

## 3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals. Modification Reference Number UNC 006

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### Overview:

energywatch, the consumer watchdog, raised a proposal to change the market rules for the wholesale gas market in November 2004 (UNC Modification Proposal 006). The aim of the proposal is to improve transparency in the gas market by requiring National Grid Gas NTS to publish more information about gas supplies coming onto the network from the North Sea, interconnectors, storage sites and LNG terminals. The proposal is controversial. In general, large customers, traders and customer groups support the proposal and gas producers oppose the proposal whilst the views of shippers and suppliers are divided on the issue. Ofgem is minded to approve the proposal. We set out our analysis of the impact of approving the proposal in this document and would welcome comments and views from interested parties.

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**Deadline for Response:** 17 March 2006

**Target Audience:** This document will be of interest to industrial and commercial gas customers, gas producers, shippers, traders, suppliers, transporters and energy consumer groups.

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## Context

In May 2005 Ofgem published an Impact Assessment (IA) on Uniform Network Code (UNC) Modification Proposal 006. In July 2005 the Authority decided to defer its decision to allow the proposal to be assessed against the new baseline following the release of more information to the gas market under the DTI information initiative, agreed with offshore gas producers and National Grid Gas. This IA assesses the proposal against the new baseline of information.

## Associated Documents

- Draft Modification Report - 3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals - Modification Reference Number 0727 - Version 3.0 - 9 February 2005 (and responses)
- Modification Report - 3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals - Modification Reference Number 0727 - Version 2.0 - 5 April 2005
- 3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals - Modification Reference Number UNC 006 (0727) - Impact assessment - May 2005 (and responses)  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/11579\\_14305.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/11579_14305.pdf)
- Letter from Steve Smith - Uniform Network Code (UNC) Modification Proposal 006 "3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals" - 25 July 2005  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/11947\\_006final.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/11947_006final.pdf)
- Letter from Sonia Brown - Uniform Network Code (UNC) Modification Proposal 006 "3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals" - 24 October 2005 (and responses)  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13735\\_October\\_Letter.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/wholesalemarketmonitoring](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13735_October_Letter.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/wholesalemarketmonitoring)
- Letter from Hannah Cook - Publication of Near Real Time Data at UK Sub-Terminals (UNC Modification Proposal 006) - Ofgem Impact Assessment - Case Study - 10 January 2006  
[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13767\\_Jan\\_letter\\_merged.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/wholesalemarketmonitoring](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/13767_Jan_letter_merged.pdf?wtfrom=/ofgem/work/index.jsp&section=/areasofwork/wholesalemarketmonitoring)

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## Summary

### Purpose of the document

This document sets out for consultation Ofgem's **second IA** regarding UNC Modification Proposal 006 "Publication of Near Real Time Data at UK sub-terminals" (the proposal).<sup>1</sup> The proposal would, if implemented, require National Grid Gas plc NTS (NGG NTS) to **publish** the amount of **gas being supplied** at each of the **main entry points** to the **national gas network**, known as sub-terminals, **close to real time**. The requirement to publish this information would be restricted to sub-terminals flowing gas above 10mcm/day (this represents between 2 and 5% of daily gas demand across the year). This proposal is controversial within the industry. In general, large customers, traders and customer groups support the proposal and gas producers oppose the proposal whilst the views of shippers and suppliers are divided.

### Background

In May 2005, Ofgem published our first IA which looked at the incremental costs and benefits of the proposal compared with the information released under the DTI information initiative. Following consultation, the Authority considered the proposal at its meeting in July 2005. The Authority decided that it was minded to approve the proposal but to defer this decision because more information relating to sub-terminal flows had recently been made available to the market in June 2005. This information was published under a voluntary set of agreements negotiated by the Department of Trade and Industry (DTI) between National Grid Gas (then called Transco) and the UK Offshore Operators Association (UKOOA) on behalf of the offshore gas producers. Given the opposition to the proposal, the Authority wanted to give companies and customers more time to assess the value of this additional information and committed to carrying out a second IA before reaching its decision early in 2006.

### Principles

Ofgem considers that information transparency is an important part of any effectively functioning, competitive market. We support energywatch's aim of providing more transparency within the GB gas market. We think that, in the context of the GB gas and electricity markets as well as the wider European markets it is important that much greater transparency is achieved to make these gas markets work more effectively in customers' interests.

### Assessment of the proposal

On the basis of this analysis and responses from interested parties, Ofgem's revised assessment of the proposal is summarised in the table below<sup>2</sup>.

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<sup>1</sup> This modification proposal was originally raised as modification proposal 0727 to Transco's network code.

<sup>2</sup> The results of the qualitative assessment from the May IA are represented by ticks and crosses (rated on a scale from 1 - 4). One tick/cross represents an incremental benefit/cost compared with the base case and 4 ticks/crosses represent significant benefits/costs as compared with the base case. Where additional analysis has been carried out since the May IA, these figures are highlighted in bold.

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**Summary of Ofgem's estimated costs and benefits compared to the baseline**

Benefits	The proposal	
<b>Economy and efficiency</b>	<b>£20.03 - £59.08m</b>	
<b>Economic signals</b>	£25.03m	
<b>System balancing</b>	>£38.05m	
<b>Market volatility</b>	✓	
<b>Market perception and liquidity</b>	✓	
<b>Security of supply</b>	✓	
<b>Short term</b>	✓	
<b>Long term</b>	✓	
<b>Impact on customers</b>	-	
<b>Environmental impact</b>	-	
<b>Costs</b>		
<b>IT costs</b>	<b>£1.4m</b>	
<b>Contract renegotiation</b>	xx	
<b>Risks</b>	Impact	Probability
<b>Withdrawal of information</b>	xxx	Low
<b>Duplicate metering</b>	xx	Low
<b>Data accuracy</b>	x	Low
<b>Ownership of data</b>	x	Low
<b>Net Benefits</b>		
<b>High Case</b>	<b>£122.46 m</b>	
<b>Medium Case</b>	<b>£109.27 m</b>	
<b>Low case</b>	<b>£82.87 m</b>	

Our analysis suggests that there are likely to be **significant benefits**<sup>3</sup> associated with implementation of the proposal, particularly in relation to enhancing the **economic and efficient operation of the market**. These benefits are much higher than the direct IT costs that NGG NTS will incur to implement the proposal. We have not been able to quantify any indirect costs that other companies may incur, but we think that any such costs are likely to be significantly lower than our estimates of the benefits.

We recognise that there are some **potential risks** that could reduce our estimate of the benefits. We would welcome views from market participants on our analysis and our estimates of the risks, costs and benefits.

In view of the significant potential benefits associated with implementation of the proposal, **we remain minded to accept the proposal**. The Authority will consider the responses to this IA and intends to reach its final decision at its meeting in April 2006.

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<sup>3</sup> The NPV has been calculated on the basis of the potential benefits that would be achieved in relation to improved economic signals, system balancing and reduced market volatility. These benefits are assumed to accrue over the period 2006 to 2021 and have been discounted at a rate of 6.25%.

## 1. Introduction

→ **Chapter Summary:** This chapter describes the proposal, the structure of the document and our intended way forward. We would welcome views from interested parties on our assessment of the proposal set out in this document.

→ **Questions:**  
There are no specific questions in this chapter.

1.1. The purpose of this document is to set out, for consultation, Ofgem's second IA<sup>4</sup> regarding UNC Modification Proposal 006 "Publication of Near Real Time Data at UK Sub-Terminals" (the proposal).

1.2. The proposal was raised by energywatch on 18 November 2004. In May 2005, Ofgem published, for consultation, an IA<sup>5</sup> (the May IA), and in July 2005, following consideration of the proposal by the Authority, published a letter detailing its intended way forward<sup>6</sup>. At that time, the level of information provided to the market was changing as part of the DTI voluntary information initiative and the Authority considered that a final decision regarding the proposal should be delayed until the impact of those changes could be assessed. The Authority therefore proposed that a further IA should be undertaken in January/February 2006 on the basis of the new information available to the market, with a final decision on the proposal expected in April 2006. If the Authority decides to direct implementation of the proposal the anticipated implementation date is October 2006.

### The proposal

1.3. The proposal is seeking to increase the level of information transparency through the provision of near to real time information at each of the main entry points to the UK gas network, known as sub-terminals<sup>7</sup>. The requirement to publish this information would be restricted to sub-terminals flowing gas above 10mcm/day.

1.4. The information currently released to the market includes:

- the daily flows from each sub-terminal provided with a two day delay (D+2); and
- sub-terminal information aggregated to a north-south split and provided on an hourly basis<sup>8</sup>.

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<sup>4</sup> The requirement to carry out an IA where the Authority considers that a policy proposal is "important" is contained in Section 5A of the Utilities Act 2000. Chapter 1 of the May IA contains further information regarding this requirement.

<sup>5</sup> 3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals - Modification Reference Number UNC 006 (0727) - Impact assessment - May 2005.

<sup>6</sup> This letter is referred to as the July letter throughout the document and refers to the letter from Steve Smith - Uniform Network Code (UNC) Modification Proposal 006 "3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals" - 25 July 2005.

<sup>7</sup> For further detail regarding the proposal see Ofgem's May IA.

<sup>8</sup> This information is made available on NGG NTS's website: <http://www.nationalgrid.com/gas>

## Analysis

1.5. We have carried out further detailed analysis and have sought the views of interested parties on the potential incremental value of the proposal. To inform our analysis we sent letters in October 2005<sup>10</sup> and January 2006<sup>11</sup> to interested parties asking for their views.

1.6. We have set out our analysis in this document for consultation. Our assessment draws upon further information that we have obtained regarding the impact that implementation of the proposal may have as well as the views expressed by market participants and NGG NTS regarding the proposal. We would welcome further views on our revised analysis and assessment of the costs and benefits, presented in the IA, associated with implementation of the proposal.

## Structure and Approach

1.7. Chapter 2 of this document contains Ofgem's assessment of the costs and benefits of the proposal in relation to each of the identified issues.

## Way Forward

1.8. Ofgem would welcome the views of interested parties regarding all aspects of this IA. Responses should be sent to [wholesale.markets@ofgem.gov.uk](mailto:wholesale.markets@ofgem.gov.uk) to be received no later than **17 March 2006**. Details of how to respond can be found in Appendix 1<sup>12</sup>. Based on its analysis of the issues and responses to the consultation, Ofgem will issue a final decision on the proposal by the **end of April 2006**. In reaching a decision regarding the proposal the Authority will have regard to<sup>13</sup>:

- the relevant objectives of the UNC;
- Ofgem's wider statutory objectives; and
- Ofgem's guidance document regarding Information release under Gas Transporters Licence Standard Special Condition A7<sup>14</sup>.

1.9. If the Authority approves the proposal, it is expected to be implemented in **October 2006**.

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<sup>10</sup> This letter is referred to as the October consultation throughout the document and is the letter sent by Sonia Brown regarding Uniform Network Code (UNC) Modification Proposal 006 "3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals" - 24 October 2005. A summary of responses to the October consultation as well as a summary of responses to the May IA is contained in Appendix 5.

<sup>11</sup> This letter is referred to as the January consultation throughout the document and is the letter sent by Hannah Cook regarding Publication of Near Real Time Data at UK Sub-Terminals (UNC Modification Proposal 006) - Ofgem Impact Assessment - Case Study - 10 January 2006. A summary of responses to the January consultation and a list of parties to whom the letter was sent is contained in Appendix 6.

<sup>12</sup> Appendix 2 provides details of how to give feedback to Ofgem on the manner in which this consultation has been conducted.

<sup>13</sup> Details of Ofgem's statutory objectives and duties are set out in Appendix 3. For further details of the issues that the Authority will have regard to in reaching its decision regarding the proposal, see Chapter 2 of the May IA.

<sup>14</sup> Information release under Gas Transporters Licence Standard Special Condition A7 - Guidance Document : Version 2.0 - November 2005 - 243/05 <http://www.ofgem.gov.uk>

## 2. Costs and Benefits of the proposal

→ **Chapter Summary:** This chapter details the additional analysis that Ofgem has carried out in relation to implementation of the proposal. It also provides an overview of the responses received to recent consultations regarding the proposal. Ofgem would welcome respondents' views regarding the costs and benefits that are outlined in this chapter. In particular, Ofgem would welcome views regarding the modelling analysis undertaken, in relation to the high, medium and low cases presented. Ofgem would also welcome views in relation to NGG NTS's IT system cost estimates.

→ **Questions:**

1. Has Ofgem undertaken the appropriate analysis?
2. Is there any additional analysis that would have been appropriate?
3. Do you think the assumptions used in the modelling were correct?
4. Are the benefits obtained from the modelling analysis reasonable?
5. Was there value in carrying out the January consultation?
6. Are NGG NTS's cost estimates reasonable?
7. Has Ofgem reached the correct conclusions regarding NGG NTS's cost estimates?
8. Do you agree with Ofgem's overall conclusions regarding the costs, benefits and associated risks?

### Introduction

2.1. In the May IA, Ofgem identified a number of key issues that it considered necessary to take into account when analysing the impact that the release of near to real time sub-terminal data would have on the market<sup>15</sup>. These included:

- economy and efficiency;
- security of supply;
- overall impact on customers;
- environmental impact;
- costs of implementation; and
- risks and unintended consequences.

2.2. In the May IA, Ofgem sought to quantify, wherever possible, the impact that approval of the proposal would likely have with respect to each of these key issues. However, some of these key issues proved difficult to analyse on a quantitative basis and therefore, for those issues, Ofgem undertook a qualitative assessment of the impact that implementation of the proposal may have<sup>16</sup>.

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<sup>15</sup> For further detail regarding these key issues see Chapters 4 and 5 of Ofgem's May IA.

<sup>16</sup> For further details of these assessments see Chapter 5 of the May IA.



2.3. As part of its assessment of the proposal since publication of the May IA, Ofgem has revisited each of the key issues. Where further information has been attained regarding the impact that the proposal would have in respect of each of the key issues, relative to the current baseline of information available, further analysis has been carried out and the assessment is provided in this chapter. Where Ofgem considers that the costs and benefits identified in the May IA remain appropriate in respect of each of these key issues Ofgem has not sought to repeat that assessment here<sup>17</sup>.

### **Baseline for analysis**

2.4. When Ofgem carried out and published its May IA, sub-terminal data was not made available to the market in any form. As of the end of June 2005, sub-terminal data aggregated to a north-south split and provided on an hourly basis was made available to the market, changing the baseline for analysis. Ofgem therefore considered that the appropriate baseline for analysis would include the information released under the DTI information initiative.

2.5. In response to the October consultation a number of respondents stated that the hourly sub-terminal data provided on a north-south basis had not been available for a sufficient period of time to allow a full assessment of the benefits to be made. Ofgem considers that the information has been available to the market for a sufficient amount of time to allow an assessment of its usefulness to be undertaken, especially given that it was available during a particularly difficult winter.

### **Analysis**

2.6. This chapter provides details of additional analysis that Ofgem has carried out since publication of the May IA, as well as its updated views regarding the incremental costs and benefits relating to each of the key issues, that may be achieved if the proposal is implemented.

2.7. Ofgem has carried out additional analysis regarding the costs and benefits that may be achieved if the proposal is implemented. In particular, analysis has been carried out regarding the benefits that may be achieved in relation to increased economy and efficiency (a key issue referenced in the May IA). In this regard:

- a model has been developed to provide a better understanding of the various factors underlying prices to help quantify the effect of any change in participants' behaviour resulting from the improved economic signals achieved through increased sub-terminal information and the impact that this would have on prices; and
- Ofgem has sought to understand better the behavioural changes that the release of information under the proposal may cause and the anticipated consequential effects that it would have in terms of market volatility and liquidity by seeking industry views via consultations in October and January.

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<sup>17</sup> For further information regarding Ofgem's initial views in relation to the key issues considered, see Chapter 5 of the May IA.

2.8. Ofgem has also re-examined the IT system cost estimates provided by NGG NTS associated with implementation of the proposal.

2.9. In addition, we have considered responses received regarding certain key issues outlined in the May IA and has carried out further assessment in relation to these issues. These key issues include:

- market volatility;
- market perception and liquidity;
- IT costs incurred by market participants;
- commercial sensitivities;
- contract renegotiation;
- withdrawal of information; and
- duplicate metering.

## Benefits

### Economy and Efficiency

2.10. In the May IA we identified four areas relating to economy and efficiency where implementing the proposal could produce benefits<sup>18</sup>. These included:

- economic signals - offshore gas production is currently the main source of supply in the GB gas market and therefore it is important for market participants to understand factors relating to the state of offshore supplies in order to make well informed trading decisions;
- system balancing - NGG NTS's role as residual balancer would likely be reduced as, with increased information, market participants would be better able to balance their positions within day. Ofgem considers that this would lead to a reduction in system balancing costs, producing benefits for the market and ultimately consumers;
- market volatility - it is important that the wholesale market price adjusts dynamically to reflect underlying supply and demand as rumours and market sentiment could give rise to unnecessary high and/or volatile prices; and
- market perception and liquidity - increased information is likely to improve understanding and market confidence, this may attract new entrants into the market, increasing competition in the market and improving trading activity and liquidity.

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<sup>18</sup> For further detail regarding these areas see Ofgem's May IA.

2.11. The following section provides details of Ofgem's updated assessment regarding the impact that implementation of the proposal would have in terms of improved economic signals, market volatility and market perception and liquidity.

#### *Economic Signals*

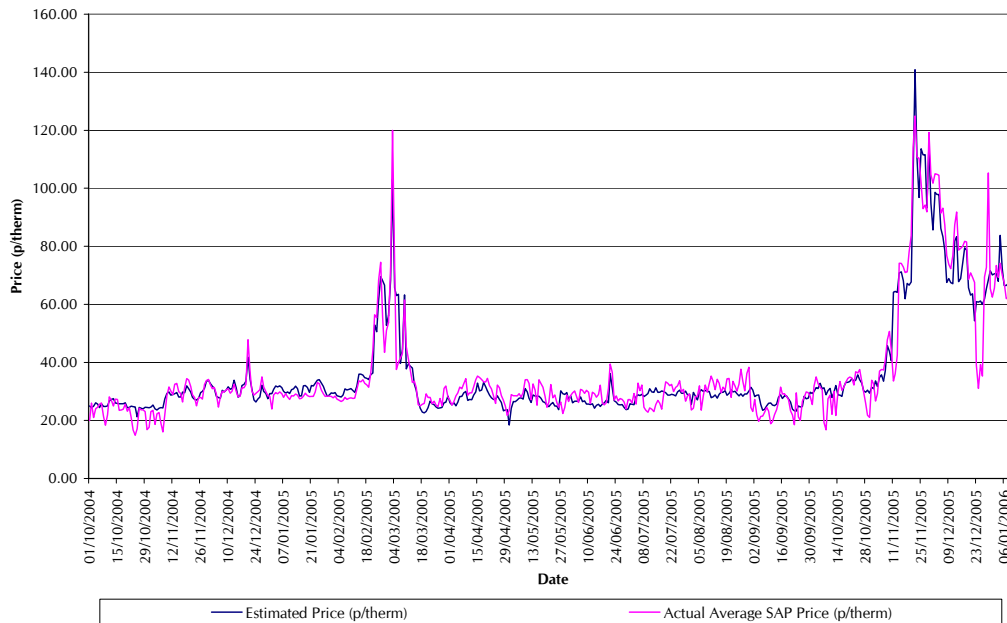
2.12. As noted earlier, we have carried out further assessment of the potential costs and benefits that may be incurred as a result of implementation of the proposal in relation to improved economic signals. The following section provides an overview of the assessment that Ofgem has undertaken, detailing the modelling analysis carried out to quantify the potential costs and benefits that would be achieved from improved economic signals. It also details how Ofgem's views have been informed by responses to consultations carried out in respect of the proposal.

#### *Modelling analysis*

2.13. Ofgem has undertaken analysis of historical daily data to allow a better understanding of the relationship between beach flows and prices given current levels of information available and to assess the relationship that would be observed if near to real time sub-terminal information were released under the proposal. Our analysis uses a simple linear regression model of price based on five key factors that we think are likely to influence the level of supply and demand for gas which, in turn, impact upon the on-the-day price of UK gas. This simplified approach provides an indication of the extent to which each of these factors can explain movements in the price of gas, assuming that each of these variables is independent of the others. In undertaking this analysis we assumed that GB gas prices are a function of:

- temperature;
- Zeebrugge prices;
- beach flows;
- interconnector flows; and
- storage flows.

2.14. Figure 2.1 below highlights the prices observed over the period between 1 October 2004 and 6 January 2006 and the prices obtained from the regression analysis that was carried out using historical data from this period. The graph shows that the simplified model appears to be a reasonable proxy for the gas market, as predicted prices appear to track observed prices reasonably well.

**Figure 2.1 Price model**

2.15. The model suggests that beach flows contribute 0.00366 pence/therm per mcm of beach flow. This suggests that historically, a 1mcm increase in beach supplies gives rise to a 0.00366 pence/therm increase in price. The intuition is that as supplies from the beach increase more expensive sources of gas are used and this is reflected in prices.

#### Assumptions used in the modelling

2.16. Ofgem has attempted to quantify the change in prices that would be observed in the event that near to real time sub-terminal data were available, by making assumptions about the change in the risk premium which would be observed in relation to offshore outages of certain magnitudes<sup>19</sup>. These assumptions have therefore been made in relation to three categories of outages; large, medium and small:

- in the event of a large outage Ofgem has assumed that there would be a day-on-day reduction in beach flows of more than 4%. In this event the coefficient of beach is assumed to be 8% lower given that these outages are significant and that better information would allow market participants to improve their management of risk with respect to intra-day price spikes in the longer run;
- in the event of a medium outage Ofgem has assumed that there would be a day-on-day reduction in beach flows in the range of 2-4%. The reaction of market

<sup>19</sup> The beach component of the price of gas currently includes a risk premium associated with uncertainty that exists when an offshore outage occurs. If near to real time sub-terminal flow information were available market participants would be better able to manage this risk and therefore the outage risk premium would be reduced.

participants is assumed to be less rapid than where a large outage occurs and therefore the coefficient of beach is assumed to be 5% lower; and

- in the event of a small outage Ofgem has assumed that there would be a day-on-day reduction in beach flows of 0.5% -2%. The reaction of market participants is assumed to be less rapid than in the case of a medium outage and therefore the coefficient of beach is assumed to be 2% lower.

2.17. A historical analysis of the offshore outages observed during the period October 2004 to January 2006 highlighted that the average day-on-day reduction in flows during this period was 2.5% and therefore the scenarios relating to small, medium and large outages have been modelled around this observation. A number of respondents to the October consultation stated that risk would be reduced as a result of the release of information under the proposal and therefore the risk premium has been reduced where a small, medium or large outage occurs.

#### Results of the modelling

2.18. Ofgem has developed three potential scenarios. These scenarios are:

- a low impact scenario in which the information released under the proposal reduces the risk premium for large beach outages;
- a medium impact scenario in which the information released under the proposal reduces the risk premium for large and medium beach outages; and
- a high impact scenario in which the information released under the proposal reduces the risk premium for large, medium and small beach outages;

2.19. Table 2.1 below outlines the results obtained, using the assumptions outlined above, in each of these scenarios.

**Table 2.1 Reduction in consumer costs**

	High Impact	Medium impact	Low impact
<b>Reduction in consumer costs</b>	<b>£59.08 million</b>	<b>£46.06 million</b>	<b>£20.03 million</b>

2.20. The table above highlights that there are potentially significant benefits to customers, in NPV terms, associated with the release of near to real time sub-terminal data.

2.21. The assumptions used as part of the low impact scenario better reflect the views of a number of respondents who did not consider that the information would be of value to the market. These respondents indicated that the level of risk associated with release of near to real time sub-terminal information would be increased and would therefore likely be of detriment to the market overall. A number of these parties considered that there were high risks associated with achievement of the benefits given the potential for exposure of the commercial positions of upstream producers and therefore they considered that the likelihood of parties seeking to withdraw their information from NGG NTS was also high.

2.22. Ofgem has sought to reflect the views of these parties in the low impact scenario of its modelling analysis. However, Ofgem does not consider that the level of benefits associated with the low impact scenario reflects the benefits that would be achieved if the proposal were implemented. Ofgem considers that release of near to real time sub-terminal information will provide all parties with a better understanding of movements observed within the system, reducing uncertainty associated with the level of available supply and allowing market participants to reach better informed trading decisions.

2.23. Ofgem considers that it is more likely that the potential benefits from more accurate economic signals would lie between the medium and high impact case. This is because we think that its assumptions regarding the extent to which market participants would obtain a better understanding of the workings of the market are conservative given that:

- with the release of near to real time sub-terminal data market participants will be able to understand where either a medium or large beach outage has occurred and will likely also be aware of small beach outages where these have occurred. This information will allow all market participants to gain a better understanding of the supply picture and to what extent supply disruptions are affecting price; and
- the analysis assumes that flows through the interconnector, storage flows, the price of gas at Zeebrugge and temperature are drivers of price but that they are not affected by price themselves. In reality a change in the flow of gas from beach would alter the balance of supply and demand by reducing the level of gas made available to the market from beach. In this respect, the margin of supply above demand would be altered and this would have a subsequent impact upon gas prices. Where this occurs, the volume of gas that storage and the interconnector chose to flow, as well as the decision of customers to provide demand side response would be affected due to the change in price that they would obtain in return for making gas available. A qualitative analysis would suggest that inclusion of these components would increase the benefits of the proposal by including the response of other parts of the system to a change in the price of gas.

2.24. Ofgem remains of the view that if only the low impact benefits were achieved this would outweigh the one-off costs of £1.4 million as estimated by NGG NTS associated with implementation of relevant systems to support the proposal. If the medium and high impact benefits were to be achieved this would suggest significant benefits.

2.25. The modelling analysis has therefore highlighted significant benefits associated with implementation of the proposal. Even in view of these significant benefits we think that the actual benefits that would likely be achieved would be much higher given the conservative assumptions we used in our modelling. Ofgem would welcome the views of interested parties regarding the modelling analysis, in terms of both the assumptions used and the results obtained.

2.26. Ofgem recognises the inherent difficulties associated with modelling the potential benefits that may be achieved as a result of the release of near to real time

sub-terminal information. Therefore, in addition to this modelling, Ofgem has sought to obtain the views of interested parties regarding the costs and benefits that they consider would be achieved as a result of implementation of the proposal.

#### Consultation responses - effect of increased information

2.27. As outlined previously, in October Ofgem consulted with all parties that had previously responded to consultations regarding offshore information and invited views regarding the incremental value that publication of information under the proposal may provide. In addition, to enable market participants to provide informed views on the incremental value of information under the proposal, Ofgem provided a one week sample of near to real time sub-terminal flow data representative of that which would be available to the market should the Authority approve the proposal.

2.28. Responses to the October consultation remained broadly split between those parties not in favour of the proposal, mostly those with upstream interests, and those in favour of the proposal, mostly customers or those parties with downstream interests. Of those respondents in favour of the proposal, a number highlighted that the provision of near to real time sub-terminal information would allow them to obtain a better understanding of gas supply and demand on the day. These respondents stated that this improved understanding would, in turn, allow them to make more informed decisions based on observed changes within the market. However, a number of respondents to the October consultation set out that they did not see any benefit from the release of locational flow data.

2.29. In January Ofgem invited further views of market participants regarding the way that they would react to an offshore outage with the current information available as compared with the information that would be available if the proposal were approved. In undertaking this analysis Ofgem looked into certain days where a supply disruption had occurred and a subsequent increase in price was experienced for which customers were unable to discern the underlying reason. On the basis of this analysis Ofgem worked up two case study examples to mimic the effect that the incidence of an offshore outage may have on observed line pack as well as its impact on price.

2.30. These case studies were sent to various industry stakeholders<sup>20</sup>, to seek their views in order to better understand how in particular examples the release of near to real time sub-terminal information would affect their position.

2.31. These case studies were helpful in informing the assumptions used in developing the modelling analysis as well as reinforcing the views expressed in response to the October consultation. In this respect, a number of respondents stated that:

- the provision of near to real time sub-terminal data would improve their position management and/or their ability to engage in demand side response. Therefore, the market would respond more appropriately to a supply disruption, reducing the volatility of prices within the market;

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<sup>20</sup> The industry parties included upstream producers, shippers, large industrial users and customer/producer representatives that had responded to earlier consultations in respect of the proposal.

- the benefits of reduced volatility and prices would result in more informed market decisions, therefore representing a real cost saving for the market overall; and
- there would be an increase in volatility and prices. In addition there would be further risks associated with potential exposure of parties.

2.32. These views suggested that some market participants considered that they would be able to understand better the reasons underpinning a supply disruption and this would reduce the uncertainty associated with taking trading decisions.

2.33. One large user estimated that its own costs would be reduced by £2.5m/year. This estimate supported the assumptions used by Ofgem in undertaking its modelling and would suggest that the potential estimated benefits obtained by Ofgem are conservative.

2.34. Ofgem notes that while respondents to the January consultation did not provide details of any indicative costs that would be incurred as a result of implementation of the proposal, one respondent to the October consultation provided an outline of these potential costs. As such, this respondent considered that if the 3p/therm price increase associated with a supply disruption, as previously identified by Ofgem, were to materialise this would likely be incurred by parties in a distressed buyer position, resulting in costs of £106,000 per day for every 10mcm of production affected.

2.35. A number of respondents did however express concerns regarding the process used to carry out the consultation particularly in respect of the time permitted to respond<sup>21</sup>.

### Summary

2.36. Therefore, in summary, from its further assessment of the costs and benefits associated with improved economic signals, Ofgem considers that there are potential benefits to consumers in the range of £20 - £59 million, in NPV terms. Ofgem also considers that the benefits in this regard would likely be toward the high end of this range given the conservative assumptions that were made in the modelling carried out. Ofgem recognises that there may be greater impact on some parties of releasing this information, notably on upstream parties, but considers that the improved economic signals within the market suggest that such costs would be outweighed by the potential benefits.

### *Market Volatility*

2.37. In the May IA Ofgem outlined that the level of volatility in the market would likely reduce in response to the release of near to real time sub-terminal data as market participants will be able to make decisions on the basis of information which more accurately reflects the state of the system. A number of respondents to both the May IA and the October consultation considered that market volatility would be reduced as participants would be able to react to data in real time. Respondents also

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<sup>21</sup> A summary of these concerns is contained in Appendix 6 along with Ofgem's views regarding the process that was followed in undertaking the January consultation.



highlighted that volatility would likely reduce over time as market participants learnt to better interpret the data. In addition, a number of respondents to the January consultation also pointed to the reduced price levels and volatility that would be observed as a result of the release of near to real time sub-terminal information. However, a number of respondents to these consultations claimed that information released under the proposal would be unlikely to reduce volatility in the market while some stated that volatility would likely increase due to a lack of understanding regarding the data. In this respect, a number of respondents outlined that further analysis regarding the impact upon volatility would be required.

2.38. We think that the level of volatility in the market will reduce in response to the release of near to real time sub-terminal data. Ofgem recognises that, on occasion, the availability of this information may cause an increase in the market volatility due to the reaction of market participants to observed changes in sub-terminal flows. However, Ofgem considers that although the proposal may create a risk associated with increased volatility, allowing market participants to make their own commercial decisions based on actual market data is preferable to the present situation in which there is considerable uncertainty regarding trading decisions and where these can be based upon rumours of offshore outages.

2.39. We think that our previous assessment regarding market volatility remains appropriate and have not carried out any further detailed assessment regarding this issue. Ofgem would also note that respondents to the October and January consultations did not suggest any particular further analysis that it would be appropriate to carry out in relation to market volatility.

#### *Market perception and liquidity*

2.40. In the May IA we outlined that increased information would be likely to have a beneficial impact on market confidence and that this may attract new entrants, increasing competition in the market as well as improving trading activity and liquidity. In responses to the May IA and October consultation, a number of market participants stated that they considered that the proposal would increase the level of liquidity within the market. However, two respondents did not consider that the proposal would create the effect of increasing liquidity and suggested that further analysis of liquidity on the market would be required.

2.41. We still think that implementation of the proposal will have a positive impact on the level of liquidity in the market as market participants will be able to understand better the reasons for movements in the market and therefore take trading decisions with greater confidence<sup>22</sup>. Ofgem notes the views of respondents to the May IA and October consultation who stated that further analysis should be carried out in relation to this key issue. However, while it has not sought to do so Ofgem would highlight that in considering this proposal it has assessed the impact that it would have upon competition and ultimately consumers. Ofgem therefore considers that the proposal would improve market perception, by further supporting the development of an open and transparent market, attracting new entrants and increasing competition which would ultimately benefit consumers in terms of reduced prices.

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<sup>22</sup> For further details of the qualitative analysis carried out regarding this issue, see Chapter 5 of the May IA.

2.42. Ofgem would also note that respondents to the May IA and October consultation did not suggest any particular analysis that it would be appropriate to carry out in relation to market perception and liquidity. Ofgem would therefore welcome any views that market participants have with respect to further analysis in respect of the impact of the proposal upon liquidity.

## Costs

2.43. In the May IA, Ofgem identified a number of areas in which costs directly associated with the implementation of the proposal may be incurred<sup>23</sup>. These included:

- IT costs; and
- contract renegotiation.

2.44. The following section provides an overview of the additional analysis that Ofgem has carried out in respect of these costs as well as views expressed by interested parties in response to more recent consultations. In response to these consultations a number of market participants have highlighted that they would incur increased costs associated with monitoring of the data. The following section therefore provides an overview of the concerns expressed and sets out our views on these issues.

### IT costs

#### *Background*

2.45. Prior to publication of the May IA NGG NTS stated that to support the release of near to real time sub-terminal flow data to the level and frequency required, it would be necessary for it to undertake a number of system development activities and enhancements. NGG NTS produced an initial high level estimate of £650,000 for the IT system development costs.

2.46. In responses to the May IA a number of parties stated that the cost estimates provided by NGG NTS were excessive given the changes that would be required. However, in its response to the May IA NGG NTS provided an updated estimate and outlined that implementation of the proposal would cost in the order of £1.4 million due to the IT system developments that would be required.

#### *Process*

2.47. Ofgem has previously noted that such costs appear excessive given that NGG NTS already has access to and uses the near to real time sub-terminal data that would it would be necessary to release if the proposal were implemented. Therefore, Ofgem has been seeking to understand the reasons for this estimate. We have made a number of informal requests to NGG NTS for further information and issued a

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<sup>23</sup> For further detail regarding these key issues see Chapters 4 and 5 of Ofgem's May IA.

formal information request<sup>24</sup> which sought to obtain all relevant documentation regarding the cost estimate<sup>25</sup>.

2.48. In its response to Ofgem's formal information request NGG NTS highlighted that the costs associated with implementation of the proposal would result from the need to extract a greater volume and frequency of data from its main systems and to publish this data on a designated website. Ofgem requested clarification regarding the details of the cost estimate provided by NGG NTS to obtain a better understanding of the key areas where the costs that NGG NTS has estimated would arise. In this respect, Ofgem requested:

- further details regarding the need for the changes to NGG NTS's integrated Gas Management System (iGMS) which supports its core operational requirements. NGG NTS has highlighted that changes will be required to allow data to be extracted from iGMS at increased frequency. NGG NTS has also outlined that that these changes will need to be implemented whilst ensuring that the design of the system is not amended as this could have implications in terms of ensuring safety obligations are met. However, NGG NTS has not provided any further clarity regarding the underlying requirement for changes to its iGMS system; and
- additional clarity regarding the hardware requirements necessary to support the databases needed to permit the release of near to real time sub-terminal information. NGG NTS has highlighted that it will require a new web server, associated application servers and databases to support the provision of information under the proposal. However, NGG NTS has outlined that the level of information in Table 2.2 will need to be stored on its databases and provided to interested parties on its website. Table 2.2 highlights that the level of information NGG NTS will need to process, publish and store is relatively low even taking into account the potential additional information that may need to be processed and stored due transport and context data overheads. It therefore seems unlikely that completely new systems would be required for this.

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<sup>24</sup> Issued on 10 November 2005.

<sup>25</sup> Copies of the documents that NGG NTS provided in response to this formal request are provided for information in Appendix 8.

**Table 2.2 Information NGG NTS required to process, publish and store**

<b>Assumption</b>	<b>Units</b>	<b>Value</b>
Number of telemetered points		25
Volume of data obtained from each telemetered point every 2 minutes	Bytes/Telemetered point/Update	113
Data update period from iGMS to database	Minutes/Telemetered point/Update	2
Data update period from iGMS to website	Minutes/Update	12
Approximate number of users		390
Frequency of user report downloads	Requests/day	10,000
<b>Estimates based on assumptions</b>		
<b>Data Storage</b>		
Volume of data per update from all 25 telemeters	KB/Update	2.8
Volume of data obtained per day	MB/Day	2
Volume of historical data NGG NTS required to store	MB/2 Years	1,450
<b>User Load</b>		
Volume of data per website update (i.e. update of 6, 2 minute readings from the 25 telemetered points every 12 minutes)	KB/Update	16.6
<i>Calculation based on frequency of user report downloads on current systems:</i>		
Frequency of user report downloads	Requests/second	0.3
User load due to data	KB/second	5.7
<i>Calculation based on each user polling the system once every update period:</i>		
Frequency of user report downloads	Requests/second	0.5
User load due to data	KB/second	9

2.49. Ofgem therefore remains of the opinion that NGG NTS's cost estimate for implementing the proposal, of £1.4 million, represents the upper end of a range of potential costs. Analysis of the IT development costs that NGG NTS has outlined that it would incur in order to implement systems to permit the increased information to be made available to market participants suggests that some of the requirements may not be necessary given the volume of data flows that would need to be provided under the proposal.

2.50. Ofgem would welcome further clarity from NGG NTS regarding the reasons underpinning the need to incur the costs associated with implementation of this proposal as well as the views of other interested parties regarding the cost estimates provided by NGG NTS.

**IT costs incurred by market participants**

2.51. A number of respondents to the October consultation highlighted that they would likely incur costs associated with the monitoring of data released under the proposal as well as any associated analysis that may be required.

2.52. Ofgem recognises that some parties may seek to develop more sophisticated IT systems to capture, retain and/or analyse the additional data flows released under the proposal. Ofgem considers that the extent to which such costs were incurred by parties would be a commercial decision for those parties and the costs could therefore range from no cost to large sums depending on how sophisticated the systems were that parties chose to put in place. Ofgem considers that the investment made in this regard would reflect the value that parties placed on capturing the additional data.

2.53. In addition, Ofgem is aware that where it is not possible for smaller parties to collate and analyse the relevant information, the potential would exist for a third party to carry out this task on their behalf. Therefore, Ofgem considers that any costs associated with monitoring of the data would be incurred voluntarily by market participants as they sought to better understand market fundamentals and therefore make more informed trading decisions to reduce associated costs.

**Contract renegotiation**

2.54. In the May IA Ofgem noted that there were costs which may be incurred by producers due to the commercially sensitive or confidential nature of the information that would be released under the proposal. In the May IA Ofgem also outlined that there were potential costs associated with the need for contract renegotiation. The following section provides an overview of the responses received to Ofgem's more recent consultations regarding:

- commercial sensitivities; and
- renegotiation of contracts.

*Commercial Sensitivities*

2.55. Producers who oppose the proposal are concerned that the publication of this information will expose them as other companies will know that production has failed and that they are short of gas. Producers are concerned that they will face higher costs when buying gas to make up any shortfall. Producers, like all market participants, can choose how they sell their gas and whether or not they want to mitigate this risk through a range of tools. They can, for example, choose to hold back some production in reserve and sell this into the spot market when contracted fields are operating normally or to make up any shortfall if a field fails. They can buy storage capacity and place gas in store to manage the risk. Or they can contract with other producers or large customers to provide them with gas if they have a production problem.

2.56. We think that this risk may be overstated given the range of tools available to producers to manage this risk. A producer can take a range of actions to prevent being exposed to higher prices in the spot market if it faces an unexpected production problem. If a producer chooses not to seek to manage or mitigate the risks associated with a production problem then it has chosen to accept the risk that the price may rise and the costs of making up any shortfall will also rise.

2.57. A producer may even benefit from a price rise following a production failure. If the price rise is large enough and the producer has gas in store or spare production and is able to make up its shortfall and sell surplus gas to the spot market it may make more profit than it would have made if there had not been a problem.

2.58. In the May IA, we noted that there may be a small number of instances where some parties may experience increased exposure at sub-terminal level but considered that the aggregation of flow data to 10 mcm/day at the sub-terminal level would provide sufficient protection for most parties. In this respect, in the majority of cases where sub-terminals accept flows above 10mcm/day, these flows arise from a number of diverse sources in terms of field ownership.

2.59. In response to the May IA a number of market participants outlined that there was no reason why the near to real time sub-terminal information should not be made available given that producer affiliates already have access to this information. Another respondent considered that commercial exposure would be limited as details of single user entry points would not be released. However, a number of respondents to both the May IA and the October consultation stated that the commercial positions of potentially distressed buyers should not be exposed as this would make them vulnerable to high prices and considered that the implications that this may have had not been properly assessed. Two further respondents highlighted that, in some instances, the commercial position of storage operators would be exposed and that they did not consider that this was the intent of the proposal.

2.60. Ofgem recognises that there will be limited cases in which the commercial position of producers and storage operators will be exposed given the 10mcm/day threshold but recognises that there will be instances in which the position of certain parties is exposed as a result of an offshore outage. However, Ofgem would note that in other markets, notably electricity, information is made available in real time regarding unit performance and therefore where an outage occurs, the commercial positions of affected parties will be exposed.

2.61. Ofgem is aware that although in the event of an offshore outage market participants will be able to discern that there are physical problems associated with the flows of gas from a particular sub-terminal, they will not have information regarding the contractual position of the affected party. As such, they will not be able to discern whether the producer needs to buy gas from the market to meet its contractual obligations or whether it has other production, gas in store or other contractual arrangements with customers/producers to recover its position. The extent to which offshore producers will be affected by such an outage will vary from party to party.

2.62. Although Ofgem has not carried out any further detailed assessment of this issue, it considers that increased availability and transparency of information

regarding supply and demand leads to a more efficient overall outcome. Where market participants have concerns regarding commercial exposure due to the level of information transparency, Ofgem would note that it is open for parties to raise further modification proposals to seek to address any concerns. Ofgem would also highlight that if this proposal were to be approved, market participants would be able to raise additional modifications, in relation to the proposal, prior to its implementation in October 2006.

#### *Contract renegotiation*

2.63. In the May IA Ofgem outlined that it had undertaken a preliminary assessment of all relevant contractual agreements and concluded that, apart from a small number of legacy agreements, the majority of the contracts permitted the disclosure of information by NGG NTS to third parties where required by law.

2.64. In response to the May IA, a number of respondents stated that it would appear that the current structure of the contracts in place between NGG NTS and parties with offshore interests would permit the release of information. A further respondent highlighted that if NGG NTS was of the opinion that contract renegotiation would be an issue associated with implementation of the proposal it would be appropriate for NGG NTS to carry out any analysis in this regard. In contrast, a number of respondents stated that significant time and resource would be involved in contract renegotiation and that the costs of this remained unclear. As such, a number of respondents outlined that it would be appropriate to take into account the issue of potential liability for NGG NTS if it were required to release near to real time sub-terminal information and highlighted that they did not consider that this had previously been adequately assessed.

2.65. Although Ofgem has not carried out any further detailed assessment of this issue, it considers that it is unlikely that NGG NTS will be subject to liability claims in this respect. Even where NGG NTS's legacy agreements do not appear to allow the disclosure of information to third parties it can be argued that the confidentiality provisions of the legacy agreements in question would be frustrated by implementation of the proposal. A subsequent change in the law affecting a contract can be treated as an instance of frustration. In these circumstances the parties would be discharged from compliance with the affected terms of the contract (i.e. without further amendment of the contract). Accordingly, the change in the legal position could permit the information to be released under the current contracts.

### **Risks and unintended consequences**

2.66. Ofgem considers that there may be elements of risk regarding the achievement of the potential benefits identified above<sup>26</sup>. In the May IA, Ofgem considered risks and potential unintended consequences associated with:

- withdrawal of information; and
- duplicate metering.

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<sup>26</sup> For further detail regarding these key issues see Chapters 4 and 5 of Ofgem's May IA.

2.67. The following section provides an overview of the views expressed by interested parties in response to more recent consultations regarding the risks that may be associated with withdrawal of information and the possibility that duplicate metering may be required.

### **Withdrawal of information**

2.68. In the May IA, Ofgem noted that one of the main concerns that market participants had, in relation to implementation of the proposal was that it could threaten the provision of sub-terminal information to NGG NTS. In responses to the May IA a number of respondents expressed concern regarding threats from producers that they may withdraw the provision of all offshore information if the proposal were approved. Two respondents outlined that such a reaction would be unreasonable whilst a number of other respondents considered that the risk of withdrawal of this information was low.

2.69. In responses to the May IA and October consultation two market participants stated that there was a risk of the withdrawal of this information and that producers would need to consider whether there were sufficient safeguards to protect their commercial interests.

2.70. Ofgem would note that, since publication of the May IA, a number of producers chose to invoke the return or destroy conditions within the contracts that were in place between NGG NTS and offshore producers regarding the provision of information for the Transporting Britain's Energy (TBE) consultation process. Since these conditions were invoked both producers and UKOOA have noted the importance of the provision of this information to NGG NTS to ensure the safe and secure operation of the system in its role as SO. As such, Ofgem is aware that producers are currently working with NGG NTS to put in place contracts regarding the provision of this information for the TBE process in 2006. Ofgem notes that the TBE information covers a wide range of data which is much broader than the information that would be released under the proposal. As such, Ofgem considers that producers would have likely had greater concerns regarding the release of some of the other data provided to NGG NTS as part of the TBE process.

2.71. Although Ofgem has not carried out any further detailed assessment of this issue, Ofgem remains of the view that it is unlikely that sub-terminal information would be withdrawn if the proposal were to be approved. Ofgem also notes that producers have repeatedly outlined, including in responses made to recent consultations, the importance of providing this information to NGG NTS in its role as SO. Ofgem also notes the views raised by NGG NTS regarding the value of this information, provided by the offshore community as part of the TBE process, to help monitor system security in its role as SO. Ofgem considers that given the obvious value of this information for ensuring the secure and efficient operation of the gas system, a value that has been particularly highlighted over this winter, it would be highly unlikely that producers would seek to withdraw this information.

### **Duplicate metering**

2.72. In the May IA Ofgem noted that if the provision of the sub-terminal information were to be withdrawn it would be necessary for NGG NTS to install duplicate



metering equipment at sub-terminals and potentially other NTS entry points. In response to the May IA a number of market participants considered that the installation of duplicate metering would be inefficient. Two respondents outlined that, even if it were necessary for duplicate metering to be installed the benefits of the proposal would continue to outweigh the costs. Although a further respondent stated that the reverse would likely be the case.

2.73. Although Ofgem has not carried out any further detailed assessment of this issue it considers that producers are unlikely to withdraw sub-terminal information and that the installation of duplicate metering would be a relatively inefficient way of acquiring the data required for release under the proposal. Ofgem therefore agrees with parties that outlined that the installation of duplicate metering would be inefficient but considers that the risk associated with this remains relatively low.

## **Additional considerations in the May IA**

### **Comparisons between the gas and electricity market**

2.74. As part of the May IA Ofgem included a table<sup>27</sup> setting out the level of information made available in the gas market as compared with the corresponding level of information made available in the electricity market<sup>28</sup>. In response to the May IA, one party considered that the comparisons drawn between the level of information available in the gas and electricity market were irrelevant given that there are fundamental differences between these two markets. Further discussions with this respondent have highlighted that the concerns were related to the level of exposure that would be experienced by a generator if an outage occurred in the electricity market as compared with the level of exposure experienced by a producer in the gas market.

2.75. However, Ofgem would note that in electricity, information is made available in real time regarding unit performance and therefore where an outage occurs, the commercial positions of affected parties will be exposed.

2.76. Ofgem is aware that although in the event of an offshore outage market participants will be able to discern that there are physical problems associated with the flows of gas from a particular sub-terminal, they will not have information regarding the contractual position of the affected party. As such, they will not be able to discern how much (if any) additional gas the producer will need to buy in order to meet its contractual obligations. In addition, market participants will not know how much a particular party has chosen to "insure" itself against an offshore outage and, in this regard, the extent to which offshore producers will be affected by such an offshore outage will vary from party to party.

### **Legal text**

2.77. In the May IA, Ofgem outlined that it considered that the current draft of the legal text was ambiguous in relation to the timing of information release as well as in respect of certain other areas.

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<sup>27</sup> For further information, see Appendix 1 of the May IA.

<sup>28</sup> For further detail regarding this comparison see Appendix 1 of Ofgem's May IA.

2.78. Ofgem is aware that since publication of the May IA, energywatch has carried out a consultation regarding the current drafting of the legal text to support the proposal. Ofgem understands that energywatch and NGG NTS have been in discussion regarding the current drafting of the legal text. Following the outcome of these discussions, an updated draft of the legal text is provided in Appendix 7.

### Summary of costs and benefits

2.79. Ofgem considers that the benefits associated with release of near to real time sub-terminal information could potentially be significant. Although questions remain regarding NGG NTS's estimates of the IT costs associated with implementation of the proposal, Ofgem considers that even if these costs of £1.4 million were incurred they would be significantly outweighed by the potential benefits. Table 2.3 below highlights the potentially significant benefits that would accrue over the next 15 years associated with implementation of the proposal. Ofgem considers that the benefits achieved would likely lie between the medium and high scenarios and may even be higher than this given the conservative assumptions used in the modelling.

**Table 2.3 Potential benefits**

<b>Benefits</b>	<b>The proposal</b>	
<b>Economy and efficiency</b>		
<b>Economic signals</b>	<b>£20.03 - £59.08m</b>	
<b>System balancing</b>	£25.03m	
<b>Market volatility</b>	>£38.05m	
<b>Market perception and liquidity</b>	✓	
<b>Security of supply</b>		
<b>Short term</b>	✓	
<b>Long term</b>	✓	
<b>Impact on customers</b>	-	
<b>Environmental impact</b>	-	
<b>Costs</b>		
<b>IT costs</b>	<b>£1.4m</b>	
<b>Contract renegotiation</b>	xx	
<b>Risks</b>	Impact	Probability
<b>Withdrawal of information</b>	xxx	Low
<b>Duplicate metering</b>	xx	Low
<b>Data accuracy</b>	x	Low
<b>Ownership of data</b>	x	Low
<b>Net Benefits</b>		
<b>High Case</b>	<b>£122.46 m</b>	
<b>Medium Case</b>	<b>£109.27 m</b>	
<b>Low case</b>	<b>£82.87 m</b>	

2.80. Ofgem considers that, in light of the mitigating factors outlined above, the risks and unintended consequences highlighted in the May IA would likely be small.

## Appendices

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## Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document.

1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.3. Responses should be received by **17 March 2006** and should be sent to:

Sonia Brown  
Director, Wholesale Markets  
Ofgem  
9 Millbank  
London  
SW1P 3GE

[wholesale.markets@ofgem.gov.uk](mailto:wholesale.markets@ofgem.gov.uk)

1.4. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website [www.ofgem.gov.uk](http://www.ofgem.gov.uk). Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.5. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

1.6. Following industry consultation regarding the analysis contained within this IA, the Authority will be taking a decision in respect of the proposal at its meeting in April 2006. Any questions on this document should, in the first instance, be directed to:

Hannah Cook  
Wholesale Markets  
Ofgem  
9 Millbank  
London  
SW1P 3GE

020 7901 7444

[Hannah.cook@ofgem.gov.uk](mailto:Hannah.cook@ofgem.gov.uk)

**CHAPTER: Two**

**Question 1:** Has Ofgem undertaken the appropriate analysis?

**Question 2:** Is there any additional analysis that would have been appropriate?

**Question 3:** Do you think the assumptions used in the modelling were correct?

**Question 4:** Are the benefits obtained from the modelling analysis reasonable?

**Question 5:** Was there value in carrying out the January consultation?

**Question 6:** Are NGG NTS's cost estimates reasonable?

**Question 7:** Has Ofgem reached the correct conclusions regarding NGG NTS's cost estimates?

**Question 8:** Do you agree with Ofgem's overall conclusions regarding the costs, benefits and associated risks?

## Appendix 2 - Feedback Questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments.

1.2. Please send your comments to:

Selvi Jegatheswara  
Consultation Coordinator  
9 Millbank  
London  
SW1P 3GE

[Selvi.jegatheswara@ofgem.gov.uk](mailto:Selvi.jegatheswara@ofgem.gov.uk)

### Appendix 3 - Ofgem's Statutory Responsibilities

1.1. Ofgem is the Office of Gas and Electricity Markets, regulating the gas and electricity industries in Great Britain. Ofgem operates under the direction and governance of the Gas and Electricity Markets Authority. The Gas and Electricity Markets Authority has the ultimate responsibility for all that Ofgem does. It determines strategy and decides on major policy issues.

1.2. Ofgem's powers and duties are provided for under the Gas Act 1986, the Electricity Act 1989, as amended principally by the Utilities Act 2000, Competition Act 1998, Enterprise Act 2002 and Energy Act 2004. Ofgem has concurrent powers with the Office of Fair Trading (OFT) to apply the Competition Act 1998 to the gas and electricity sectors in Great Britain.

1.3. Ofgem's principal objective is to protect the interests of consumers present and future, wherever appropriate by promoting effective competition. We must also have regard to:

- The need to ensure that all reasonable demands for electricity and, so far as is economical, gas are met
- The need to secure that licence holders are able to finance their obligations, and
- The interests of those people who are disabled or chronically sick, of pensionable age, living on low incomes, or living in rural areas.

1.4. We are also required to carry out our functions in the manner, which we consider best calculated:

- To promote efficiency and economy including efficient use of energy
- To protect the public from dangers
- To contribute to the achievement of sustainable development
- To secure a diverse and viable long term energy supply, and
- Shall have regard, in carrying out those functions, to the impact on the environment of the gas and electricity industries.

1.5. In carrying out our functions we must also have regard to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed; and any other principles that appear to us to represent the best regulatory practice.

1.6. Furthermore, we must have regard to social and environmental guidance issued by Ministers. Ofgem also has a duty to consult and take into account any advice given by the Health and Safety Executive about all gas and electricity safety issues that may be relevant to our functions under the Gas Act and the Electricity Act.

## Appendix 4 - Glossary

### C

#### Coefficient

The coefficient indicates the extent to which each of the independent variables contributes to the price of gas.

### D

#### Department of Trade & Industry (DTI)

The government department working to create the conditions for business success and to help the UK respond to the challenge of globalisation.

#### DTI information initiative

A voluntary arrangement, agreed between producers and NGG NTS, for the disclosure of offshore information. The agreement was the result of a DTI led body of work involving Ofgem, UKOOA, terminal operators and NGG NTS.

### E

#### energywatch

energywatch is the independent watchdog for gas and electricity consumers and provides free, impartial advice on a range of energy issues. energywatch also investigates complaints on behalf of consumers who are experiencing difficulty in resolving problems directly with their energy suppliers.

### I

#### Impact Assessment

A document, such as this, published by Ofgem under the terms of Section 5A of the Utilities Act 2000 which places a duty on the Authority to carry out Impact Assessments on proposals that the Authority considers are "important". An Impact Assessment is likely to provide Ofgem's views on the potential costs and benefits of the proposal and the likely risks and unintended consequences to the achievement of those benefits.

### L

#### Line pack

The volume of gas within the National or Local Transmission System at any time.



**M****Mcm/day**

The amount of gas in millions of cubic metres that would flow into the network in 24 hours at the current rate.

**N****National Grid Gas plc NTS**

The owner and operator of the National Transmission System throughout Great Britain.

**National Transmission System (NTS)**

A high-pressure system consisting of terminals, compressor stations, pipeline systems and offtakes. Designed to operate at pressures up to 85 bar.

**Net Present Value (NPV)**

NPV is the net level of potential costs and benefits after discounting at an appropriate rate.

**North – south split**

The aggregation of information into two zones, "north" and "south". North comprising of St. Fergus, Barrow, Teesside, Burton Point, Partington and Glenmavis, south comprising of Easington (including Rough), Theddlethorpe, Bacton, Isle of Grain, Dynevor, Avonmouth and Hornsea.

**O****Offshore outage**

The reduction in flows (either planned or unplanned) from an offshore field.

**R****Relevant objectives of the UNC**

(a) the relevant objectives in Standard Special Condition A11(1); and  
(b) in relation to a proposed Modification of these Rules, the requirements in Standard Special Conditions A11(9) and (12) (to the extent that they do not conflict with the relevant objectives referred to in (a) above).

**S****Sub-terminal**

The main entry points to the NTS.

### System Operator (SO)

NGG NTS as operator of the National Transmission System (NTS).

## T

### Transporting Britain's Energy (TBE)

The TBE process requires NGG NTS to establish long term supply and demand scenarios for investment planning purposes. The associated TBE consultation process also provides a forum for debate on a range of related issues facing the gas industry.

## U

### UK Offshore Operators Association (UKOOA)

UKOOA is the representative organisation for the UK offshore oil and gas industry. Its members are companies licensed by the Government to explore for and produce oil and gas in UK waters.

### Uniform Network Code (UNC)

The Uniform Network Code (UNC) sets out the legal and contractual framework for the supply and transportation of gas. It provides a common set of rules for all industry players to ensure that competition can be facilitated on equal terms. The Network Code came into effect in March 1996 after two years of negotiation between Transco and shippers. Following the sale of four of the gas distribution networks from NGG NTS to three independent buyers, the Network Code was replaced by the UNC which is managed by the Joint Office of Gas Transporters.

## Z

### Zeebrugge prices

Prices at which gas is traded at the Zeebrugge hub.

## Appendix 5 – Summary of responses to May IA and October consultation

1.1. There were 32 responses to the May IA, of which 16 supported implementation of the proposal, one offered qualified support and 15 were against its implementation. While of the 22 responses to the October consultation, ten supported implementation of the proposal, one provided qualified support and 11 were against its implementation.

### Release of sub-terminal information on a north-south basis

#### Responses to the May IA

1.2. Three respondents to the May IA expressed support for implementation of the phased DTI information initiative. Of these, one stated that continued provision of information under this initiative was preferable to implementation of the proposal while another expressed continued support for the DTI information initiative as long as commercial positions were not exposed. One respondent considered that the provision of information under the DTI initiative would create significant benefits and another stated that the initiative would likely have an incremental benefit to the market. 11 respondents set out that the initiative needed to be fully implemented and given time to work and that only then could an assessment of the proposal be made and further changes discussed.

1.3. Two respondents welcomed implementation of the final phase of the DTI information initiative but considered that the initiative did not go far enough in terms of the information that it made available. One respondent did not consider it to be appropriate to wait and observe the impact of the release of information under the DTI information initiative as sub-terminal information was crucial to the efficient functioning of the market. Two respondents set out that a legislative approach to the release of this information was required while, in a similar regard, a further stated that a voluntary initiative would never be as effective as a UNC obligation. One respondent considered that the information released under the DTI voluntary information initiative did not address the information asymmetry between onshore and offshore producers.

1.4. However, five respondents to the May IA considered that implementation of the proposal would provide only marginal benefits, if any, over and above those that would be achieved from the DTI information initiative. In this respect, one May IA respondent highlighted that any liquidity or volatility benefits may be attributable to the DTI voluntary information initiative. A further respondent also set out that the case had not been made for the implementation of legislation for the provision of sub-terminal data to the market and a further pointed out that acceptance of the proposal would be inconsistent with the agreement reached with the DTI.

### **Responses to the October consultation**

1.5. Respondents to the October consultation provided details of the way in which the north-south information had proved useful since its release in June 2005.

#### *Current information sufficient*

1.6. Four respondents considered that the information provided under the final phase of the DTI voluntary information initiative provided the required level of information in relation to sub-terminal flows.

1.7. Of these respondents, two outlined that the data provides an understanding of the gas flows onto the system as well as the changes in market conditions that occur. A further respondent detailed that the north-south information was a helpful addition to the current data available to the market e.g. line pack and forecast demand and that the portfolio of this information provided them with a reasonably accurate supply profile. In addition, one respondent considered that the data provided interested parties with important information underlying supply conditions.

#### *Information provided an incremental benefit*

1.8. Nine respondents outlined that the north-south data had provided an incremental benefit in terms of understanding the flows of gas onto the system. In this respect, one respondent stated that the release of this information had helped to inform gas purchasing decisions. A further respondent set out that the release of this information had helped to level the playing field between different market participants.

1.9. Five respondents highlighted that they use the information as part of their overall portfolio of tools which includes line pack and demand data. One such respondent considered that the information was helpful in providing some additional data over and above the information previously available. However this respondent, as well as four further parties, stated that the benefits achieved were limited and that the DTI information initiative had not gone far enough in terms of providing the required information regarding sub-terminal flows. One respondent stated that the information frequently created more questions than answers while another highlighted that it had not undertaken to invest in relevant systems to monitor this information given its limited use. A further respondent pointed to the inevitable difference in the information provided as part of the voluntary DTI information initiative and the information available to the physical players which gave them an advantage over and above other market parties.

1.10. A number of respondents stated that the level of aggregation of the information published under the DTI information initiative tended to disguise the reasons underlying any changes in gas flows. In addition, one respondent suggested that the aggregation of information into north and south flows served as an artificial divide of the data. In a similar respect, two respondents outlined that the timeliness of publication of the data meant that interested parties could only react to changes in supply after the event while other parties had access to the real time data.

1.11. Three respondents considered that the way in which the north-south data was presented could be improved. One such respondent stated that presentation of the data currently makes the information difficult to manage, while another outlined that the data requires too much manual extraction and a third considered that the information should be presented in a graphical way to allow trends to be identified. In addition, two respondents stated that they had concerns regarding the robustness of the data and highlighted instances in which the data has not been available in a timely manner.

*Information not of use*

1.12. Three respondents set out that the release of the north-south information had not proved useful. In this respect, three respondents stated that the information was not sufficient to inform purchasing decisions while a further respondent detailed that it did not expect benefits to be achieved as a result of the release of further information.

*General comments*

1.13. Four respondents considered that the information had not been available for a sufficient period of time to allow a full assessment of the associated benefits to be made. In this respect a number of the respondents stated that Ofgem should have allowed a full year to elapse prior to reaching any conclusions regarding the information provision. One respondent considered that if such a period of time were permitted, benefits similar to those predicted under the proposal would be achieved. A further respondent considered that a more detailed analysis of the existing information was required.

1.14. Two respondents stated that the provision of information in the north-south format enabled the information to be released to interested parties without creating issues associated with commercial confidentiality. In contrast, two respondents considered that the continued provision of the information under a voluntary scheme was not appropriate and that parties should have a legal obligation to provide sub-terminal information given its importance.

## **Views regarding the proposal**

### **In Favour of the Proposal**

1.15. Around half of the respondents to both consultations were supportive of the proposal. They identified several areas where benefits were likely to arise, and these were largely reiterated in response to the October consultation, although some additional points were raised.

*Economic signals*

1.16. 11 of the May IA respondents considered that information regarding supply and demand was essential for market participants to understand price movements and for this to inform their commercial decisions.

1.17. In response to the October consultation, eight respondents considered that the release of offshore information under the proposal would be of benefit to the operation of the market. Six respondents considered that the information would increase transparency, permitting participants to construct a more accurate picture of the state of the system and therefore allow purchasing decisions to be reached based upon market fundamentals. In this respect, one respondent highlighted that even where price spikes were observed these would relate to actual supply problems. A further respondent set out that the sub-terminal information, used concurrently with the other information available to the market would allow parties to better understand the impact that changes in flows may have. Two respondents outlined that reduced risk sentiment would help to reduce prices.

1.18. A further respondent to the October consultation considered that the provision of near to real time sub-terminal information would allow detailed analysis to be carried out regarding the gas supply curve and permit an understanding of the supply curve at any one time. Two respondents highlighted that it would take time to learn to understand the data provided as part of the proposal although, of these, one stated that this was a skill that would likely be developed quickly.

1.19. One respondent to the May IA stated that the proposal would likely provide significant benefits over and above those from the DTI information initiative while a further detailed that the proposal would provide a greater degree of transparency than the DTI information initiative. Similarly, in response to the October consultation two parties stated that the benefits of greater information could be almost entirely attributed to the release of disaggregated sub-terminal information. A further respondent to the October consultation detailed that the release of sub-terminal information would allow an understanding of the supply demand balance in real time whilst at the moment the relevant information is only available 2-3 days after the event.

1.20. One respondent to the May IA and another to the October consultation stated that the provision of near to real time sub-terminal information would help to facilitate demand side response. In this respect, a further respondent to the October consultation considered that the release of information under the proposal would reduce the need for other signals to the market such as the gas balancing alert proposed under modification proposals 061 and 062.

*System balancing*

1.21. One respondent to the May IA stated that release information under the proposal would assist NGG NTS in its role as system operator as market participants would be able to better react to changes in market fundamentals. A respondent to the October consultation stated that liquidity would increase and that faster re-

pricing of commodities should assist parties in maintaining a balanced position while another considered that balancing costs would be reduced.

#### *Market Volatility*

1.22. Two respondents to the May IA considered that the release of near to real time sub-terminal data would assist in reducing volatility while two further respondents also stated that volatility would reduce as participants learnt to interpret the data. In response to the October consultation four parties considered that market volatility would be reduced by allowing parties to react to real time data and, of these, two refuted claims that provision of this information would mislead the market creating greater volatility.

1.23. One respondent to the May IA stated that the provision of near to real time sub-terminal data would ensure that the gas price represented supply and demand fundamentals rather than speculation and rumour. A respondent to the October consultation set out that the presence of rumours accounted for a premium of 5-10% on prices and that at times of system stress this premium could increase to as much as 15-20%. The respondent also stated that uncertainty risk is feeding into the forward market and this also creates a premium of 5-10% in the run up to winter.

#### *Market perception and liquidity*

1.24. Three respondents to the May IA stated that the implementation of the proposal would increase market liquidity, as prices would better reflect supply and demand fundamentals. Two further respondents considered that there would be a marginal increase in liquidity in the prompt market. Similarly, another May IA respondent suggested that the release of near to real time sub-terminal information would reduce volatility and increase liquidity which would subsequently attract investment. Two further respondents set out that the release of sub-terminal flow information would help to reduce bid-offer spreads in the market. One respondent to the October consultation set out that market currently carries a price premium from the information asymmetry that exists but that it was difficult to attach a value to this premium.

#### *Security of Supply*

1.25. Three May IA respondents considered that if market participants were able to better understand supply demand fundamentals as a result of the visibility of disaggregated sub-terminal flows this would incrementally increase security of supply in the long term. A further three respondents to the October consultation set out that overall security of supply would improve due to the increased understanding of market operation which would improve the reaction to changes in market conditions.

#### *Scale of benefits*

1.26. Four respondents to the May IA agreed with the broad benefits identified in Ofgem's IA although three further respondents considered that the IA underestimated the level of net benefits that would be achieved if the proposal were

to be implemented. Two respondents stated that the benefits would significantly exceed any likely costs.

1.27. Five respondents to the October consultation commented that benefits associated with potential implementation of the proposal would significantly outweigh the associated costs. However, most found difficulties in placing a quantitative value upon provision of the information. One respondent considered that if a 1 per cent saving on gas supplies were to be assumed, it would be possible for them to achieve savings of £1 - £2 million per annum while a consumer representative considered that if savings in the region of 0.5 – 1 pence per therm were achieved this would amount to savings of £8.5 to £17 million per annum for its members.

1.28. One respondent clarified that a key requirement for achievement of the benefits was that the information was presented in a user friendly format. A further respondent stated that the potential implementation of this proposal would allow the development of a legislative approach and avoid the possibility of withdrawal of the information.

### **Against the Proposal**

1.29. In responses to both the May IA and the October consultation half of the parties detailed opposition to the Mod as well as issues of concern.

#### *Economic signals*

1.30. One May IA respondent considered that the release of sub-terminal flow information would not assist customers in making more informed purchasing decisions as compared with the information currently available. Two further respondents stated that it was difficult to see that disaggregated sub-terminal data would provide benefits to the market with one outlining that constraints are already signalled via NGG NTS's activity in the market. Three respondents stated that the availability of near to real time sub-terminal data during the Summer 2003 interruptions would not have prevented these from occurring.

1.31. Three respondents to the October consultation set out that they did not see any benefit from the release of locational flow data given that trading is generally carried out at the NBP. In this respect, one respondent considered that the aggregated flows contained sufficient detail given that there is only one UK price. A further respondent outlined that, in the absence of explanatory text, the information would not have any meaning while another considered that the information would be of limited use and as such would only benefit very large users and traders.

#### *System balancing*

1.32. A May IA respondent was not convinced that an increased visibility of offshore outages would provide the market with an understanding regarding the reliability of offshore supplies and that the benefits associated with system balancing were largely theoretical.



*Market volatility*

1.33. Two respondents to the May IA did not consider that volatility in the market would be reduced by the release of near to real time sub-terminal information while a further respondent stated that volatility would likely be increased. In this respect two respondents outlined that there had not been any analysis of the effect of implementation of the proposal on volatility and in addition two further respondents considered that the benefits associated with a reduction in volatility had been overestimated. Another respondent suggested that volatility in the market would increase due to inaccuracies that would be present within the published data. Another May IA respondent stated that there was the potential for the provision of information under the proposal to mislead the market given that it would be difficult for participants to understand the information even after a long period of learning.

1.34. Four respondents to the October consultation were of the opinion that release of information under the proposal would mislead interested parties due to a lack of understanding of the information and as a result of any inaccuracies present within the data. The respondents therefore considered that this would lead to increased volatility in the market while a further respondent set out that volatility would likely increase due to variations observed within the flow data. Two further respondents set out that the reaction of the market to information of this nature would likely create costs which would inevitably be passed on to the end consumer.

*Market perception and liquidity*

1.35. In response to the May IA, one party stated that there had not been any analysis of the effect that the proposal would have on market liquidity while a further set out that it was unlikely that liquidity in the prompt market would be increased. While in response to the October consultation one respondent stated that there had not been a reduction in the bid-offer spreads since the publication of information under the DTI information initiative in July and that it was therefore unlikely that this would materialise as a result of implementation of the proposal.

*Security of supply*

1.36. Three respondents to the May IA stated that it was unclear how claims that the release of near to real time sub-terminal data would increase security of supply could be substantiated while a further stated that the data would not add anything to security of supplies over and above data released under the DTI information initiative. Two respondents considered that the release of this information would disincentivise upstream investment and another stated that the extent to which this might be the case had not been assessed. In this regard, two further respondents stated that the release of information under the proposal may serve to discourage overseas investment.

1.37. Two respondents to the October consultation considered that implementation of the proposal would place disincentives on investment in the UKCS.

*Costs versus Benefits*

1.38. Two of the May IA respondents considered that the benefits of the release of sub-terminal flow information were significantly outweighed by the cost and risks associated with the proposal. Two further respondents stated that it was difficult to see that disaggregated sub-terminal data would provide benefits to the market with one outlining that constraints are already signalled via NGG NTS's activity in the market.

1.39. Five May IA respondents did not consider that there had been any conclusive evidence regarding the existence of benefits that would lead them to support this proposal. Of these, two set out that the benefits were uncertain and had been overstated while costs to producers had not been properly assessed. A further respondent considered that Ofgem had made significant assumptions regarding the size of the benefits while another stated that the figures associated with potential benefits were based more on sentiment than on analysis. In addition, one respondent considered that the analysis carried out by Oxera regarding benefits should have been given greater weight.

1.40. A further respondent set out that most markets work perfectly well without detailed real time information while another considered that Ofgem was trying to create a perfect market when its principle objective was simply to promote competition. A further respondent to the October consultation stated that the parties in support of implementation of the proposal had not adequately justified the reasons why they considered that the release of information would provide an incremental benefit. Another respondent suggested that Ofgem should be as concerned about the capture of demand data as supply side data.

**Costs of Implementation**

1.41. One respondent to the October consultation stated that the proposal was unnecessary and would involve significant costs.

*To NGG NTS*

1.42. Three May IA respondents considered that the costs estimated by NGG NTS were excessive and of these two stated that they did not understand why the costs were this high given that NGG NTS already collates and aggregates the information as part of the DTI information initiative. One respondent stated however that the costs estimated by NGG NTS were relatively small as compared with the potential benefits from implementation of the proposal. Two respondents considered that a more detailed assessment of the costs would be required if the proposal were to be approved.

*To Market Participants*

1.43. Three respondents to the October consultation stated that they would likely incur costs associated with monitoring and analysis of the data but one such respondent highlighted that any such costs encountered were entirely voluntary. One

respondent emphasised its willingness to invest in new tracking software, illustrating the benefits perceived while a further stated that it would anticipate that market participants would seek to systematise the data. Two further respondents stated that it would place a strain on existing commercial interfaces as customers sought explanation from DFO's as to the reasons underlying a supply disruption.

#### *Commercial Sensitivities*

1.44. Seven respondents to the May IA stated that there was no reason why near to real time information should not be made available especially given that other parties within the market have access to this. Five respondents stated that provision of information on an equal basis was essential for a level playing field to be created and for the market to function effectively while a further stated that there was a benefit in all parties receiving the same data at the same time. One respondent stated that the current lack of information stifles the market.

1.45. In response to the October consultation, five parties also considered that all market participants should have equal access to information and highlighted that in other markets e.g. equity stock markets acting on "inside information" is unlawful.

1.46. One May IA respondent outlined that the proposal would limit the commercial exposure of producers by restricting the disclosure of information at single user entry points. Similarly, another considered that release of the information should not be to the detriment of any single party and, as such, a further respondent outlined that the commercial position of parties was not a relevant consideration with respect to this proposal.

1.47. A respondent to the October consultation stated that the premiums resulting from supply disruptions and the associated uncertainty are currently passed on from those with access to offshore information to those without. A further respondent also outlined that parties would only be placed in distressed buyer positions if the market were aware of its commercial contracts or nominations by sub-terminal on the day ahead.

1.48. Four respondents to the May IA and a further six respondents to the October consultation highlighted that if the proposal were to be approved producers and sub-terminal operators would be placed in the position of distressed buyers in the event of a supply disruption making them vulnerable to high prices. One respondent to the October consultation considered that if the 3 pence per therm price increase, previously identified by Ofgem, associated with a supply disruption were to materialise this would likely be incurred by parties in a distressed buyer position, resulting in costs of £106,000 per day for every 10mcm of production affected. Two respondents to the May IA stated that Ofgem had not properly taken into account issues associated with placing producers in the position of distressed buyers while another respondent to the May IA set out that Ofgem had not fully considered the issue of the commercial sensitivity of the information.

1.49. One respondent to the May IA considered that the limit of 10mcm/day was arbitrary and would discriminate against large supply points while two respondents set out that the limit would not protect all parties from having their commercial

positions revealed. A respondent to the May IA and a further respondent to the October consultation set out that storage sites would be affected by the proposal which would appear to be an unintended effect. A further respondent stated that the 10mcm/day limit may discourage investment in projects above this threshold.

#### *Risk of liability to NGG NTS*

1.50. Two respondents to the May IA stated that it would be necessary to consider the issue of liability for the publication of sub-terminal flow information and the corresponding accuracy of the data when assessing this proposal. Two further respondents considered that the issue of liability had not been appropriately assessed. Another respondent stated that Ofgem would need to be confident that the benefits of the proposal would outweigh the costs associated with the risk of liable claims.

1.51. Three respondents to the October consultation stated that the obligation to publish near to real time sub-terminal information may place NGG NTS in breach of confidentiality provisions. Another respondent stated that parties may seek economic redress if information is released and their commercial position is exposed while another stated that the threat of litigation would be greatly increased. Three further respondents suggested that it would be appropriate for Ofgem to address issues of this nature as part of its IA although another stated that estimating the scale of liabilities that may arise would prove very difficult.

#### *Contract renegotiation*

1.52. Three May IA respondents considered that the current structure of the contracts between NGG NTS and parties with offshore interests would allow the release of information under the proposal while a further stated that it was only likely the legacy contracts in place that would create problems in this respect. Another respondent suggested that it would be appropriate to assess the viability of renegotiating the contracts as well as the extent to which the contracts allow the information to be released.

1.53. One respondent to the May IA set out that there should not be confidentiality issues, in any case, given that the near to real time sub-terminal flow data is measured by NGG NTS's meters. A further respondent stated that even if confidentiality issues were apparent there was plenty of time to renegotiate the current contracts that are in place. Another respondent highlighted that if this issue was of concern it was strange that NGG NTS had not carried out detailed analysis regarding the impact that this would have.

1.54. In contrast, three May IA respondents considered that the contract renegotiation required would involve a significant amount of time and resource while two respondents stated that this had been underestimated by Ofgem. Another stated that Ofgem had not carried out sufficient analysis in this area and a further two respondents set out that the costs remained unclear while an additional respondent outlined that it would be difficult to accurately assess the cost and complexity involved in the required contract renegotiation. One respondent stated that if the release of sub-terminal flow data was not permitted under the contracts it

would be inappropriate to approve a proposal which required NGG NTS to release this information. A further outlined that if the issue was not addressed it may expose NGG NTS to a risk of contract breach. One respondent stated that Ofgem needed to be sure that the benefits of the proposal outweighed costs of contract renegotiation.

1.55. In addition, two respondents to the October consultation outlined that substantial time and resource would be required to negotiate amendments to existing contracts regarding the provision of sub-terminal information to National Grid and that the associated costs could not be justified.

#### *General*

1.56. One respondent also expressed concern that technical and legal problems, outlined in the FMR, had not yet been adequately considered and suggested that a thorough analysis of these issues would be required.

### **Risks**

#### *Withdrawal of information*

1.57. Three respondents to the May IA expressed concern at threats from parties that they may withdraw from the provision of all offshore information while a further respondent considered that approval of the proposal could be viewed as a negative step if the information were to be completely withdrawn. A further respondent stated that the potential implementation of this proposal would allow the development of a legislative approach and avoid the possibility of withdrawal of the information.

1.58. Two May IA respondents considered that withdrawal of the information would be unreasonable especially in view of the safety issues associated with provision of this information to NGG NTS. Four respondents were of the opinion that the risk of withdrawal of this information was relatively low while another considered that this risk would depend on the extent to which parties considered that withdrawal of the information would damage their interests and commercial reputation. One respondent set out that producers would have to consider whether there were sufficient safeguards to protect their commercial interests. Another stated that there was a risk of withdrawal of the information which would have a detrimental impact on security of supply.

1.59. Three respondents to the May IA stated that the threats of information withdrawal simply served to highlight the flaws within the current voluntary DTI information initiative while a further expressed support for the development for a legislative route for the provision of this information. One respondent to the October consultation pointed out that producers may choose to withdraw their support from the DTI voluntary information initiative and that this would need to be taken into account. However, One respondent suggested that if this were the case it would bring producers' willingness to create transparency into question.

### *Duplicate Metering*

1.60. Two May IA respondents considered that if duplicate metering were to be installed this would be inefficient and similarly a further respondent set out that if this were the case NGG NTS should be required to demonstrate why it considered such an approach to be efficient. Another respondent outlined that the costs associated with this were unclear.

1.61. Two May IA respondents stated that even in the event that duplicate metering were required the benefits of the proposal would continue to outweigh the costs although a further respondent considered that if this were the case the costs would likely outweigh the benefits. One respondent was of the opinion that issues regarding duplicate metering should be considered a risk of the proposal rather than a cost while another stated that it would be necessary to consider this as a cost of the proposal. One respondent suggested that alternative approaches to data collection could be considered.

### *Data Accuracy*

1.62. One respondent outlined that NGG NTS would not be able to provide assurances regarding the reliability of the data but that it would equally not be willing to incur liability for the provision of inaccurate data. A further respondent stated that the release of sub-terminal data near to real time would inevitably involve some data inaccuracies.

## **General**

### **Drafting of the legal text**

1.63. With respect to the drafting of the legal text, three May IA respondents stated that it would be inappropriate to allow NGG NTS to withhold data that may be unavailable, erroneous, misleading or confidential and of these two suggested that NGG NTS should release this data and highlight any concerns that it has. Two respondents also considered that the information should be published on business and non business days given that the gas market trades on both. Another respondent stated that the legal text was unclear as to the frequency with which the sub-terminal flows would be published. A further respondent set out that the legal text was clear.

1.64. Two respondents to the October consultation considered that paragraph 5.9.2(b), which would permit National Grid not to publish certain data where this was prohibited by a confidentiality agreement, should be excluded.

### **Timescales for implementation**

1.65. Two May IA respondents also stated that the timescales associated with the necessary changes to implement the proposal appeared to be excessive.

**Comparisons between the gas and electricity market**

1.66. One May IA respondent as well as one respondent to the October consultation considered that comparisons that have previously been made with the level of information available in the electricity market were irrelevant given the fundamental differences between the two markets.

1.67. A further respondent to the May IA stated that it was likely that the release of sub-terminal flow information would have a positive knock-on effect in the electricity market.

**Sample of sub-terminal data**

1.68. A number of respondents made reference to the sample of sub-terminal flow data that was provided. Four respondents stated that it was difficult to simulate how the data may have been used if it had been observed in real time given that it was a historical sample while a further stated that it had not been able to draw any meaningful conclusions from the data. One respondent set out that the data was from a fairly uneventful summer period, that some sub-terminal data was missing from the sample and that it was therefore difficult to make an assessment of the way in which the data may have informed decisions. One respondent stated that the sample of information appeared to indicate changes in supply within the day that were unrelated to supply disruptions. A further respondent detailed that the release of sample of information had reinforced concerns raised in previous consultations regarding the proposal.

## Appendix 6 - Summary of responses to January consultation

1.1. There were 16 responses to the January consultation. Of these respondents, two were large users, five were shippers, eight had upstream production interests and two were consumer representatives.

### Likely response to line pack changes given current data

1.2. Two large users and one representative stated that with current data it would be difficult to discern the underlying cause of any change in line pack and that they would therefore seek to try and understand the reason for the change in line pack by contacting others within the industry or through guess work. Of these, two stated that its behaviour could therefore be based upon rumour. One representative stated that customers buying within day would be unable to use the information currently available to initiate a confident reaction within the market. Two representatives also stated that it would be difficult to discern why the change occurred until the individual sub-terminal flows were made available on D+2.

1.3. Two shippers stated that their reaction would be dependent on their position within the market with one stating that they would be more driven by market sentiment. Two shippers stated that they would use a variety of information, some of which was not included within the example which made it difficult to comment.

1.4. One producer stated that it would look at the change in line pack as well as other data sources while another stated that if it was their field that had experienced the outage they would seek to balance their position by purchasing gas. Four producers stated that they would consider their current supply of gas to the market and, of these, three set out that they would maximise output in this situation. One producer stated that the current available information would be sufficient for their requirements.

### Effect of real time sub-terminal data

1.5. Two large users and one representative considered that if the data were published this would permit market participants to obtain an understanding of the underlying reason for a disruption in supply which would affect decisions regarding the purchase of gas. Two representatives also stated that the release of this information may allow market participants to engage in demand side response.

1.6. Two shippers set out that the information would allow market participants to understand the reasons for a change in supply and the dynamics of the market. Of these, one stated that parties would therefore have more time to react to the information, reducing the level of prices at the end of the gas while the other suggested that this would reduce uncertainty in the market. A further shipper stated that the market would respond to a supply disruption more appropriately, therefore reducing the level of volatility and prices within the market.



1.7. Two shippers stated that the release of near to real time sub-terminal flow data would not change their behaviour in the examples provided. Of these, one outlined that the information would not conclusively highlight the cause of the reduction in supply or even the duration that the reduction would likely last.

1.8. One producer outlined that the release of near to real time sub-terminal information would provide greater flexibility to manage their position. Two further producers stated that the information would not affect their decisions and one outlined that it would continue to wait to see changes in line pack. Another producer considered that price rises would occur following the release of this information.

### **Perceived benefits of the new information**

1.9. Two large users stated that the benefits would be associated with reduced volatility and prices that reflected fundamentals allowing more informed purchasing decisions to be made. Of these, one estimated that prices could fall by 1 pence per therm creating an annual saving of £2.5 million. Two representatives stated that the benefits would result from reduced price fluctuations and a corresponding reduction in expenditure on gas.

1.10. Three shippers considered that the release of near to real time sub-terminal information would reduce prices and volatility and increase market confidence. Of these, one considered that this may serve to reduce intervention by NGG NTS. Two further shippers stated that they did not perceive that there would be any benefits associated with the release of this information.

1.11. Four producers stated that they did not envisage any benefit from the release of this information.

### **Perceived costs of the new information**

1.12. Two large users and one representative did not consider that they would face any serious costs associated with implementation of the proposal although one clarified that this was dependent upon the information being presented appropriately.

1.13. Two shippers outlined that costs would be incurred as a result of the need to capture the real time sub-terminal flows. Two shippers considered that there would be an increase in volatility and prices. Two further shippers stated that there were risks associated with exposure of parties.

1.14. Two producers stated that volatility in the market would likely be increased to the detriment of consumers while a further stated that it was likely that consumers would make more frequent nominations at inflated prices which would need to be met. One producer considered that legal costs would be increased as a result of claims for liability and that, in addition, costs associated with an outage would be inflated. One producer stated that costs would be incurred as a result of the need to engage in contract renegotiation.

### **Commercially sensitive nature of the information**

1.15. Three producers stated that commercial positions would be exposed if they were to suffer a disruption and that they would be required to purchase gas at a higher price. Of these, two respondents stated that this would raise concerns regarding liability. A further producer stated that the level of exposure would be dependent upon the number of producers that ship to a sub-terminal. Another producer set out that the 10 mcm/d aggregation was sufficient protection.

### **Process**

1.16. A number of respondents expressed concern regarding the process that Ofgem adopted in undertaking the January consultation. The section below outlines the specific concerns raised by respondents and details Ofgem's rationale for conducting the consultation in this way.

### **Permitted timescales**

1.17. A number of respondents commented upon the short time frame given to reply to the January consultation, and stated that this brought into question the validity of the exercise by compromising the quality of the data collated.

1.18. Ofgem recognises that the timeframes provided to respond to this specific consultation exercise were shorter than usual. However, Ofgem would outline that the January consultation invited the views of interested parties regarding a specific element of the proposal and that, in this respect, the consultation was undertaken to inform specific assumptions used in the modelling. Ofgem considers that as the consultation process for the proposal has been conducted over an extended timeframe interested parties have therefore been given numerous opportunities to express their views regarding the proposal.

1.19. Ofgem notes that views expressed in response to this consultation were consistent with stated views in relation to previous consultations regarding the proposal.

### **The select nature of the consultation**

1.20. A number of respondents commented on the select nature of the consultation. While one thought this a sensible reflection of the differentiated impact of the proposal on market participants, another was concerned that this signalled the process drifting away from a formal transparent approach.

1.21. Ofgem considered that it was appropriate to circulate the letter to those parties that had responded to the October consultation given that they had recently expressed an interest in the process surrounding the proposal. Ofgem would highlight that the January consultation was sent to a roughly equivalent number of each of the stakeholders within the industry and Ofgem therefore considers that a representative sample of market participants was consulted. In addition, Ofgem would note that the consultation was distributed more widely where this was requested.

1.22. In addition, Ofgem would note that the consultation was sent to producer and consumer representatives to seek their views, as well as the views of their members regarding the consultation. The option was therefore available to these consumer representatives to circulate the letter further to the members that they considered may have been interested in providing a response to the consultation.

### **Partial representation of the information**

1.23. A large proportion of respondents stated that the information provided was only a partial representation of what currently exists and stated that this made determining likely responses difficult without making a host of assumptions. Some felt that this misrepresentation of the current system reflected a bias in favour of the proposal, while another warned that it would play into the hands of detractors.

1.24. Ofgem had obtained an understanding, from previous consultations regarding the proposal, that the main indicators market participants use to determine whether or not an offshore outage has occurred is data regarding line pack and price. Ofgem is aware that market participants also use other available data to support any initial conclusions reached from observations regarding line pack and price but considered that the graphical representations would provide a proxy for the information currently available.

### **Lack of clarity**

1.25. The lack of clarity regarding the exercise was cited by five respondents as to why they could not answer the questions specifically. The issue of the quality of the data was raised, for example text referring to the charts was mislabelled while the scales on the charts were misleading. This helped to underpin the perception of some of the respondents that the exercise lacked merit.

1.26. Ofgem considers that the information provided was intended to be used as an indication of activity on the system and, as such, the trends in the data observed should have been sufficient for market participants to have an understanding of the changes taking place within the market.

### **Value of the exercise**

1.27. A number of respondents questioned the use of the exercise, believing that such retrospective action on hypothetical data is very subjective. Given this, several raised concerns as to the weight the exercise would have in the IA.

1.28. Ofgem accepts that it may prove difficult for market participants to reflect upon the way that they may have behaved when faced with a certain situation but considered that responses to this consultation would assist Ofgem's understanding in this regard. Ofgem would highlight that the results of the exercise were used to underpin the assumptions adopted for the modelling analysis and therefore did not constitute a large element of the analysis that was carried out in the IA.

**Appendix 7 - Draft legal text**

**UNC Modification Proposal Number 006**

**3rd Party Proposal: Publication of Near Real Time Data at UK sub-terminals**

**Draft Legal text**

TPD Section V

*Amend paragraph 5.9.1 to read as follows: -*

5.9.1 Subject to the provisions of paragraph 5.9.2 and the other provisions of the Code, National Grid NTS shall arrange for the data referred to in Annex V-1 (“operational and market data”) to be published or made available in the manner specified in Annex V-1.

*Amend paragraph 5.9.2 to read as follows: -*

5.9.2 National Grid NTS shall not be obliged to publish or make available operational and market data pursuant to paragraph 5.9.1 where that data is not available to National Grid NTS.

Amend Annex V-1 to read as follows: -

Annex V-1: Table of Operational and Market Data

Column	Name	Description
1	Data	data definition and indication of the time period to which the data corresponds
2	Timing	initial publication timing and where appropriate, timing of updates if the data is subject to any change
3	Format	tabular, graphical, other
4	Presentation	Downloadable, viewable or both
5	Disclosure	public or restricted (and if restricted, list of entities to whom the data can be released)

Data	Timing	Format	Presentation	Disclosure
The rate of flow of gas (in MSCM per Day) over a 2 minute period into the NTS from each National Grid LNG Storage Facility.	Every 12 minutes, in respect of the six 2 minute periods commencing 24 minutes before the time of publication and ending 12 minutes before the time of	Tabular	Viewable	Public

	publication.			
The rate of flow of gas (in MSCM per Day) over a 2 minute period into the NTS at each System Entry Point capable of flowing (in aggregate) more than 10 MSCM per Day of gas into the System.	Every 12 minutes, in respect of the six 2 minute periods commencing 24 minutes before the time of publication and ending 12 minutes before the time of publication.	Tabular	Viewable	Public
The rate of flow of gas (in MSCM per Day) over a 2 minute period into the NTS at each Aggregate System Entry Point capable of flowing (in aggregate) more than 10 MSCM per Day of gas into the System.	Every 12 minutes, in respect of the six 2 minute periods commencing 24 minutes before the time of publication and ending 12 minutes before the time of publication.	[Tabular]	[Viewable]	[Public]