



INTERIM REPORT ON THE DEVELOPMENT OF AN ENTRY CAPACITY SUBSTITUTION METHODOLOGY

March 2009

1. INTRODUCTION

National Grid Gas plc (“National Grid”) in its role as holder of the Gas Transportation Licence in respect of the NTS (the “Licence”) is obliged, in accordance with Special Condition C8D paragraph 10, to prepare an entry capacity substitution methodology which shall be applied for the purposes of fulfilling National Grid’s obligation in respect of entry capacity substitution.

National Grid is also required to submit to the Authority, for approval, a statement setting out the methodology referred to above.

Paragraph 10 (b) further requires National Grid to use reasonable endeavours to substitute entry capacity in accordance with the approved methodology statement.

On 17th December 2008 the Authority Directed that National Grid should submit its proposed methodology statement no later than 7th September 2009. In its letter explaining the Authority’s reasons for agreeing to a delay to the implementation of the entry capacity substitution obligations, Ofgem required National Grid to submit an interim report, no later than 31st March 2009, on the progress towards preparation of the entry capacity substitution methodology to the revised timetable.

National Grid has prepared this report to meet the requirement set out above. It provides an update on progress to date and comments on the likely achievement of National Grid’s obligations to the revised timetable. Additional comments are provided on potential IT systems implications and other possible issues.

2. Timeline

To further the development of the entry capacity substitution methodology following initial work throughout 2007 and 2008 National Grid arranged a series of workshops. At workshop 6, held on 7th January 2009, National Grid presented a proposed timeline (attached as appendix 1) for the development of a methodology that allowed comprehensive industry input whilst meeting the 7th September deadline.

In addition to the informal and formal consultations on the proposed methodology, the timeline also shows when related developments (if necessary) could be progressed; e.g. UNC modification proposal, charging proposals, Licence changes.

National Grid has subsequently hosted workshop 7 and will be hosting workshop 8; both as originally scheduled.

3. Workshops

Workshop 5 on 5th December 2008 was the first of a new series of workshops. Held in advance of the Authority’s Direction to delay the substitution obligations, this workshop achieved two high level objectives:

Firstly, Ofgem provided a clarification of its expectations for an entry capacity substitution methodology.

- Reference was made to the high level obligation of National Grid to operate an economic and efficient system and that, if a Licence term is shown to be contrary to this, then that term can be amended.
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- Ofgem also stated that the methodology needed to make sensible commercial decisions that avoided excessive capacity degradation and that this might require an element of discretion.
- Amongst the various potential options one approach that should be considered would allow Users to signal an anticipated requirement for capacity without necessarily taking on the full User commitment obligation.
- Ofgem would also consider a transitional path to the introduction of substitution that would provide a soft landing.

Secondly, National Grid re-examined an extensive range of eleven potential solutions for implementation of entry capacity substitution. These consisted of:

1. The original draft methodology without any constraints. All unsold capacity may be substituted.
2. Limits on quantity available for substitution; e.g. TBE forecasts or historical flows.
3. National Grid discretion (option 1 with National Grid ensuring that all decisions are “sensible”).
4. Ofgem discretion (option 1 with Ofgem ensuring that all decisions are “sensible”).
5. Economic test – assessing the value of incremental capacity against that considered for substitution.
6. Exchange rate cap (with economic test) to prevent excessive capacity destruction.
7. Option to buy. Triggered if capacity is identified for substitution.
8. Sub-reserve prices. Effectively a reservation option.
9. Early warning system whereby information is made available to Shippers to aid bidding strategies. Shippers can respond to perceived threats to capacity being substituted.
10. Two stage auction.
11. BGT proposal which is a form of a two stage auction with the second stage applying at the subsequent QSEC auction; i.e. after 12 months.

Industry was invited to identify their preferred options for further development. A clear preference was expressed for the 2-stage auction, an exchange rate cap, limits on quantity (TBE), and Ofgem discretion. Ofgem expressed reluctance to apply discretion although they indicated that they would review the grounds under which they have the right to veto National Grid’s substitution proposals. National Grid used workshops 6 and 7 to refine the preferred options into three credible proposals:

- (i) The **Mechanical Approach** has been developed to exclude a quantity of unsold capacity from the substitution processes. This quantity is intended to represent the forecast future requirements at all entry points. An exchange rate cap would also be applied to mitigate against excessive loss of capacity in aggregate across all ASEPs. An arbitrary value of 5:1 has been proposed.

It was felt that exclusion from substitution of capacity up to the level of historical flows was inappropriate as substitution is intended to move capacity as demand declines at specific ASEPs. Most participants preferred the use of the peak requirements forecast in National Grid’s 10 year statement. However, this presents problems in relation to storage sites, LNG importation terminals and pipeline interconnectors all of which may have the capability to deliver higher quantities of gas than assumed within National Grid peak day forecasts. An alternative of “peak deliverability” is being considered, but this

would limit potential substitution opportunities to a small number of ASEPs; namely well established coastal terminals where the requirement for capacity appears to be decreasing in line with dwindling UKCS gas supplies. Whether it is appropriate, or discriminatory, to limit substitution in such a manner remains to be debated.

The Mechanical Approach has the advantage of being relatively simple to implement. It is a transparent process that requires little or no change to Shippers' bidding behaviour. The use of forecast supply values and an exchange rate cap should ensure that substitutions are not uneconomic and inefficient. The values used can also be varied over time allowing for a soft landing; e.g. by protecting only 90% of forecast values in future years.

The main problem identified with the Mechanical Approach is that it does not require a User commitment. In the absence of a signal from Users capacity could be withheld from substitution when it is not required or made available for substitution and at a later date may be shown to be required. These situations may occur due to forecast inaccuracies. This methodology may also result in Shippers and up-stream operators overstating their future requirements thereby undermining the supply forecast process; however, this risk should not be over-stated as other sources could be used to benchmark the forecast values.

- (ii) The **Option Approach** allows Shippers to place an "option" on capacity to exclude it from substitution processes. Current proposals are that an option would ensure that capacity remains at the ASEP, but would not be reserved for the specific Shipper. Generally, the option price would be lower than the purchase price being equivalent to 32 quarters at minimum reserve price.

The option would allow Shippers to identify their future requirements, as opposed to reliance on forecast values, and, because it requires a User commitment, would be more reflective of genuine future requirements. Hence, as the option cannot be used to freeze out Shippers at that ASEP, exclusion from substitution processes should be justifiable.

This approach requires additional processes in front of the QSEC auction, but this should not present significant problems to National Grid or to Shippers. Capacity that is not sold and is not subject to an option may be substituted in response to a signal for incremental capacity. Application of an exchange rate cap would mitigate against inefficient substitutions and excessive capacity destruction and could be applied to provide a soft landing. A lower cap, compared to the Mechanical Approach, of 4:1 is considered appropriate for the Option Approach because this option requires an element of User commitment from Shippers.

The Option Approach is not a complex process but it does require Shippers to be aware of market developments and the potential for incremental signals that may impact capacity that they expect to obtain in future auctions. However, it does require a User commitment and so provides an indication of future requirements that should improve upon the Mechanical Approach.

- (iii) The **Two-Stage Auction** proposal allows Shippers a second opportunity to obtain capacity if, in the first stage, incremental capacity is signalled and capacity becomes a likely candidate for substitution.
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Stage 1 of the auction would be essentially the same as the current QSEC auction with Shippers able to obtain incremental capacity and existing baseline / obligated capacity.

Stage 2 of the auction would allow the release of baseline / obligated capacity only. It would be based on AMSEC functionality so as to minimise the requirement for IT systems work. Hence each bid window would be stand-alone, and capacity would be obtained on a pay as bid basis.

Shippers would identify vulnerable (unsold) capacity after stage 1 of the auction and would be able to buy that capacity to prevent it from being substituted away.

This option requires Users to make a full commitment to obtain the capacity, i.e. to pay the reserve price for the ASEP in question. However, the commitment would be based on actual incremental signals elsewhere rather than perceived threats under the Option Approach.

At the end of stage 2 National Grid would assess the incremental capacity signals and determine whether substitution is possible. Any unsold capacity, at the end of stage 2, may be used. This would be subject to an exchange rate cap. A lower cap compared to the other two proposals, of 2:1, has been proposed to reflect the fact that Users may need to make a much greater commitment to protect capacity under this option.

The Two-Stage Auction would require a major change to UNC, and possibly Licence changes, due to the impact on process timelines. For example:

- Stage 1 of the QSEC auction would be shortened to five rounds and would commence at the start of the month.
- The notification of prices would need to be published earlier, at the start of July, which would impact on the timeline for approval of the IECR. Although submission of revised proposals for the IECR can be brought forward there would be insufficient time to include the IECR audit.
- Rules for stage 2 capacity allocations need to be specified.

The Two-Stage Auction requires the greatest User commitment signal and, through the lower exchange rate cap, provides greatest protection against inefficient substitutions. However, there is less scope for a soft landing. As it requires a full commitment from the User, Users may feel unable to partake in stage 2 and capacity that should not be substituted (because it is needed) would be.

4. IT Impacts

National Grid has undertaken a preliminary assessment of the IT impacts of the three potential options. This assessment has involved discussions with teams that manage the QSEC process and considers whether existing system functionality can be adapted to suit the proposals. The assessment has not involved discussions with, or studies by, Xoserve. Our initial findings are as follows:

- (i) It is expected that the Mechanical Approach would have no IT impact. National Grid would identify (and notify Shippers of) any capacity to be excluded from substitution. This would be taken into account after the QSEC
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auction when undertaking the network analysis to assess substitution opportunities, but would not require amendment to external facing processes.

- (ii) The Option Approach would require Gemini functionality to allow Shippers to place options on capacity. It is expected that similar “options functionality” could be used with little or no changes required. The remainder of the QSEC would be unchanged and post-auction substitution processes would be carried out off-line.
- (iii) It is anticipated that the Two-Stage Auction would use existing QSEC functionality for stage 1 and AMSEC functionality for stage 2. This would require little or no change to existing systems. However, should AMSEC rules, e.g. pay as bid, not be acceptable for the second stage of a QSEC auction then significant changes may be necessary. This would require more detailed assessment than has currently been undertaken.

National Grid does not foresee IT issues being an impediment to the implementation of entry capacity substitution provided that this is along the lines of the proposals outlined. In the first instance National Grid would look to a combination of adapting existing functionality with off-line processes to facilitate the early introduction of substitution. However, some systems work may be necessary to totally automate the process in the longer term.

Further IT development may be required to resolve the single quarter issues (and any other issues unforeseen at this time), but National Grid expects that, at least in the short term, no specific rules will be applied to prevent single quarter bookings.

5. Other Issues

Single Quarter Issue.

A solution to the single quarter issue remains to be identified as prohibiting single quarter bookings may be difficult to define and complicated to implement. For both the Two-Stage Auction and the Option Approach (for ASEPs with a low reserve price) Shippers may consider that obtaining a single quarter of capacity at a distant date is the most economic solution for them. Whilst a single quarter booking in the near term (continuous to existing bookings) may be acceptable, a discontinuous booking would appear to be an attempt to undermine substitution, albeit on the grounds of genuine concern by the Shipper.

UNC Review Proposal 221

A UNC Review Group has been established to consider the credit and security arrangements that Shippers are required to have in place to take part in, and be allocated capacity from, QSEC auctions. The group has raised UNC modification proposal 246 which will, if implemented, require Users to provide security in respect of all QSEC capacity allocations. Hence even a distant single quarter booking will have a cost element, albeit fairly small, which may deter or justify such bookings.

It is possible that alternative security proposals may be put forward through a variation to the 246 proposal. These alternatives could have an impact on the QSEC timeline which in turn could present difficulties for implementation of the Two-Stage Auction option. Until alternatives, if any, have been raised and a decision made on implementation the precise impact on substitution is unclear.

Licence Changes.

Subject to the final proposals, changes may be necessary to the Licence. It is not expected that these would be considered in detail until September 2009. However, Licence changes may also be required to facilitate the implementation of

substitution, e.g. ensuring Licence allows sufficient time for Ofgem to undertake an Impact Assessment between National Grid's submission of the methodology statement and the Authority's approval/veto. In addition, Ofgem may consider it prudent to clarify the Substitution Objectives in relation to wider obligations to operate the network in an efficient, economic and co-ordinated manner. These changes should, if deemed necessary, be developed by Ofgem and will not be progressed by National Grid.

UNC Modification Proposals

The Two-Stage Auction would, and the Option Approach may, require modifications to UNC. These modifications would cover proposed changes to auction processes which it would be inappropriate to detail in the substitution methodology statement. These would be developed, as necessary, in accordance with the draft timeline when there is more certainty as to the preferred option.

Charges

It may be necessary to develop fees for options through a charging methodology proposal. However, if option fees are not considered to be transportation charges it may be possible to include the charge within the substitution methodology statement.

6. Assessment of ability to achieve dates

Workshop participants have expressed serious concerns with the substitution obligation throughout the development process. These centre around added uncertainty and a tightening of the system which would reduce flexibility and the ability of the NTS to meet operators' needs, especially when responding to short- and medium-term market signals. However, National Grid believes that participants recognise the potential benefits of substitution and are contributing positively to the development of workable proposals.

At this stage, National Grid is not convinced that it will obtain significant support for any of its potential proposals when it undertakes either the informal or formal consultations in the summer of 2009. However, a full range of options have been explored, all feedback has been acted upon, and all questions responded to.

Notwithstanding that there remains substantial work to develop an entry capacity substitution methodology that meets the requirements of the Licence whilst providing mitigation against that risks identified by workshop participants, National Grid believes that it will be able to submit a proposed entry capacity substitution methodology statement to the Authority for approval by 7th September 2009.

**Appendix 1 – Draft Timeline for Development and Implementation of Entry Capacity Substitution Methodology.
Assumes a QSEC in March 2010.**

