern triangle as a result of the decline in UKCS flows coupled with increased NTS investment and the decision of the Norwegian producers to land gas from Ormen Lange at Easington rather than St Fergus.

Based upon experience so far this winter and the expected flows from GasPort at Teesside, the following is a reasonable assessment of maximum flows during winter 06/07:

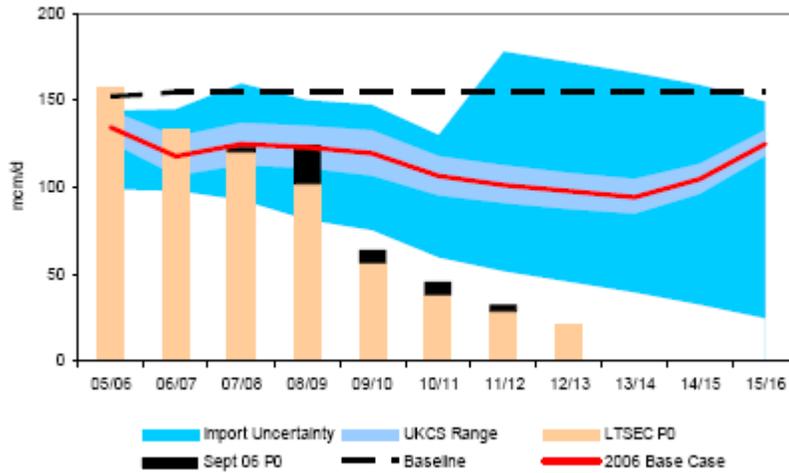
St Fergus	125 MCMD
Teesside	46 MCMD
Barrow	25 MCMD
<b>Total</b>	<b>201 MCMD</b>

This is significantly below the maximum flow recorded in 2003/04.

#### 4. Northern Triangle - Forecasts for 07/08

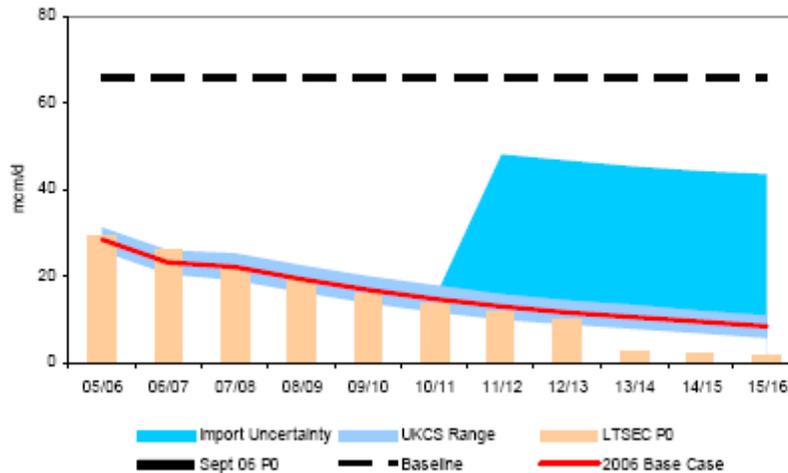
St Fergus flows are expected to remain broadly flat as a result of the start of Ormen Lange flows to Easington, around 20% below the baseline

FIGURE A2.4G – Peak St. Fergus Forecasts (Mcm/d)



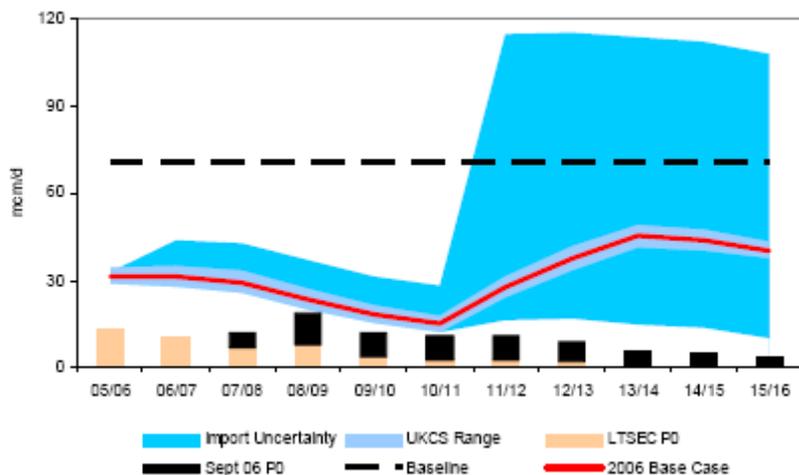
For winter 07/08, Barrow flows are forecast to decline slightly and the proposed baseline of 23 MCMD may be close to the likely flows.

FIGURE A2.4B – Peak Barrow Forecasts (Mcm/d)



Teesside flows are expected to remain broadly in line with Teesside forecasts for 2006/07 as Excelerate would be able to flow slightly higher volumes due to the installation of onshore gas heating which allows higher flows (around 14 MCMD).

FIGURE A2.4H – Peak Teesside Forecasts (Mcm/d)



## 5. Northern Triangle - Capacity Investment

In addition to declining Northern Triangle flows, National Grid has made significant investment in additional physical capacity to move Northern triangle gas, as follows:

Project	Cost £M	Completion	Comments
Avonbridge compressor station	63.4	2005	Purpose to increase entry capacity and replace old plant
Aberdeen to Lochside pipeline	58.1	2005	Purpose to increase summer capacity not winter
Upgrading projects	11	2004	
Nether Kellett compressor station	22.9	2004	
<b>Total Investment</b>	<b>155.4</b>		

Data from Ofgem TCPR Website

It is clear that this investment has acted to significantly reduce the buy-back risk from terminals within the Northern triangle, though even before this investment there was little buy back (Appendix 2).

If National Grid believes that the risk of capacity buy backs is greatest in the summer when capacity is reduced due to lower local demand, then a more appropriate solution would be to have lower baselines/capacity sales in the period 1 April to 1 October with the existing higher baselines in place during winter months.