



National Grid Gas NTS and other interested parties

Promoting choice and value for all gas and electricity customers

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Date: 7 December 2009

Dear Colleague

Authority decision on Gas Entry Capacity Substitution Methodology Statement

National Grid Gas plc ("NGG"), in its role as holder of the Gas Transporter Licence in respect of the National Transmission System ("NTS") (the "Licence"), in accordance with Special Condition C8D paragraph 10 (a) of the Licence (as amended¹), prepared and submitted to the Authority for approval on 7 September 2009, a Gas Entry Capacity Substitution Methodology Statement² (the "Methodology") and associated documents.

The Authority³ carefully considered NGG's Methodology Statement, Consultation Conclusions Report⁴, the responses to NGG's consultation and the matters raised during industry workshops and meetings which focused on the development of the substitution methodology. Where relevant, we also considered the responses to our consultations on amending the provisions of NGG's licence which relate to the implementation of substitution. Following this consideration, we undertook analysis to assess the potential impact of implementing the proposed methodology which was published in our Initial Impact Assessment⁵ on 4 November 2009.

Having regard to the relevant objectives set out in the licence, as set out at Special Condition C8D paragraph 10 (c) (i) – (v), and the principal objective⁶, and statutory duties⁷ of the Authority and for the reasons set out in the letter, the Authority has decided that:

- It will approve the Gas Entry Capacity Substitution Methodology Statement pursuant to paragraphs 10(a) of Special Condition C8D of NGG NTS's Gas Transporter Licence

This letter outlines the background to NGG NTS's Methodology Statement, the Authority's Impact Assessment and responses, and gives reasons for the Authority's decision.

¹ Derogation notice to NGG amending the date for submission and implementation, dated 17 December 2008

² The Entry Capacity Substitution Methodology Statement (proposed), v0.5 effective from 8th December 2009: 7 September 2009; <http://www.nationalgrid.com/uk/Gas/Charges/statements/>

³ Ofgem is the Office of gas and Electricity Markets Authority. The terms 'Ofgem', 'the Authority' and 'We' are used interchangeably in this letter.

⁴ Entry Capacity Substitution Methodology Statement Formal Consultation Conclusions Report, 7 September 2009: <http://www.nationalgrid.com/uk/Gas/Charges/statements/>

⁵ Gas Entry Capacity Substitution Methodology – Initial Impact Assessment (Ref: 136/09), 4 November 2009

⁶ Set out in Section 4AA of the Gas Act 1986, as amended.

⁷ The Authority's statutory duties are detailed in a number of statutory instruments including the Gas Act 1986

Background

In our Initial Proposals document for the Fourth Transmission Price Control Review (TPCR4), published in June 2006, we introduced the concept of substitution to re-allocate unused baselines⁸ and described the framework that we anticipated would be developed to make this possible. The principles which we set out for re-allocating baseline capacity were as follows:

- After each long term capacity allocation, NGG will review demands for capacity relative to the current baseline levels.
- If there is an entry or offtake point where demand exceeds the baseline level of capacity and there is a 'reasonably substitutable' entry or offtake point with unsold baseline capacity, then NGG will develop a proposal to transfer capacity between the relevant points.
- NGG would need to consult and develop a methodology for identifying and proposing appropriate substitutions in these circumstances, and the methodology would be subject to Ofgem approval.
- NGG would then submit a report to Ofgem following each long term capacity allocation setting out how it proposed re-allocating baseline capacity. Once approved, the baselines would be changed with effect from the delivery date of the capacity bought in the relevant long term auction.

We further developed our views in the TPCR4 Updated Proposals⁹ document and proposed a framework for the substitution and reallocation of baselines in the context of long term capacity allocations, including the introduction of a substitution obligation. In particular, we proposed that:

- NGG NTS should be obliged under its licence to consult on and develop a transparent methodology for revising baseline quantities. This methodology would address both processes associated with substitution and the upward revision of baselines to reflect developments at offtake and entry. The methodology would need to reflect NGG NTS's statutory and licence obligations with respect to efficient network development. NGG NTS should be obliged to use all reasonable endeavours to identify capacity transfers.
- NGG NTS would be required to offer capacity transfer exchange rates to shippers who request them to facilitate the transfer of sold and unsold capacity between entry points.
- Ofgem approval would be required before baselines are substituted or revised;
- NGG NTS would also be required as part of its application to revise baselines to set out the exchange rate that was applied in undertaking any substitution;
- NGG NTS would be required to publish a statement setting out revised baseline numbers reflecting any revisions that have been approved by Ofgem; and
- NGG NTS would be required to submit to the Authority an annual statement explaining the basis upon which it has reached the view that user demands signalled through long term allocations cannot be satisfied by substitution.

⁸ Baselines define the levels of capacity that the transmission licensee is obligated to release. Baselines also determine the levels above which incremental capacity is defined.

⁹ TPCR 2007-2012 Updated Proposals, September 2006 (Ref No. 170/06)

We set out further views on gas transmission entry capacity substitution in the TPCR4 Final Proposals document which was published in December 2006¹⁰. We introduced a new obligation on NGG NTS to facilitate the transfer of unsold capacity to meet demands for capacity elsewhere. To give effect to this obligation in a transparent manner we required NGG NTS to establish a methodology, which would need to be consulted on with interested parties and approved by Ofgem. Discussion between NGG, the industry and Ofgem on substitution occurred through a series of nine workshops from April 2008 to July 2009¹¹.

NGG consulted informally on its first draft methodology for the introduction of NTS entry capacity substitution in July 2008. In parallel, gas shippers asked Ofgem to make clear whether the initial implementation of substitution could occur before a future Quarterly System Entry Capacity (QSEC) auction. In response to this request for clarification on the process and timetable for the introduction of NTS entry capacity substitution, we published an open letter¹² on 11 September 2008. In that open letter we stated that we believed this was a matter for NGG and its customers. We reiterated our understanding that some of NGG's customers thought that it would be inappropriate for substitution to take place prior to a further QSEC auction. We expressed the view that, should shippers continue to hold this view, it would always be open to them or NGG to submit a proposal to modify the Unified Network Code to bring forward the date of the 2009 QSEC auction and make the case that this would better facilitate the objectives of the UNC. We would then decide, in the usual way, whether any such proposal would better facilitate the objectives of the UNC in light of our duties, including our duties to protect the interests of customers and promote competition. We also reiterated our commitment to the introduction of substitution and to the timetable set out in the 4 March 2008 derogation¹³ (delaying the NTS entry capacity substitution obligation), which had remained unchanged throughout; namely, that we would expect NGG to submit an entry capacity substitution methodology to Ofgem by early January 2009 and we would make a decision on the methodology by early April 2009 at the latest.

On 17 December 2008 we issued a further derogation¹⁴ which required NGG to prepare an entry capacity substitution methodology and submit this to the Authority, to allow substitution to be in place by 1 March 2010. This followed an informal consultation by NGG on a draft methodology following a series of workshops over the summer, and a Conclusions Report which was published in September 2008. Most respondents expressed support for the principle of entry capacity substitution, although there was no clear consensus on a preferred methodology.

We recognised concerns that application of substitution, in the manner described in the draft methodology, could have undesirable consequences and in view of these outstanding concerns we felt it appropriate to allow more time for the development of the methodology through a further derogation. We considered that this would potentially permit a more comprehensive and flexible solution, greater consensus, reinforce user commitment and provide greater transparency about the risks and effects of substitution.

NGG's informal consultation on the entry capacity substitution methodology was initiated on 15 May 2009. NGG consulted on three methodologies: the mechanical approach, the retainer approach¹⁵ and the two stage auction approach. There was a clear preference

¹⁰ TPCR 2007-2012 Final Proposals, December 2006 (Ref No. 206/06)

¹¹ Hosted by Joint Office. Details of workshops are available on their website: http://www.gasgovernance.com/NR/rdonlyres/555D3D93-A763-4E27-A8DD-C64DF67AA197/24814/EntrySubstitutionWorkshop1_Apr_08.pdf

¹² www.ofgem.gov.uk/Networks/Trans/GasTransPolicy/TTS/Documents1/080911%20The%20introduction%20of%20capacity%20substitution.pdf

¹³ 4 March 2008 Direction issued to National Grid Gas plc by the gas and Electricity Markets Authority pursuant to paragraph 10 of Special Condition C8D of the gas transporter licence in respect of the NTS

¹⁴ www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=177&refer=Networks/Trans/GasTransPolicy

¹⁵ At this stage of the consultation process, this was being referred to as the "option" approach

amongst respondents for adopting the mechanical approach, although a number also expressed support for the two stage approach. The majority rejected the retainer approach on the basis that it was comparatively complex and had been insufficiently developed at that time.

On 3 July 2009 Ofgem published a further open letter¹⁶ in order to clarify the principles that we considered should be applied to the substitution methodology. We indicated that a key principle which underpins the NTS entry capacity arrangements is that users face a choice. If users want financially firm rights to use the system they need to purchase them and make a financial commitment to pay for them. The arrangements allow them to secure rights for up to seventeen years into the future through a series of auctions that are held every year. Where users choose not to secure rights and therefore rely on auctions of firm or interruptible capacity which are held for each gas day, then they face the risk that entry capacity is not available if the system is constrained. We set out that the introduction of the substitution regime does not change these choices or risks in a fundamental way, but substitution may broaden the pool of parties who might bid for and secure the capacity at a particular entry point, and increase the risk that a shipper who has not chosen to buy capacity is unable to access entry capacity on the day.

Our July 2009 letter indicated that although many respondents expressed views indicating their support for the "mechanical" methodology, in Ofgem's view, the "mechanical" methodology is not an appropriate means of rationing available unsold capacity. We did not, however, express a preference between the retainer and the two-stage auction approaches. We stated that we considered the withholding of capacity from the effects of substitution based on future forecast flows is moving away from the fundamental principles of user commitment set out above, as it does not require financial commitment to indicate future capacity needs. We also expressed a concern that, by creating a mechanistic link to Transporting Britain's Energy (TBE) data, companies might no longer submit their best view of current needs to NGG, but rather provide information to keep options open. We see the TBE process as a valuable contribution to the industry's strategic planning process and so would be reluctant to make changes which risk distorting the inputs to the TBE process.

NGG's formal consultation on the substitution methodology, based on the retainer approach, was initiated on 24 July 2009. A total of 10 responses were received. One respondent indicated that they were not in favour of NTS entry capacity substitution in general.

Five of the ten respondents stated that they did not support the proposed methodology statement. Two were unambiguously opposed to the methodology: one referred to it as "fundamentally flawed" (although this respondent did not outline why they considered this to be the case) and another saw "little merit in the Retainer approach as currently drafted". Three respondents expressed disappointment that NGG had not consulted on the Two-Stage Auction method. NGG emphasised in the conclusions report that the Licence requires NGG to submit to the Authority for approval a single methodology statement, not a range of methodology statements. A total of 5 responses indicated support for the Two-Stage Auction method. Several of the respondents expressed concerns about the timing of Ofgem's letter of 3 July 2009 and its impact on the development of the proposed methodology.

On 1 July 2009 we published our first informal consultation on proposed licence changes. We carefully considered the responses we received and published a second informal consultation on 12 August 2009. This was followed by a Section 23 Gas Act 1986 licence modification consultation which we published on 18 September 2009. On 23 October 2009

¹⁶www.ofgem.gov.uk/NETWORKS/TRANS/GASTRANSPOLICY/Documents1/Open%20letter%20on%20the%20methodology%20for%20entry%20capacity%20substitution.pdf

Ofgem published a Section 23 Gas Act 1986 licence modification Direction¹⁷ which amended Special Condition C8D of NGG's Gas Transporter Licence (the Entry Capacity Substitution licence condition). We consider that the original licence obligation on NGG was clear; however, a number of industry participants expressed the view that there was scope to improve the clarity of the substitution obligation as set out in Special Condition C8D. The licence amendments clarified the objectives which should be followed when deciding whether to substitute entry capacity and, in particular, explained the need for future capacity requirements to be underpinned by some form of user commitment, with appropriate credit arrangements. In addition, the licence change provided for Ofgem to undertake a three month assessment of the substitution methodology, to bring the assessment period into line with other licence conditions. For the avoidance of doubt the Authority has assessed the proposed methodology against the licence condition (as amended).

The licence change made was to Special Condition C8D: NTS gas entry incentives, costs and revenues; Part C – Capacity release obligations. Paragraph 10: Entry capacity substitution obligation states that:

"... the licensee shall use reasonable endeavours to ensure that the entry capacity substitution methodology facilitates the achievement of the following objectives (the "entry capacity substitution objectives"):

- (i) ensuring that entry capacity substitution is effected in a manner consistent with the licensee's duties under the Act and the standard, Standard Special and Special Conditions, in particular the duty to develop and maintain an efficient and economical pipeline system;
- (ii) in so far as is consistent with (i) above, ensuring that entry capacity substitution is effected in a manner which seeks to minimise the reasonably expected costs associated with funded incremental obligated entry capacity, taking into account the entry capacity that shippers have indicated they will require in the future through financial commitment to the licensee;
- (iii) ensuring that entry capacity substitution is effected in a manner which is compatible with the physical capability of the pipeline system to which this licence relates;
- (iv) in so far as is consistent with (i) above, avoiding material increases in the costs (including entry capacity constraint management costs in respect of obligated entry capacity previously allocated by the licensee to relevant shippers) that are reasonably expected to be incurred by the licensee as a result of substituting entry capacity; and
- (v) in so far as is consistent with (i), (ii), (iii), and (iv) above, facilitating effective competition between relevant shippers and relevant suppliers."

The Authority's Impact Assessment

Where section 5A of the Utilities Act 2000 applies, the Authority must either carry out and publish an Impact Assessment or publish a statement setting out its reasons for believing that it is unnecessary for it to undertake an Impact Assessment. Section 5A (2) sets out the matters which would determine whether or not a proposal is "important" for the purposes of section 5A. These are where the implementation of a proposal would be likely to do one or more of the following:

¹⁷Modification of Special Condition C8D of National Grid's gas transporter licence - (Reference number: 129/09)

- a. Involve a major change in the activities carried out by the Authority
- b. Have a significant impact on market participants in the gas or electricity sectors;
- c. Have a significant impact upon persons engaged in commercial activities connected to the gas or electricity sectors;
- d. Have a significant impact on the general public in GB or in a part of GB; and
- e. Have significant effects on the environment

We considered that a decision in relation to the substitution methodology would be important for the purposes of section 5A of the Utilities Act and an Impact Assessment would be necessary. The Impact Assessment assessed the Methodology against the entry capacity substitution objectives. We also gave detailed consideration to wider impacts in accordance with our statutory duties.

In our initial impact assessment we analysed the way in which the proposed methodology would impact on three separate potential signals for incremental capacity; namely, at Barrow, Easington and in the South East zone. These scenarios have been highlighted by industry within workshops and in correspondence with Ofgem as potential developments that might trigger substitution. These three scenarios formed the basis of the quantitative analysis which we presented in the recent Impact Assessment.

During the workshops and meetings held over the past two years to discuss and develop a substitution methodology, some industry participants have questioned the overall merits of substitution. Whilst we have addressed such comments and concerns in discussion and in other documents, we considered that there was merit in presenting and discussing the salient features of these views in our Impact Assessment. We therefore included a section in the document on the general principles of substitution which did not relate to any specific methodology for the implementation of substitution. From our assessment of the benefits, costs and risks we expressed the provisional view that we believed that the methodology submitted to us would have a net positive benefit. We therefore indicated that we were minded to approve NGG's proposed methodology, subject to consideration of the responses to this consultation and without fettering the discretion of the Authority.

Initial Impact Assessment - Respondents' views

We received a total of thirteen non-confidential responses to our Initial Impact Assessment consultation and these are published on Ofgem's website¹⁸. We have also included a summary of these as an Appendix to this letter.

Ten of the thirteen respondents expressed support for the principle of substitution, with a number commenting that the potential reduction in infrastructure investment was sensible in view of the changing pattern of gas sources. Only one respondent explicitly stated that they were not in support of entry capacity substitution. Two of the respondents commented that in their view, the Impact Assessment had been extensive and reasonably assessed the methodology; although another respondent criticised our assessment of the impact of the proposed Methodology.

¹⁸ <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=13&refer=Networks/Trans/GasTransPolicy/TTS>

Respondents generally agreed that we had identified the benefits associated with substitution, though two also pointed out there would be additional benefits gained from the capacity signals obtained. One commented that these same benefits could also have been obtained through a two-stage auction mechanism. Another respondent criticised the analysis for focussing on short term benefits, and claimed that these should have been matched by an analysis of the adverse effects of less system flexibility and the consequences for security of supply.

Whereas the majority of respondents supported the principle of substitution, the majority of these same respondents raised concerns about the proposed Methodology. These concerns centred on a number of common themes. These themes relate to:

- the potentially adverse impact of substitution on security of supply
- the possibility that substitution may result in offsetting wholesale price rises
- the adverse impact of substitution on shippers, which respondents claimed was not adequately addressed in our Impact Assessment.
- concerns about the adequacy of the analysis presented in the Impact Assessment, including the link between our evaluation of the proposed methodology and ongoing areas of our work.
- the merit of the "retainer approach" in comparison with the two other approaches which were worked up in detail by NGG, namely the mechanical and two-stage auction approaches.
- concerns about detailed aspects of the proposed methodology, in particular the level of exchange rate cap.

Ofgem's views on issues raised

Impact on security of supply

A significant number of respondents considered that the methodology would reduce the flexibility that is currently available to shippers to take advantage of excess capacity at some ASEPs¹⁹, and that this would result in a tighter system. They reasoned that as a consequence, new sources of gas might have difficulty accessing the system and so there would be an adverse impact on security of supply; respondents considered this would be particularly true if developers are unable to book the capacity they require until their projects are sufficiently matured. They also considered that the complexity of the arrangements would prove to be a deterrent to new entrants and non-UK based shippers. A further concern was that the requirement to make a financial commitment early would be a barrier to the development of some projects.

Ofgem's view

Our Impact Assessment included analysis of system capacity, showing the NTS obligated level as 10,742GWh/day with a maximum sold level of 6,696GWh/day. This can be compared with peak system capacity utilisation of just under 4,900GWh/day for last winter (which was in itself a colder than average winter) and an estimate of a 1-in-20 peak winter capacity requirement of 5,900GWh/day. Whereas we acknowledge that localised constraints can occur despite a significant surplus of capacity on a system-wide basis, we consider that there is little evidence to suggest that the system will be constrained for capacity within the coming years. Even allowing for all unsold capacity to be substituted at the greatest possible rate of 3:1 would still result in a system with an aggregate capacity more than

¹⁹ Aggregate System Entry Point

60% in excess of last winter's peak requirement.²⁰ Therefore, we remain unconvinced that even the most extreme substitution scenarios would cause security of supply concerns.

Moreover, the policy objective of substitution is to minimise unnecessary investment when providing incremental capacity on the NTS. It achieves this through the reallocation of long-term unbooked capacity to those places where capacity has been both requested and underpinned by user commitment. Whether the NTS aggregate capacity is reduced as a result is dependent on a number of factors, such as the rate at which incremental capacity signals are made, and the exchange rate that might apply for any such capacity. In addition, the proposed methodology provides shippers with the opportunity to signal their potential interest in any capacity that might be at risk of substitution through taking out a retainer on that capacity. Therefore, although respondents assert that the NTS will become more constrained with a resulting loss of flexibility, such a development is not a foregone conclusion.

We accept that the methodology adds another layer of involvement to the current capacity system, but as it is based on the current mechanism, we do not consider that the incremental complexity is sufficient to be considered as a significant barrier to entry.

We are also not convinced that the proposed Methodology would create a barrier to certain developments. The price of entry capacity is a small fraction of the development costs of a project to deliver gas; even at terminals where there is currently a surplus of capacity, we find it difficult to believe that an efficient developer would leave it to risk that the project could be stranded by not booking capacity in advance. This is the same risk that developers face whether or not substitution is implemented because shippers who do not book capacity that they need run the risk of losing that capacity to another party. What substitution achieves is to require developers to commit within NGG's development timescales in order to have certainty for capacity for their project, rather than relying on surplus capacity. Moreover, given the comparatively low cost of the retainer (as currently proposed under GCM18²¹) and the fact that it is proposed that the retainer will be refundable in the event that retained capacity is subsequently utilised, we consider that if anything, the proposed methodology acts to reduce the concerns that developers may have in connection with gaining access to the NTS.

Impact on wholesale gas prices

Seven respondents commented that we had not quantified the potential impact on wholesale gas prices and that the need to do this was discussed at several of the substitution workshops. Several commented that the reduction of system capacity due to the implementation of substitution would reduce the flexibility of supply for shippers, and this would have a direct impact on the price of gas which would outweigh the benefits gained through reduced investment. Some suggested that Ofgem could have obtained information on the potential price effects by issuing an information request to shippers, which could have been used to inform this analysis.

Ofgem's view

We set out our views on the impact of the proposed Methodology on wholesale prices in our Impact Assessment.

²⁰ There is approximately 4000GWh/day of substitutable capacity (=10,742 – 6,696). At an exchange rate of 3:1, this equates to approx 1,300GWh/day. Adding this to the 6,969GWh/day of bookings totals 8,000GWh/day, which is more than 60% in excess of the 4,900GWh/day peak day demand from last winter.

²¹ Gas Charging Modification 18: www.gasgovernance.com/Code/Modifications/

One of the purposes of our Impact Assessment document was to provide an opportunity for shippers and other interested parties to provide information they considered relevant to our decision. There are provisions for parties to provide such information on a confidential basis. Although a number of parties commented on the adequacy of our assessment of wholesale prices, only one respondent provided information relevant to this assessment (which related to anecdotal experience surrounding the introduction of the Trade & Transfer regime). Some respondents argued that respondents should only be expected to provide information to Ofgem following receipt of a formal information request. We strongly disagree with this view, which runs counter to the purpose of a consultation exercise. Respondents should always feel free to submit relevant information to an Ofgem consultation, on a confidential basis if necessary, without the need for a formal information request. Although shippers have told us that the potential impact on wholesale prices was a real concern, we have not been shown any quantitative or qualitative evidence in support of this assertion throughout the two years during which the substitution methodology was being developed. If industry parties have information which has a bearing on this matter, we are disappointed they have not brought it forward in response to our consultation.

The respondent who provided anecdotal evidence of price rises due to the transfer of capacity quoted the November 2007 transfer of capacity from Theddlethorpe and Isle of Grain to Easington. In this instance, 592GWh/day of capacity was used to create 85GWh/day of capacity at Easington. This early example of the trade and transfer system was used as a learning point for the proposed substitution methodology, as although the transfer provided useful capacity where it was valued most, the consensus amongst shippers was that too much capacity has been "destroyed". This led to the acceptance of a smaller exchange rate cap for the subsequent trade and transfer methodology, and for the current substitution methodology proposal. It is worth noting that our review of the market prices at that time does not indicate any wholesale price rise, either in the forward market when the transfers were made public or any general level shift as the transfer took effect, that could be attributable to a shortage in supply from either of the affected ASEPs. It is also worth noting that with the exception of a short period in December capacity at Theddlethorpe (when there were specific capacity issues along the East coast), interruptible capacity was still offered and cleared at zero price at both of the affected ASEPs throughout the winter period.

We remain unconvinced that wholesale gas prices will be adversely affected by the introduction of this substitution methodology.

We would not expect a direct price impact from the cost of the retainer itself. The price of the retainer (as proposed), is small in proportion to the value of the gas being shipped and it will directly offset NGG's allowed revenues.

We observed in the Impact Assessment that substitution of entry capacity would only occur in response to a signal for increased entry capacity elsewhere and that, in itself, this additional capacity might be expected to reduce wholesale prices and improve security of supply.

We agree that wholesale prices could rise if the NTS became capacity constrained; however, the evidence set out above does not suggest the system will be constrained for capacity within the coming years. As we observed above, even allowing for all unsold capacity to be substituted at the greatest possible exchange rate (of 3:1) would still result in a system with an aggregate capacity some 60% in excess of last winter's peak requirement. We remain unconvinced that even the most extreme substitution scenarios would influence the price of gas on a system-wide basis.

We note that substituted capacity will be reinstated within 42 months of a signal for incremental capacity being received at a previous donor ASEP, at which point any potential

capacity shortfall would be resolved. Hence, the only possible impacts on wholesale prices which could occur, would arise in a constrained part of the system as a result of an unanticipated need. Such an effect, however unlikely, is difficult to quantify in the absence of market data. In our view the methodology contains adequate safeguards to protect against excessive substitution; furthermore, NGG has an obligation to keep the methodology under regular review.

We therefore believe that our assessment is appropriate and conclude that the short-term potential impact on wholesale gas prices as a result of implementing the proposed substitution methodology to be negligible.

Costs associated with substitution

Some respondents considered that the Impact Assessment should have taken into account the implementation costs for shippers, and that the Impact Assessment was focused solely on the costs of the system operator.

Ofgem's view

Our Impact Assessment did illustrate the costs of retainers for shippers and the costs to re-trigger capacity at an ASEP if capacity had previously been substituted away at that ASEP. The retainer mechanism is subject to separate UNC²² and charging methodology modification proposals which will in turn be carefully considered by the Authority; without fettering our discretion on these proposals, these indicate the retainer costs to be £2,922 per GWh/d of capacity. This means that a typical new project of moderate size, requiring 250GWh/d of entry capacity, would attract a retainer cost of around £730,000. In comparison a firm capacity booking for one quarter of 250 GWh/d of capacity at St. Fergus or at Bacton would be approximately £8.6m and £1.91m respectively. In the event that a retainer is purchased and the capacity is subsequently purchased by a shipper, as set out in the methodology, the retainer is refunded.

It is claimed that shippers will incur costs through the additional complexity introduced by the regime. This is correct; shippers who rely on the shorter term availability of capacity will now have to reconsider their bidding strategies, in the light of substitution. None of the respondents who commented on the need to take account of these costs provided an indication of the scale of the costs. However, the benefits gained for consumers are likely to be substantially greater than any costs incurred by the shipper community. We anticipate that the introduction of substitution might only result in a small increase in headcount across the industry.

Adequacy of analysis and consideration of wider work

In this regard, there were three common points raised: the appropriateness of the analysis, and interactions with both of Project Discovery and the Carbon Capture and Storage (CCS) proposal for the St. Fergus pipeline.

Appropriateness and level of analysis

Three respondents broadly agreed with our assessment based on the scenarios used. However, other respondents commented that Ofgem's analysis was too narrow as it did not consider the counter effects that a tighter NTS might have on gas wholesale prices. In addition, respondents commented that our view that it was difficult to anticipate incremental signals, did not allow an adequate assessment of the proposal's fitness for

²² UNC 265 'Creation of a NTS Entry Capacity Retention Charge within the UNC': www.gasgovernance.com/Code/Modifications/

purpose for the whole network and its users. One respondent commented that because the quantitative analysis is scenario based the benefits may not be realised if those investment signals are not received.

Ofgem's view

There is uncertainty regarding the timing and location of auction signals for incremental entry capacity which may trigger capacity substitution. This uncertainty was discussed in industry workshops and it was judged that the uncertainty could be best addressed by means of scenario analysis. Three different scenarios were developed by industry; these were based on the examples that were acknowledged by shippers to represent a credible view about potential new supplies. The scenarios and the potential impacts which we analysed represent a plausible range of possible outcomes from the introduction of the substitution methodology. Some of the scenarios demonstrate significant savings in terms of the investment in the NTS.

Interactions with Project Discovery²³

Three respondents commented on the interaction of substitution with the forecast scenarios presented in Ofgem's Project Discovery consultation. One respondent suggested that the non-adoption of the mechanical approach was inconsistent with the scenarios presented in Project Discovery, whilst another suggested that West of Shetland Gas and Norwegian supplies should deserve special treatment because Project Discover highlighted that the threat to security of supply was greatest in a severe winter. Another respondent suggested that the substitution methodology impact assessment should have considered the requirement for substitution to meet the Project Discovery scenarios.

Ofgem's view

We invited comments on the scenarios in our Project Discovery consultation to gather views about the likely needs to be placed on the networks in future. Each of the scenarios presents different assumptions about the future demands for gas and the way that supplies may meet those. In turn each scenario will place different needs for additional capacity on the transmission network. We believe that entry capacity substitution is entirely consistent with future capacity needs and will serve to reallocate capacity to those entry points which need it and away from those that do not. However whatever the future requirements for additional capacity may be, those needs will only be satisfied if there is a clear user commitment for the new capacity, so that the system operator has sufficient advance warning to plan the network accordingly. In this regard, the proposed methodology is entirely consistent with such objectives. The same principles apply to the specific supply projects mentioned (West of Shetland, Norwegian imports) and the opportunity for shippers to purchase capacity remains unaltered as a result of adopting the proposed methodology.

Further, the Project Discovery comments with regards to security of supply challenges do not consider capacity constraints to be a significant factor causing these problems; it is the physical availability of gas to the GB, given the competing markets in Europe and the influences of contractual congestion and strategic storage on those markets, which is the source of concern.

Interaction with NGG's CCS proposal

In April 2009 we published a consultation document²⁴ on the proposed disposal of part of the NTS for transportation of carbon dioxide emitted from electricity power stations, as part

²³ Project Discovery Energy Market Scenarios (122/09) 9 October 2009

²⁴ Proposed disposal of part of National Transmission System (NTS) for Carbon Capture and Storage - (Reference number: 35/09)

of the government's plans for a carbon capture (CO₂) and storage (CCS). Respondents queried the potential interaction between the substitution methodology and CCS.

Ofgem's view

The Department of Energy and Climate Change (DECC) is holding a competition to demonstrate commercial scale CCS in the UK. National Grid's potential involvement in CO₂ transportation is through offering onshore transportation services to one of the parties primarily responsible for transporting and storing CO₂ in the context of the DECC competition. National Grid has identified a possible opportunity to participate in the competition by using some of the current National Transmission System (NTS) assets to provide onshore transportation of CO₂ from coal fired power stations to permanent storage. National Grid has approached Ofgem with an outline proposal for the disposal and possible alternative use of several NTS pipelines for this purpose, in Scotland. NGG is not proposing to change existing baselines following a disposal, so NGG's existing obligations and auction revenues are unaffected. As such we believe that the CCS proposal needs to be judged on its own merits and since the proposal does not involve any change to baselines we believe that the interaction with the proposed substitution methodology to be minimal.

Merits of alternative approaches

A number of respondents commented on their preference for the alternative methodologies that were under development during the later workshops, namely the two-stage auction and the mechanical approach. They expressed disappointment that the Impact Assessment had not conducted a more detailed analysis of these approaches.

Two – stage auction

Two respondents expressed the view that a two-stage auction was a better solution and that it would avoid the complexity associated with the retainer approach. It was further stated that the two-stage auction had not been properly assessed alongside the retainer methodology. One respondent noted that the two-stage auction would require a redesign of the QSEC auction and that the retainer did not require users to make a full financial commitment initially. One respondent advocated that a two stage auction model (or hybrid) should be fully considered for introduction in 2011.

Ofgem's view

We highlighted the fact that the major difference between the two-stage auction approach and the retainer approach is the mechanism by which users are able to signal future capacity requirements to preserve baseline capacity, and so limit the capacity available for substitution at an entry point. However the mechanism for enabling capacity to be substituted between entry points is the same; the only other difference is that an exchange rate cap of 2:1 was suggested for the mechanical approach in contrast with an exchange rate cap of 3:1 for the retainer methodology. We expressed the view that we believed that there were merits in both approaches and that both were consistent with NGG's licence obligations. However, we have to assess the methodology put before us on its own merits for the purpose of assessing compliance with NGG's licence obligation, irrespective of the merits or otherwise of alternative proposals.

We think that it would be appropriate for NGG to consider both of these methods in any future review of the substitution methodology. As such, the future evolution of a methodology along the lines of the two-stage auction remains possible, but it would be subject to further development and would need to be judged against the relevant criteria in the same way. We highlighted some of the concerns that would need to be overcome in our initial impact assessment.

It is for NGG to bring forward suggestions, in consultation with shippers, for any changes to the methodology. There are some parallels to draw with the introduction of the trade and

transfer methodology whereby the benefits of the experience of trade and transfer were applied to the development of an enduring regime which has operated successfully since July 2008 but which has some major differences from the interim approach which was applied for the winter period in 2007.

Mechanical approach

Six respondents re-iterated their clear preference for a mechanical methodology and expressed their disappointment that Ofgem had decided to reject this approach and therefore did not conduct a full impact assessment on such a methodology. One respondent considered that we had "moved the goalposts" by amending the licence condition part way through the process, specifically to rule out the mechanical approach.

Ofgem's view

We stated our position in relation to the mechanical approach in our July 2009 open letter and the subsequent licence change which was directed in October 2009 made clear the adherence to the principles of firm user commitment which we expect to see applied. We provided further details on why we consider the mechanical approach to be inappropriate in our Impact Assessment.

We believe that there are drawbacks with the mechanical approach and its reliance on forecast flows as a means limiting the amount of entry capacity which may be available for substitution; these were clearly set out in our initial impact assessment. There are difficulties with such an approach because not all entry points have forecast flows associated with them. For example forecasts are not available for storage sites and it has been suggested that maximum deliverability could be used as a proxy for forecasts of future flows. A similar difficulty arises with LNG import terminals, LNG storage sites and interconnectors. There is a risk that relying on the maximum flow rate may not be a true representation of future utilisation, which could result in capacity being withheld from substitution unnecessarily. This approach effectively limits substitution to specific beach terminals. In addition this methodology requires no financial user commitment to indicate future capacity needs. Capacity would be excluded from substitution on the basis of the forecast flows captured by NGG in their annual TBE process. Excluding capacity from substitution on this basis is not consistent with NGG's licence obligations. No new information has been presented in the responses to challenge the views we have previously expressed about the inappropriateness of a mechanical approach when measured against the principles of firm user commitment.

With regards the changes to the licence condition, these were signalled as long ago as last year, and the driving force was requests by shippers to provide further clarity on NGG's obligations so all parties would be better able to assess the likely risks and consequences. The nature of the changes to the licence condition have not fundamentally altered the principle of substitution, but has incorporated those of user commitment, which was the fundamental principle underlying the whole of the capacity allocation processes in TPCR4.

Detailed aspects of the Methodology

As mentioned previously, there were a number of comments on the detail of the methodology and related issues; we deal with these in the section below.

Exchange rates

Seven respondents expressed concerns about the 3:1 exchange rate cap, querying why it was set at this level, how long it would remain at this level and what safeguards could be applied to ensure that exchange rates were being calculated in a manner which accurately reflected interactions on the network. There were particular concerns that the cap could be

increased or removed in future. The view was also expressed that the annual review created uncertainty for future investment because the methodology could change.

Ofgem's view

During industry discussions on the substitution methodology there was considerable debate about the appropriate level at which any cap or limit should be set. No firm conclusions were arrived at; however, factors which weighed heavily in setting an appropriate cap were the level of risk faced by the network in relation to the surrender of capacity, the way in which future capacity needs could be signalled and the desire for an initial methodology which provided a "soft landing" as a transition to the implementation of entry capacity substitution.

We consider that the exchange rate cap of 3:1 represents a reasonable compromise which permits substitution whilst preventing excessive loss of capacity rights. NGG have an obligation to review the substitution methodology at least once a year and to do so in consultation with shippers and interested parties. We believe that the requirement for such review provides appropriate scrutiny of the way that substitution has been conducted and does not preclude further examination of the exchange rate if this were deemed necessary. The detailed scope for such a review is not set out in detail in the licence but we believe that the consultative nature of such a review should ensure that all relevant aspects are examined.

User commitment

Respondents commented that shippers were encouraged to invest in long term capacity but believed that no measures were proposed to address the problems faced by developers who do not have the rights to buy capacity. This would require collusion by shippers to avoid capacity being substituted away. It was also commented on that user commitment was not included in the analysis and that substitution could result in a greater proportion of capacity being booked at QSEC auctions.

Ofgem's views

We have stated our position on user commitment, in relation to the gas entry regime, on many occasions and set out our views clearly in the open letters we published in September 2008 and again in July 2009. If a shipper or developer is pursuing a project then they are exposed to competitive pressures in the purchase of firm capacity rights and will need to exercise a financial user commitment to secure the capacity they need. Developers remain free to enter into commercial arrangements with shippers in order to secure capacity rights if they themselves do not wish to acquire a shipper's licence and we have seen this occurring previously. We do not believe that the proposed substitution methodology fundamentally changes these choices.

We indicated the likely level of user commitment which needs to be exercised via a retainer in order to prevent capacity from being substituted away in our initial impact assessment and the likely costs of retainers have been discussed in the substitution methodology workshops. We believe that the current level of charges for a retainer (if approved) represents a viable option for shippers who wish to purchase baseline entry capacity but are unable to do so at the time because the projects they are associated with are insufficiently advanced. In this regard all projects face similar dilemmas about the timing of the purchase of entry capacity and this argument applies equally to projects which intend to purchase entry capacity by triggering the release of incremental capacity on the network.

Unfair effects on ASEPs

Two respondents stated that they believe that the proposed methodology will increase the number of shippers who could bid for capacity as it allows a potential interaction between shippers at all ASEPs and that this changes the risks associated with booking entry capacity. It was also suggested that the methodology would create ASEPs which are more vulnerable to having unsold capacity substituted away than others because of their location and interaction with other entry points and that this was discriminatory.

Ofgem's view

We agree that some entry points will present greater opportunities for donating unsold capacity for substitution than others; this is because of their location but more importantly because of declining supplies being delivered to these entry points. A key principle that underpins the NTS entry capacity arrangements is that users face a choice. If users want financially firm rights to use the system they need to purchase them and make a financial commitment to pay for them. The arrangements allow them to secure rights for up to seventeen years into the future through a series of auctions that are held every year. Users can choose not to secure rights and rely on auctions of firm or interruptible capacity that are held for each gas day, but then they face the risk that entry capacity is not available if the system is constrained. The introduction of the substitution regime does not change these choices or risks in a fundamental way, but substitution may broaden the pool of parties who might bid for and secure the capacity at a particular entry point and increase the risk that a shipper who has not chosen to buy capacity is unable to access entry capacity on the day. Since we first consulted on the proposals to introduce substitution arrangements as part of TPCR4, shippers would have been able to secure long term capacity through the QSEC auction process. There has been a 2007 QSEC auction following the introduction of the substitution licence obligation and shippers have had two further opportunities to secure long-term capacity rights in the 2008 QSEC auction and the 2009 QSEC auction. The proposed methodology provides further opportunities for shippers to indicate their capacity needs via the retainer mechanism which mitigates against the effects described. We therefore believe that there has been adequate opportunity for shippers to secure entry capacity and the proposed methodology extends the range of tools available to shippers to secure future capacity.

Complexity of the regime and regulatory risk

Respondents have argued that the development of the methodology has adversely affected the perception of regulatory risk in the UK and undermined the UK's attractiveness as a place to land gas. It is also argued that the introduction of substitution has increased the complexity of the entry regime.

Ofgem's view

We have not seen any evidence of developers being reluctant to invest in new projects. Since the introduction of the substitution obligation was announced in TPCR4 Final Proposals in December 2006, a total of 501 GWh/d of incremental capacity has been triggered via the QSEC auctions in 2007, 2008 and 2009. Developers continue to bring forward proposals at various stages of development and we believe that contrary to the views expressed, substitution will enhance the attractiveness of the UK market, because it offers the potential for new supplies to connect without the need to construct as much new network reinforcement.

The changing pattern of gas supplies has presented several challenges which have necessitated a re-examination of the way the NTS network is utilised and how this will continue to change and evolve over time. The package of measures we introduced at the last price control introduced entry capacity trade, transfer and substitution. Trade and transfer have already delivered benefits for network users as well as consumers by allowing capacity to be moved away from entry points where it was not needed and delivered to

those where it was valued most. Discretionary capacity release has also been augmented by the introduction of UNC 216 which has increased the flexibility available to suppliers who wish to bring gas to the UK. It may be argued that each of these mechanisms has added to the complexity of the regime, but since the supply pattern is less predictable and as import dependency increases we believe that it is right that changes to the regime are considered and introduced where appropriate after consultation with industry. We believe that substitution is part of this and that any additional complexity which may be attributed to substitution is offset by the benefits which we have identified it will deliver.

Proportion of capacity withheld for the short term auctions

At present 10% of capacity is held back from QSEC (and therefore from substitution). One respondent queried if Ofgem could confirm its future intentions with regard to the proportion of capacity held back from QSEC auctions.

Ofgem's view

At the time of the last price control (TPCR4) we indicated that consideration would be given to removing the requirement to withhold 10% of baseline capacity from QSEC auctions in future. Whilst this view represented our thinking at the time it is not a firm policy commitment and would need to be explored in conjunction with other measures and incentives considered as part of any future price control. We also indicated in our Initial Impact Assessment that work is currently being conducted through the European Regulators' Group for Electricity and Gas (ERGEG) which is considering the appropriate level of capacity that should be held back for short term access arrangements²⁵. Any conclusions from this work would be binding on the proportion of short term capacity to be excluded from the QSEC auctions in the GB regime. Any future decision on the amount of capacity held back for short term access will need to take account of the conclusions reached by ERGEG in this regard.

Reasons for the Authority's decision

We believe that substitution is in the interests of consumers and consistent with our principal objective and statutory duties. We consider that entry capacity substitution will guard against the risk that capacity is sterilised at an entry point where it is not needed. By reducing the obligation on NGG to provide capacity at such entry points, additional capacity can be made available elsewhere. Where this occurs, the need for investment in new network reinforcement may be avoided. We consider that this has three advantages:

- (1) lower costs to customers as a result of the avoided capex,
- (2) environmental benefits associated with avoidance of constructing cross-country pipelines, and
- (3) avoiding potential delays and costs associated with the planning process linked to investment projects which can impact the timing of the delivery of new infrastructure.

We have considered the benefits and costs that arise from the application of the proposed substitution methodology and we set these out in our Impact Assessment. The primary benefits are the avoidance of sterilised capacity and savings in capital expenditure because construction of network reinforcement is avoided. The reduction in the capex needed by NGG represents a clear and tangible benefit for consumers.

NGG's methodology is based on an approach which allows shippers to signal future capacity needs via a financial commitment for that capacity. The proposed methodology also limits

²⁵ ERGEG principles: Capacity allocation and congestion management in natural gas transmission networks, ref E08-GFG-41-09

the amount of capacity which may be moved away from an entry point by use of exchange rates between entry points.

We analysed the impact of substitution by considering three potential scenarios. These were derived from various sources including industry comments, discussions within the substitution methodology workshops and consultation with NGG. The scenarios looked at three separate potential signals for additional incremental entry capacity: at Barrow (216.6GWh/d), Easington (108.3GWh/d) and in the South East zone (175 GWh/d). Whereas they represent potential developments that might trigger substitution, they do not reflect any specific projects.

Savings in capital expenditure will depend on the pattern of incremental signals received and on their size and location. We assessed three potential signals at Barrow, Easington and the South East zone and we assumed that the likelihood of each signal was broadly similar. Were each signal independent, the saving in capital expenditure under the proposed methodology would be £27m, £0, or £51m respectively. Further substitution opportunities could generate additional capex savings. If UKCS gas supplies continue to decline there would be further scope for incremental signals to be met by substitution with subsequent savings in capital investment.

Some industry participants argue that the substitution will cause security of supply concerns where inadequate provision has been made by users for future flows. We consider that the approach which has been proposed by NGG provides users with the necessary means to secure future capacity for these future flows at minimal cost, without undermining the entry capacity auction regime.

Some industry parties argue that substitution will lead to an increase in wholesale prices. For the reasons set out above, we do not consider this effect will be material.

The proposed methodology has, at its core, the establishment of exchange rates which define the ratio of capacity moved from one entry point to another, and ways of prioritising which entry points receive capacity and which entry points provide capacity. The methodology also proposes a mechanism through which users can limit the capacity that can be moved to another entry point by making a payment (a capacity retainer). Finally, the proposed mechanism provides for the use of an exchange rate cap, which will also limit the amount of capacity which can be substituted. We consider that the exchange rate cap provides a "soft landing" for the introduction of the proposed methodology, which will reduce the risk of large-scale unanticipated consequences.

We consider that the proposed methodology is likely to deliver the benefits anticipated from substitution whilst minimising the risk that inappropriate levels of capacity are substituted. We also consider that the proposed methodology will not place an undue burden on shippers as it builds on existing processes associated with the long term entry capacity auctions. We understand that the methodology is simple to administer, does not need major changes to IT systems and that its implementation will not give rise to significant costs.

The Authority's decision

The Authority has carefully considered the Methodology Statement and supporting documents submitted to the Authority on 7 September 2009. The Authority has considered and taken into account the responses to NGG's consultation on the methodology. The Authority's Impact Assessment assessed the Methodology against the entry capacity substitution objectives of the licence. Following publication of our Impact Assessment, we considered carefully all of the responses to that consultation in coming to our decision. The Authority has also had regard to its principal objective and statutory duties and for the reasons set out below, Ofgem has decided that it will approve the Gas Entry Capacity Substitution Methodology Statement submitted by NGG NTS on 7 September 2009 pursuant to paragraph 10(a) of Special Condition C8D of its gas transporter licence.

Whilst we consider that the approval of NGG's Substitution Methodology Statement is appropriate in light of the objectives set out in the licence and our principal objective and statutory duties, we acknowledge that a number of shippers have concerns about the potential impact of the NGG's Methodology. In line with its licence obligations, we expect NGG to keep the Methodology under review. We expect NGG to provide and make public a report setting out its assessment of the impact of the substitution following the initial application of the methodology. We also expect NGG to give active consideration to whether enhancements to the Methodology or other methodological approaches would be better suited to meeting the licence objectives. We would expect this consideration to include all aspects of the methodology including the appropriateness of the 3:1 exchange rate cap.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Stuart Cook', written over a horizontal line.

Stuart Cook
Acting Senior Partner, Networks

Signed on behalf of the Authority and authorised for that purpose.

Appendix One - Substitution methodology response summary

Thirteen non-confidential responses to the Entry Capacity Substitution Methodology Initial Impact Assessment were received. The key points made against each question in the impact assessment are listed below.

Chapter 3 question 1: Are there additional aspects to the methodology that should be highlighted?

One respondent noted that the impact assessment identifies correctly that substitution will not apply to the 10% of capacity held back for AMSEC auction. However, Ofgem had previously indicated an aim to remove the 10% withholding requirement at the next price control review. The respondent requests that Ofgem clarify its intentions in this area.

The respondent also asks how Ofgem will police the 3:1 exchange rate limit. They state that only NGG understands the 'black box' model which calculates available capacities. Without an audit of this model, neither Ofgem nor Shippers can be certain that NGG has not underestimated the capacity that can be made available. The respondent states this argument has been made at the substitution workshops and is not recognised in the impact assessment.

Another respondent is concerned that the exchange rate cap is set at 3:1. They feel the cap should be 1:1 while substitution beds in and then increase over time. Similarly, another respondent wants Ofgem to explain how the exchange rate cap was arrived at and how it is cost reflective.

A respondent believes the methodology will create ASEPs that are more vulnerable to having unsold capacity substituted than others due to their location and interaction with other ASEPs. They believe this is discriminatory and should be addressed by Ofgem.

Chapter 3 question 2: Are the scenarios analysed appropriate and relevant to system development?

There was broad agreement that the scenarios reflect those discussed in the substitution workshops. Two respondents believe they are appropriate and relevant to system development. One respondent notes that the Barrow scenario contains a typographical error that slightly overstates the potential impact on St Fergus as a donor ASEP.

Another respondent stated that the scenarios show how the proposed methodology works but they cannot comment if they are credible assumptions, as it depends where incremental capacity will be released.

Finally, a respondent stated they could understand the argument to encourage Shippers to invest in long term entry capacity but see no measures to address problems faced by developers who neither have the rights or Shippers to purchase capacity since, until a project is matured, there are no shippers. They state that even if a Shipper group is formed it would require collusion to purchase sufficient entry capacity to prevent substitution.

Chapter 4 question 1: Do you agree with our assessment of the methodology (within framework of the current licence)?

One respondent stated the assessment presented is reasonable. This was in part reinforced by another response which said the assessment reflects key licence obligations but focuses on qualitative benefits. However, quantitative benefits are from assumptions about incremental signals for which different assumptions would lead to different outcomes.

A respondent broadly agreed with the assessment and that it rightly suggests the avoidance of investment costs is a key benefit of substitution. This respondent noted that based on the impact assessment analysis, NGG's allowed revenue could be reduced over a

5 year period which could lead to greater transmission transportation charges being passed to consumers. However, in the long term benefits could arise as substitution should lower the need for network investment and therefore limit increases of the regulatory asset base.

Other respondents were not content with the analysis. One stated Ofgem's analysis is too narrow. The impact assessment should test a proposal's fitness for purpose for the whole network and its users. Stating that 'it is difficult to anticipate incremental signals' does not reassure readers that Ofgem has undertaken a thorough analysis.

Another believed that critical elements of the analysis lack depth and conviction. One example is Ofgem dismissing the issue of flexibility by stating no evidence has been provided by Shippers - this undermines the impact assessment as it should be a matter for Ofgem to undertake the analysis. They were also unsure what the term 'a soft landing' means. For instance, will the 3:1 exchange rate cap stay fixed or be temporary and phased out? This has the potential to create uncertainty regarding investment decisions.

Several respondents noted the savings in capital expenditure quoted in the IA are small when compared to the value of gas transmitted through NTS which is around £10 billion a year. Doubtful such minor savings can be justified especially if due regard is given to adverse effects of substitution.

Chapter 4 question 2: Are there quantitative benefits that have not been included in our analysis?

Respondents' views were mixed on whether the impact assessment sufficiently included all quantitative benefits. One respondent stated they broadly agreed with main benefits of substitution identified by Ofgem. However, it is important these are quantified and balanced against costs of implementing substitution which is lacking in the IA. Another respondent stated the benefits appear reasonable but could be achieved through a two stage auction.

Several respondents believed the impact assessment neglected any analysis of the effects of constrained capacity on wholesale gas prices – this was discussed at the substitution workshops.

It was also stated that the impact assessment focused on short term cost savings. That should be matched by an analysis of the adverse effects of less flexibility and consequences for security of supply and prices of gas, and, the knock on effects on the electricity sector. Another respondent reinforced this by stating analysis should be carried out on potential benefits of flexibility to the system which will be lost under substitution.

Chapter 4 question 3: Are there any qualitative benefits that have not been included in our assessment?

One respondent stated the qualitative benefits appear reasonable but could also have been achieved through a two stage auction. Another thought the qualitative benefits were merely marginal.

One respondent found it surprising that user commitment was not included in analysis. They said that substitution could lead to a greater proportion of capacity booked at QSEC. This could also have been achieved the by changing the pricing framework.

A respondent noted that as the retainer will allow users to protect capacity from substitution for 12 months it will give NGG information on potential future supplies it would not normally get until users in position to purchase capacity. This should improve long term signalling of capacity rights.

Chapter 4 question 4: Are there any quantified costs that have not been included in our assessment?

In response to this question, three respondents noted that Ofgem has made no attempt to quantify the potential impacts of wholesale gas prices. One of these respondents stated there was a long standing request at the Transmission Workstream this be done. Several respondents said Ofgem has side stepped the issue by stating no evidence has been produced by Shippers on wholesale gas price effects; a request Ofgem never made to Shippers.

Two respondents note that substitution could lead to a more constrained system. One of these respondents believes that the cost to consumers of having a small amount of spare capacity is less than likely impact of creating a constraint when market needs supply.

A respondent said too much of the impact assessment is focussed on costs and savings to the transporter and provides only a brief analysis of impact on Shippers. They also do not see how the retainer fits with a user commitment model. As a retainer only exists for a year, it provides the transporter with a very weak signal on which to plan the network.

One respondent stated a comparison with the two stage auction model should have been made.

Chapter 5 question 1: Do you agree with our assessment of the relative differences between the capacity retainer methodology and the other methodologies?

All respondents to this question considered the impact assessment did not reasonably assess the proposed methodology against the alternatives.

One respondent stated that it was Ofgem's change to the final licence drafting in July 2009 that made mechanical approach incompatible.

Another was disappointed that Ofgem rejected the mechanical approach as this was industry's preferred option. Ofgem should have stated their position much sooner especially as in the April 2009 workshop Ofgem was asked this specific point to which they replied a range of options were to be developed for parties to consider.

A respondent believed it may be likely that some ASEPs in the future may have a shortage of capacity compared to the volume of gas available. This situation could be better handled by the mechanical approach which requires intervention to assess the risk and benefits of substitution.

Another respondent stated they are strong advocates of the mechanical approach as it provides the best compromise between allowing NGG to maximise use of system and giving Shippers confidence capacity will be available. They note that Ofgem has not done quantitative or qualitative analysis to test validity of this approach.

A respondent also supported the two stage auction model as it affords Shippers with ability to affect substitution using familiar tools such as the QSEC auction.

Other comments

Respondents made a number of other comments which either were not attached to a specific question in the consultation or were outside the scope of the consultation. The most relevant are included below.

One respondent was positive towards substitution stating it is in interests of consumers as it limits capacity sterilisation. It should also aid efficient and economic decisions regarding network investment and reduce the requirement for new infrastructure. They also believe substitution will increase competition for capacity from within single ASEPs to across all

ASEPs. Users will need to give greater consideration to purchasing long term capacity which should strengthen capacity signals.

A respondent noted Ofgem's observation in paragraph 1.10 of the initial impact assessment, which states that substitution will only occur in response to incremental signal elsewhere and is expected to reduce prices. This ignores the possibility that gas resources could become stranded if capacity is substituted from key terminals such as St Fergus. They also said the situation at St Fergus is complicated by NGG's carbon capture and storage proposal.

Several respondents believed the impact assessment did not take account of Project Discovery outcomes. One respondent noted both 'green' scenarios in Project Discovery suggested an increased reliance on imported gas which would require additional infrastructure, which the impact assessment does not consider.

One respondent was also concerned about the effect substitution would have on bi-directional flows at Bacton. They said Shippers take advantage of ability to import gas to the UK throughout the year in the knowledge that capacity is made available when needed. The removal of supply flexibility removes freedom for Shippers to act decisively at an entry point where long term forecasting is virtually impossible. A shortage of gas supply seems a likely outcome.

Finally, a respondent stated that while broadly supportive of substitution, the initial concept has become contaminated over time. It is their intention to push for a reopening of substitution debate in New Year after the industry has been exposed to one retainer based QSEC auction.