

## National Grid Company Consultation on Options for Allocating GB Transmission Access Rights Under BETTA

### Executive Summary

1. Earlier consultation documents by DTI/Ofgem and National Grid in its role as GBSO designate have proposed and explored various aspects of the enduring transmission access arrangements under BETTA. In an open letter dated 4 May 2004<sup>1</sup>, Ofgem have asked National Grid to consult on “the options for allocating GB access rights from BETTA go-live to parties who have some form of right to access one or more of the existing transmission networks, and those seeking to obtain GB access rights”. The letter also outlines the approach that DTI/Ofgem propose to adopt. This will “set down the obligations that transmission licensees will be subject to during the transitional period leading up to BETTA Go-Live. It is Ofgem/DTI’s expectation that the transitional regulatory framework will include a licence condition requiring NGC as GB System Operator to enter into contracts for connection to and use of the GB transmission system with Users”.
2. This consultation document is National Grid’s response to the request. It examines potential alternative methodologies for determining the initial allocation of access rights to the GB transmission system and seeks industry views on the most appropriate way forward. In doing so, National Grid has considered its current obligations under the Electricity Act/Utilities Act and Transmission Licence, and also those future obligations that are proposed under BETTA. In addition, any proposed methodology will have to comply with relevant European Legislation.
3. Under BETTA, due to go-live on 1 April 2005, users of transmission systems in Great Britain will require access to the GB transmission system when the existing transmission access arrangements in Scotland and England & Wales are replaced. DTI/Ofgem and National Grid have consulted on various aspects of the enduring regime for access to the GB transmission system, in particular:
  - Transmission licence conditions<sup>2</sup> including Security and Quality of Supply Standards;
  - Contractual arrangements (GB CUSC)<sup>3</sup>;
  - Technical and operational arrangements (GB Grid Code)<sup>4</sup>;
  - Charging methodologies for GB transmission systems<sup>5</sup>.
4. In summary, these proposed enduring arrangements, which are based on the existing arrangements in England & Wales, would provide GB transmission users with firm access rights to the GB transmission system and electricity market arrangements subject to payment of the relevant GB Use of System charges.
5. Also following current England & Wales practice, the proposed enduring arrangements for acquiring access rights to the GB transmission system under

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<sup>1</sup> “Open letter on access to the GB transmission system”, Ofgem/DTI, 04/05/04

[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6978\\_NigelWilliams\\_NGTOpenletter\\_may2005.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6978_NigelWilliams_NGTOpenletter_may2005.pdf)

<sup>2</sup> See “Publication of ‘near final’ transmission licences under BETTA” Ofgem/DTI, 16/04/04

<sup>3</sup> “The Connection and Use of System Code (CUSC) under BETTA: Ofgem/DTI Conclusions and publication of near final legal text of the GB CUSC – Volume 1 & 2”, Ofgem/DTI, 30/04/04

<sup>4</sup> “The Grid Code under BETTA: Ofgem/DTI conclusions and second consultation on the text of a GB Grid Code and conclusions on change management between the STC and each of the GB CUSC, GB BSC and GB Grid Code – Volume 1 & 2”, Ofgem/DTI, 07/05/04

<sup>5</sup> “GB Transmission Charging: Initial Methodologies Consultation”, National Grid, 8/04/04, <http://www.nationalgridinfo.co.uk/betta/pdfs/initialmethodologiesconsultation.pdf>

BETTA, while differing in detail between entry and exit, can be characterised as “invest then use”, i.e. the allocation of access rights to a user is contingent on the availability of sufficient physical network capacity such that, with that access right, the Transmission Licensees will continue to meet the requirements of their transmission security standards. For new users seeking access rights, this approach may mean that their access rights may not be available until certain reinforcements have been completed. However, once such network capacity has been made available by reinforcement (or released by other developments such as another participant leaving the market), the users’ access rights would continue to be allocated on that basis (in the absence of relevant modifications to the CUSC or other related documents in respect of how access rights are to be allocated), subject to payment of use of system charges in respect of such access rights.

6. In the lead-up to BETTA, the GBSO will need to incorporate an appropriate access rights policy into contracts with all GB transmission users. If the physical capacity of the GB transmission network is sufficient to accommodate all those users seeking access rights valid from BETTA go-live and later, then, consistent with the proposed enduring GB arrangements, the required GB access rights could be allocated without condition to GB users in the lead-up to BETTA Go-Live. Any new applications submitted after the enduring arrangements take effect will be dealt with under those enduring arrangements.
7. Under BETTA, the amount of GB transmission capacity required will depend on the geographic distribution of generation and demand in GB and will no longer depend on the administrative limit associated with the Anglo-Scottish Interconnector. In particular, it will need to accommodate the unprecedented growth of renewable generation projects, particularly in Scotland, at both transmission and distribution voltages, as well as the future operating regimes of existing generation. Assessments show that the GB transmission system will not have sufficient physical capacity to accommodate all the users with firm access requirements at BETTA go-live in accordance with the requirements of the transmission security standards.
8. Given these circumstances, the following high-level approaches to allocating GB access rights to those parties seeking them in the lead-up to BETTA have been identified:
  - I. Make a non-discriminatory economic allocation of firm initial GB access rights consistent with the physical capacity of the network (e.g. using auctions). Those parties who are not successful in acquiring such rights can apply for new rights under the enduring access regime but would need to wait for completion of those reinforcements required to establish the new physical network capacity. This approach requires the resolution of a number of practical issues associated with defining the available capacity in different areas and organising an economic allocation which takes into account the interactions between allocations made at different locations and, potentially, for different future years.
  - II. Allocate firm GB access rights to all parties who apply for them for a period up to a point when the enduring BETTA access processes take over. As the physical capacity of the transmission network would be less than that required by the security standards until reinforcements could be established, congestion/constraint costs in operating the systems could be significantly higher than would normally be expected. Congestion/constraints would be resolved by location balancing trades or by purchasing other congestion management services until reinforcements can be completed. This approach would provide equitable treatment of all applicants for GB access rights during that period. However, it will only be economic if parties choose their location on the basis of cost-reflective use

of system charges and if the prices offered for resolving congestion were fully competitive and so cost-reflective. This approach could result in a rush to acquire firm access agreements prior to the commencement of the enduring BETTA access processes.

- III. Allocate firm GB access rights to all parties that had existing agreements for access to either the Scottish or England & Wales networks prior to an appropriate date (the **BETTA access transition date**). This option could reduce the potential for high congestion/constraint costs associated with Approach II) but would not provide firm access rights to all users with existing agreements to make future use of transmission networks. Such users, together with those seeking new access agreements under the enduring BETTA access process, would need to wait until those reinforcements required to meet security standards were completed.
  - IV. This approach provides firm rights to certain users with existing agreements as per Approach III). However, it would also provide those users who would not receive firm access rights with the option of accepting non-firm (or less-firm) access rights until the required reinforcements are completed. This approach could reduce the congestion costs that may arise under approach II) but may avoid delaying access of all new users as would be the case in III). However, it would require development of suitable non-firm access options and transitional code and licence frameworks.
9. This consultation paper seeks to develop these approaches and set out the pros and cons, quantifying them where possible. This consultation does not seek to address the existing England and Wales methodology as a basis for the enduring GB methodology. However, views are sought on this and the most appropriate approach for use in the lead-up to BETTA. These should be sent electronically to [lewis.dale@ngtuk.com](mailto:lewis.dale@ngtuk.com) by 4 June 2004. National Grid will then prepare a summary of the responses received for Ofgem/DTI by June 14. Ofgem/DTI have stated that they will then develop the transitional legal framework and, as soon as possible after the Energy Bill receives Royal Assent, designate the appropriate legal text for the implementation of BETTA.

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## Introduction

### Background and Purpose of Consultation

1. The rationale for the reforms proposed for BETTA is set out in Ofgem's December 2001 consultation paper<sup>6</sup> and an Ofgem/DTI May 2002 report<sup>7</sup>. There have been a number of additional consultations since these initial papers that have focussed on the development of GB versions of major industry documents and associated required changes to the relevant electricity licences. Details of all of these consultations are available on Ofgem's website<sup>8</sup>.
2. Further to these consultations, Ofgem/DTI have stated in an open letter to National Grid (4 May 2004)<sup>9</sup> that they intend to place licence obligations on transmission licensees for the transitional period until BETTA go-live. They expect the transitional regulatory framework will include a licence condition requiring NGC as GB system operator to enter into contracts for connection to and use of the GB transmission system with users and, as part of this, it will be necessary to establish a process for determining how existing access rights translate into GB access rights.
3. In anticipation of these licence obligations, the letter requests National Grid to issue a consultation document to examine the range of potential options for determining the initial allocation of access rights to the GB markets and seek industry views on the most appropriate way forward. In particular, it states the consultation will need to consider:
  - A high level assessment of the potential constraint costs and related issues under each option;
  - The timescales and costs associated with implementing the various options (if these differ significantly between options) including the impact of each option on the need for new transmission investment, any interim derogations and timescales for investment;
  - An assessment of the options against the principles encapsulated within NGC's licence and statutory obligations and other legal requirements.

For the avoidance of doubt, the scope of this consultation does not extend to the enduring BETTA arrangements for GB; however, we are also inviting views on this.

### Legislative Framework

4. In addition to the changes proposed to industry documents, new legislation is required in order to implement BETTA. The relevant legislation is contained within the Energy Bill, which must pass through the parliamentary process and be granted Royal Assent before implementation.
5. The Energy Bill was introduced to Parliament in the House of Lords on 27 November 2003 and received its first reading (and publication on the UK Parliament website)<sup>10</sup>. A second reading of the Bill took place on 11 December

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<sup>6</sup> "The Development of British Electricity Trading and Transmission Arrangements (BETTA): A consultation paper", Ofgem/DTI, December 2001

<sup>7</sup> "The Development of British Electricity Trading and Transmission Arrangements (BETTA): Report on consultation and next steps", Ofgem/DTI, May 2002

<sup>8</sup> [www.ofgem.gov.uk](http://www.ofgem.gov.uk)

<sup>9</sup> "Open letter on access to the GB transmission system", Ofgem/DTI, 04/05/04

[http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6978\\_NigelWilliams\\_NGTOpenletter\\_may2005.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/6978_NigelWilliams_NGTOpenletter_may2005.pdf)

<sup>10</sup> Energy Bill available at <http://www.publications.parliament.uk/pa/ld200304/ldbills/002/2004002.htm>

2003 in the House of Lords after which, should approval be granted, the Bill should pass to the House of Commons for a similar approval process.

6. Implementation of the legislation relating to BETTA within the Energy Bill is subject to the Energy Bill being approved by both Houses and granted Royal Assent in its entirety. The timing of implementation will be subject to parliamentary timescales and the granting of Royal Assent in summer 2004, but the published intention is to implement BETTA no later than April 2005<sup>11</sup>.

#### Role of GB System Operator (GBSO)

7. One of the features of the BETTA reforms is the appointment of a GB system operator (GBSO). On 17 December 2002, Brian Wilson, then Minister for Energy and Construction, stated that he was minded to accept the recommendation that National Grid's application for GBSO should be accepted<sup>12</sup>. Until such time that the Energy Bill is given Royal Assent, National Grid is undertaking certain preparatory work for BETTA on the basis that it is GBSO designate.
8. In undertaking preparatory work for BETTA, National Grid must have consideration for the existing obligations set out in the Electricity Act/Utilities Act and our Transmission Licence, as well as those obligations that will be introduced under BETTA.
9. In August 2003, Ofgem/DTI published a consultation<sup>13</sup> (the August 2003 consultation), in which they indicated that it would be the responsibility of the GBSO to develop charging proposals in light of the proposed transmission licence obligations, which would be subject to approval by Ofgem prior to implementation. On this basis National Grid has consulted on GB transmission charging methodologies<sup>14</sup>.

#### Access to the GB Transmission System

10. On 26 January 2004, Ofgem/DTI published a statement concerning access to the transmission system<sup>15</sup>. This statement advised existing and future users of the Scottish transmission system to contact National Grid to discuss the process for putting in place the necessary contracts for connection to and use of the GB transmission system under BETTA.
11. This statement also noted that it appeared likely that all those parties connected to or using the transmission system in GB at that time would be provided with access to the GB system at their current level. However, the statement also noted that for those parties, particularly in Scotland, who have applied for access but had not yet been connected, the position was more uncertain.
12. In their letter requesting National Grid to undertake a consultation on the process for "establishing access rights on a GB basis where potential or prevailing transmission constraints might affect the allocation of such rights", Ofgem/DTI state that it is their view that in assessing the potential options, it would be appropriate for National Grid to recognise:

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<sup>11</sup> See Hansard, HC Deb 15 January 2003, C646W at [www.publications.parliament.uk/pa/cm200203/cmhansrd/vo030115/text/30115w11.htm#30115w11.html\\_sbhd2](http://www.publications.parliament.uk/pa/cm200203/cmhansrd/vo030115/text/30115w11.htm#30115w11.html_sbhd2)

<sup>12</sup> See Hansard, HC Deb, 17 December 2002, C46WS at [http://www.publications.parliament.uk/pa/cm200203/cmhansrd/vo021217/wmstext/21217m02.htm#21217m02.html\\_spm1](http://www.publications.parliament.uk/pa/cm200203/cmhansrd/vo021217/wmstext/21217m02.htm#21217m02.html_spm1)

<sup>13</sup> "Transmission Charging and the GB Wholesale Electricity Market: Part 1: An Ofgem/DTI consultation on changes to transmission licences to implement GB transmission charging under BETTA", Ofgem/DTI, August 2003

<sup>14</sup> "GB Transmission Charging: Initial Methodologies Consultation", National Grid, 8/04/04, <http://www.nationalgridinfo.co.uk/betta/pdfs/initialmethodologiesconsultation.pdf>

<sup>15</sup> Access to the GB Transmission System, Ofgem/DTI, 26 January 2004.

- a. The desirability of ensuring where practicable and economic that all demands for connection to and use of the transmission system (existing and new) can be accommodated;
- b. The desirability of preserving existing quantities of access rights, where possible;
- c. The desire to ensure that options are practically deliverable in timescales consistent with an anticipated BETTA go-live date of 1 April 2005, making due allowance for any consequent trialling and testing of IT systems and the form and scope of consultation to date on this and related issues under BETTA.

### **Nature of Enduring Transmission Access Arrangements under BETTA**

13. The proposed enduring transmission access arrangements under BETTA, which are generally modelled on the existing arrangements in England & Wales, are described in the following draft documents:
  - a. Transmission Licence Conditions including the Security and Quality of Supply Standards;
  - b. The GB Connection and Use of System Code (CUSC);
  - c. The GB Grid Code;
  - d. GB Transmission Charging Methodologies;
  - e. The GB Balancing and Settlement Code (BSC) (in so far as it describes the linkage between BM Units and access quantities).
14. Under these arrangements, and amongst other legal and regulatory duties, the GBSO would be required to:
  - a. Offer non-discriminatory terms (within specified timescales) for connection and use of the GB transmission system;
  - b. Contract with users in accordance with the GB CUSC;
  - c. Operate, and with other transmission licensees, plan the transmission system in accordance with specified security standards and the GB Grid Code;
  - d. Charge in accordance with methodologies agreed by Ofgem.

### **Enduring BETTA Generator/Entry Access Arrangements**

15. Under the proposed enduring BETTA transmission access arrangements, each generator would have firm access for a specified Transmission Entry Capacity (TEC) for each power station, subject to payment of relevant use of system charges. In this context, firm access rights mean that a generator may self-despatch any output level for a power station up to TEC and will receive compensation if the transmission capacity is not available (through balancing contracts from the GBSO).
16. Generators requiring an initial or increased allocation of TEC would need to apply to the GBSO using procedures set out in the GB CUSC. Allocations of TEC would normally be made such that the physical capacity of the transmission system remains in accordance with the requirements of the security standards. If there is insufficient physical transmission network capacity then reinforcement of the transmission network by the relevant Transmission Owner will usually be required. In such circumstances, the allocation of TEC would be contingent on completion of identified reinforcements. These contingent reinforcements can be

modified from time to time in order to reflect revised plans to best meet the emerging generation/demand pattern. However, such modifications would be chosen such that the date at which TEC can be allocated would not be delayed.

17. Once TEC has been allocated, it will continue to apply (in the absence of relevant modifications to the CUSC or other related documents in respect of how access rights are to be allocated), subject to ongoing payment of use of system charges.
18. In the case of a number of parties seeking TEC in the same area of the network then offers for terms will normally be processed and issued in the order received (subject to the Transmission Licence obligation to issue an offer as soon as practicable). If offers are interactive, i.e. there is only sufficient network capacity for a subset of the offers issued, then the recipients of interactive offers will be informed that their offer will be withdrawn in the event that an interactive offer is signed. In the event of such a circumstance, withdrawn offers will be re-issued with a revised set of contingent reinforcements and this will usually imply a later date at which TEC will be allocated.
19. For new generators seeking connection to the transmission system, agreements for Connection Entry Capacity (CEC) and TEC will usually be processed simultaneously. Customers may choose to vary the design of connections and trade-off between connection charges and the access rights that result. Such choices are subject to the condition that they do not adversely affect other customers in terms of cost or quality of service. To achieve this, customers may be required to enter into agreements setting out the customer actions needed as a result of the non-standard connection design.
20. Licence Exempt Generation (LEG) connected to distribution networks have additional choices concerning how they trade in electricity markets. Under options available in England & Wales they may not need to pay Transmission Network Use of System (TNUoS) or Balancing Service Use of System (BSUoS) charges and also may receive benefits arising from reducing the liability of Suppliers to transmission charges.
21. Small generators that are connected to the 132kV transmission network in Scotland are likely to be the subject of modified transmission charges and exemptions to certain market registration obligations that will permit these generators to trade in a similar manner to Licence Exempt Generators<sup>16</sup>.

#### Enduring BETTA Load/Exit Access Arrangements

22. In a similar manner to generator access arrangements under BETTA, it is proposed that Suppliers meeting loads on the transmission system will have firm access. This means that, under normal conditions, the GBSO will only be able to curtail Supplier transactions through agreement to a suitable balancing trade.
23. The maximum demand that can be accommodated on the transmission system is defined by a number of factors including the connection capacity at specific locations. Whereas development of the transmission system to accommodate system-wide demand growth will use a number of information sources, agreements for specific load developments are likely to have a dependency on the completion of certain reinforcements in the same manner as generation capacity applications.
24. In summary, the enduring transmission access arrangements for both generation and load may be characterised as "invest then use", i.e. the allocation of rights to a user is contingent on the availability of sufficient physical network capacity such

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<sup>16</sup> [Reference to Ofgem decision document on small generators].

that the Transmission Licensees will continue to meet the requirements of their transmission security standards.

### **Transmission Access Issues arising from BETTA**

25. In the lead-up to BETTA, the GBSO will need to contract with all Users of the GB transmission system. Such contracts will take effect from Go-Live (anticipated to be 1 April 2005). In seeking an appropriate policy in the lead-up to BETTA, different categories of User are examined with respect to their contracted access arrangements in order to provide clarity with respect to potential constraint costs, timescales and costs associated with implementation and the principles within NGC's licence and statutory obligations. Following the implementation of the enduring BETTA processes for providing offers to users seeking access to the GB transmission system (potentially some months prior to BETTA go-live), all communication and offers for future use of the GB transmission system will be made by the GBSO.
26. If the physical capacity of the GB transmission network is sufficient to accommodate all those participants seeking rights valid from BETTA go-live and later, then, consistent with the proposed enduring GB arrangements, the required GB access rights could be allocated without condition in the lead-up to BETTA Go-Live. Any new applications submitted after the enduring arrangements take effect will be dealt with under those arrangements.
27. However, initial assessments show that the GB transmission system is unlikely to have sufficient physical capacity to accommodate initial GB users. This is due to the fact that the existing networks have been sized so that they are sufficient to accommodate those flows from Scotland to England & Wales that arise under the administrative arrangements associated with the Anglo-Scottish Interconnector rather than sized for that capacity that would be required to permit GB generation to meet GB demand in a manner consistent with security standards for the Scottish and NGC networks. The amount of GB transmission capacity that will be required will depend on the total generation and demand in Scotland and the North of England. In particular, it will need to accommodate the unprecedented growth of renewable generation projects, particularly in Scotland, at both transmission and distribution voltages, as well as the future operating regimes of existing generation.
28. Given the potential demand for new network capacity, the three transmission licensees have identified the reinforcements that may be justified given the existing generation/demand patterns and the expected development of such patterns as a result of the potential location of new renewable generation in Scotland and the North of England<sup>17</sup> (irrespective of BETTA). Whereas transmission reinforcements could provide additional network capacity in the longer-term, network developments will not be able to provide a network compliant with security standards at BETTA go-live if firm access rights are provided to all parties who have requested them.
29. In the absence of sufficient physical network capacity to accommodate the potential initial access requirements at BETTA go-live, the following approaches may be considered:
  - I. Ration initial firm access rights to the GB transmission system so that use of the transmission network is based on its existing capacity and in accordance with security standards. Those parties who do not obtain their desired access rights would be required to wait until additional network capacity is developed (as per the proposed enduring BETTA transmission access regime). Under this approach, the level of congestion/constraint costs and losses would be

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<sup>17</sup> "Transmission investment for renewable generation – second consultation", Ofgem, 07/05/04.

expected to remain consistent with those that normally arise with a network designed in accordance with network security standards. To ensure an economic and non-discriminatory allocation of firm rights to all users seeking access, an auction might be used.

- II. Allocate initial firm access rights to the GB transmission system to all users with rights to the existing transmission networks in GB. Such an allocation would be in excess of the amount that would be consistent with the physical capacity of the network based on the requirements of the security standards. This option is likely to give rise to additional congestion/constraint costs and losses until network reinforcements could be undertaken. However, if all users requiring initial rights received an allocation, it would minimise the potential for GB users needing to wait for network reinforcements to be completed.
  - III. As II) above but recognising that some users with rights to the existing transmission networks were allocated such rights before the issues associated with transmission access under BETTA were identified. On this basis, firm access rights to the GB transmission system could be allocated to just those users, such that, other users with agreements made after this point would then be made new offers in accordance with the enduring BETTA access arrangements, i.e. when the necessary network reinforcements have been established. Whereas such a methodology would not be sufficient to ensure the GB transmission system would remain in accordance with the security standards, it would reduce the potential for congestion/constraints compared to that in II) above.
  - IV. Allocate a volume of initial firm access rights as per III) and offer non-firm arrangements to those parties not in receipt of initial firm rights so that they may choose to use the transmission network on an opportunity basis until network capacity becomes available. This option could permit a compromise to be struck between constraint/congestion costs on the one hand and facilitating early access to the GB markets on the other. However, to the extent that it would offer non-firm access rights, it would be inconsistent with the proposed enduring transmission access regime under BETTA (i.e. with allocating firm rights only).
30. Associated with each of these alternative approaches are a number of issues, including:
- i. the degree to which existing users of the Scottish and England & Wales transmission networks will receive rights to the GB market consistent with those they currently enjoy or expect to enjoy under existing agreements;
  - ii. the extent and timescales over which BETTA will deliver benefits from enhanced competition in GB generation and supply activities, and help facilitate the development of renewable generation sufficient to help meet Government targets;
  - iii. the extent that transmission costs may increase in the short-term;
  - iv. the effect of any interim arrangements on incentives to use, operate and develop the transmission system efficiently;
  - v. the extent to which the choice of any significant dates defining different classes of user accurately reflect access rights or may inadvertently give rise to discriminatory treatment of customers;

- vi. the practicalities of undertaking the implementation activities and completing the design and implementation of BETTA before the target go-live date of 1 April 2005.
31. The degree to which these issues are material will depend largely on the size of user requirements relative to the physical network capacity in different areas. To this end it is important to distinguish between different categories of future GB transmission user and their implied access rights.

#### **Potential Categories of GB Transmission User**

32. The Scottish transmission companies have informed National Grid that a number of parties have agreements to use the transmission network in Scotland. These parties fall into the following categories:
- a) some are existing and active users of the Scottish transmission system;
  - b) some users have entered agreements for future access to the Scottish transmission system that were offered before Ofgem/DTI's statement on 26 January 2004 and which contained no specific reference to BETTA;
  - c) others have entered agreements for future access to the Scottish transmission system that were offered after Ofgem/DTI's statement on 26 January 2004 and which make reference to BETTA.
33. The Scottish transmission companies have also stated that they have a number of offers outstanding for connection and use of the transmission system and that they are processing further applications. In addition, they have provided information on the volume of new agreements and applications for connection at distribution voltages. While these distribution customers may not require transmission access rights, they will, by virtue of meeting demand in Scotland, reduce the amount of transmission entry capacity that can be accommodated in accordance with the security standards.
34. In England & Wales, National Grid has also made agreements for future generator access to the England & Wales transmission system. As the England & Wales agreements under the CUSC contain provisions for modifying agreements in the event of regulatory changes, offers made to England & Wales users can accommodate the revisions that may be necessary as a result of new BETTA access arrangements.
35. A summary of the volumes of transmission access required by users in the categories described above is given in Table 1.

	Existing	Agreements to offers made before 26 Jan 04	Agreements to offers made after 26 Jan 04	Offers outstanding (after Jan 26 04) and applications
Scottish Hydro-Electric Transmission Limited	2293 MW	707 MW (196 MW under construction)	120 MW	2613MW
SP Transmission Limited	6819 MW	364 MW (265 MW under construction)	0 MW	1016 MW
National Grid Company plc	67186 MW	5954 MW (Existing & under construction capacity to reduce by 714 MW)	1167 MW	1156 MW

Notes:

Data represents the position confirmed with SP and SSE.

**Table 1: Summary of Transmission Access Status**

36. As the need for transmission capacity depends on the difference between generation and demand in each area, and the demand placed on the transmission system will reflect the operation of distribution-connected generation, the following table provides information on the volumes of generation connecting to distribution networks. It may also be the case that some Distribution connected plant will require transmission access arrangements (and so add to the requirements in Table 1).

	Existing	Agreements entered	Offers outstanding and applications
Scottish Hydro-Electric Distribution Area	960 MW	819 MW (335 MW under construction)	3148 MW
SP Distribution Area	318 MW	133 MW (20 MW under construction)	226 MW
England & Wales	5680 MW (NGC SYS Table 4.2)	*	*

Notes:

Data represents the position confirmed with SP and SSE.

\* This data has not been collected from Distribution Licensees in England & Wales.

**Table 2: Summary of Distribution Connected Generation**

### Assessment of Alternative Approaches to Allocating GB Access Rights

37. This section sets out potential implementations of the alternative approaches to allocating initial GB transmission access rights (identified above) and identifies some of the detailed issues that arise.

Approach I) Allocate physical network capacity to all GB users on an economic basis

38. This option would seek to ration initial GB firm access rights such that the resulting use of the network remains in accordance with transmission security standards. Parties who are unsuccessful in acquiring firm access rights in such a process, could apply for access rights under the enduring BETTA access arrangements along with other potential new users (and wait for the completion of necessary reinforcements).
39. To avoid discrimination between users of the GB transmission system and ensure an economic allocation of rights, an auction process could be used. The auction would need to represent the interactions between generators in different areas on the capacity available at key network pinch-points. Ideally, this auction process would also represent interactions between generation/entry and demand/exit rights so that, for example, the network access choices made by licence exempt embedded generation would be correctly represented in this allocation. If the auction were to allocate rights for more than just an initial period such as, for example, the first year of BETTA, then a series of auctions would be required.
40. In practice, the process for conducting such an auction could be very demanding for both the auctioneer and participants. In particular, the following auction design issues would need to be agreed:
  - a. The duration of initial rights – over a set initial period or all years until network reinforcements are completed?
  - b. The qualifications for entry to the auctions. For example, in which years can new entrants bid? Presumably, bids are limited to the physical positions users would be able to take given their connection capacity.
  - c. A suitable representation of network capacity. Sophisticated representations of network capacity would require a complex mathematical algorithm to compute critical pinch-points and the contributions of nodal rights to them. Such a model is unlikely to be transparent to auction participants. However, a simplified approach, based on an ordered clearing of nested boundaries approximating critical network pinch-points, risks unacceptable ional approximations. Even a simplified approach could prove challenging in terms of achieving sufficient transparency.
  - d. The auction settlement price - pay as bid or pay location marginal price?
  - e. The use of auction revenues – presumably auctions would represent a replacement to the locational element of TNUoS charges but a new non-locational residual charges would need to be introduced to ensure the correct total transmission revenue is collected.
  - f. Are secondary trading arrangements to be established so that participants can adjust their positions and, if so, what form are they?
  - g. A number of participants may have dominant positions in certain areas and so supervision to detect strategic bidding may be needed.
41. In its simplest form, an auction could be restricted to allocating just entry rights for an initial period, for example the first year following BETTA go-live. It may also be restricted to just those areas of the GB transmission system where capacity must be rationed, i.e. key pinch-points in the Scottish network up to and including the Anglo-Scottish border and also pinch-points in the North of England. A linked series of pay at margin auctions for these pinch points could then be arranged.

42. As a surplus of entry is expected for each of these boundaries, the scope for strategic bidding would be minimised. Secondary trading could be facilitated by the GBSO if required. It is for consideration how any revenues in excess of those that would be collected through the proposed GB TNUoS charging methodology from Scottish and England & Wales generators should be returned to customers.
43. Some advantages of this approach are as follows:
- On a theoretical basis, the allocation of initial rights would be non-discriminatory (subject to a suitable choice of bidding qualification criteria) and economic in so far as the rationing of firm rights would be in accordance with users' willingness to pay.
  - The transmission system could, in terms of TEC allocated, remain in accordance with the requirements of transmission security standards and so not exhibit potentially high congestion/constraint costs and losses.
44. Some disadvantages of this approach are:
- Even in its simplest form, this approach will be complex and give rise to a significant risk that initial rights might not be allocated prior to 1 April 2005. Adopting this approach would also affect other BETTA processes, particularly with respect to transmission charges, and hence give other implementation costs, time requirements and project risks.
  - Discovering access prices by auction is not consistent with policy decisions concerning discounted charges for renewables in remote areas of low population and for small generators connected to 132kV in Scotland made by DTI and Ofgem/DTI, respectively.
  - The methodology would not guarantee that parties with existing rights would receive firm rights under BETTA. This imposes a new risk on existing users (of needing to wait for new network capacity to be constructed or, if parts of Approach IV below are adopted, of needing to accept opportunistic operation with less than fully firm rights).
  - In practice, the simplest approach could be perceived as discriminatory because it would chiefly apply to entry access in Scotland and the north of England. A simple approach may also risk less than an efficient allocation of rights.
45. In weighing the advantages against the disadvantages of this approach, it would not be obvious from the auction outcomes whether the potential efficiency benefits of the auction allocation outweigh the disadvantages arising in terms of risks for the participants involved and, in particular, the issues that arise for those unsuccessful in acquiring initial firm rights.

Approach II) Allocate firm GB transmission access rights to all users with pre-BETTA transmission agreements

46. In this approach, all users who have existing agreements to access transmission networks in GB (whether or not that access is immediate or in the future) are allocated firm access rights for the GB transmission system under BETTA. (The extent to which existing agreements for future access are deemed to be fully executed may be the subject of further consideration). Moreover, all applicants accepting offers for access in the period (up to **BETTA access start date**) would also receive firm rights. In so far as any agreement made prior to **BETTA access start date** is conditional upon reinforcements identified by Transmission Licensees using their pre-BETTA processes (i.e. those local reinforcements necessary with the Anglo-Scottish transfers limited to the capacity of the

Interconnector), then these conditions could be included in the agreements for access to the GB transmission system post-BETTA. Options where stricter qualification conditions are applied are addressed in the subsequent approaches described below.

47. Following **BETTA access start date** offers of terms for firm GB access rights will be made in accordance with the enduring BETTA access arrangements (i.e. allocations of TEC will be contingent on those reinforcements required to meet security standards).
48. It is for consideration what the **BETTA access start date** should be. It is intended to reflect the change in the nature of access rights arising between those users agreeing access prior to the new processes under BETTA and those thereafter. As a working assumption it is taken to be the same as BETTA go-live. (It assumes that the GBSO would begin shadowing applications for access to the existing transmission systems three months prior to BETTA go-live so that GBSO offers could be provided from the go-live date).
49. Some advantages of this approach are:
  - Simplicity in implementation and therefore minimal additional risks or costs associated with achieving BETTA go-live on 1 April 2005.
  - It is non-discriminatory in terms of equal treatment of different classes of potential GB transmission users
  - It fully honours signed and pre-executed agreements and offers made prior to BETTA and thus sends positive signals to the market.
  - It may also retain a broadly economic outcome if users choose their location (or continue to operate existing plant) on the basis of cost-reflective TNUoS charges and if the pricing of congestion/constraint services are cost-reflective (through competition or, if necessary, regulatory intervention).
  - By having locational charges derived from the GB charging methodologies, it would be consistent with Ofgem and DTI policy decisions with respect to transmission charges for renewable generation in remote areas and small generators connected to 132kV transmission network in Scotland.
  - It could reduce the extent that new renewable generation with agreements would need to wait for major system upgrades and so could assist in helping to meet Government targets for renewables.
  - It allocates initial rights in a manner that is fully consistent and compatible with subsequent operation of the proposed enduring BETTA transmission access and charging processes (although the initial allocation would not follow the enduring "invest then use" approach).
50. Some disadvantages of this approach are:
  - The network would not have capacity in accordance with the requirements of security standards and the risk of significant congestion/constraint costs could arise – particularly during subsequent reinforcement outages (derogations from the Gas and Electricity Markets Authority, GEMA, would be required).
  - As a congested network gives opportunities for strategic bidding of prices for congestion/constraint management services, further uneconomic costs to transmission users and hence consumers could arise.

- As there is potential for new users to receive more favourable access conditions prior to **BETTA access start** than after, there is the potential for a surge in applications, a significant increase in work load for transmission licensees and, if there is insufficient resources to process these applications, a risk that certain applicants may receive discriminatory treatment as a result of receiving delayed offers.
51. Overall, the key risk of this approach would be that the congestion/constraint costs will rise significantly above the normal levels that are expected with a network designed in accordance with security standards. However, this risk may be alleviated if innovative congestion/constraint management services are developed and prices are supervised to minimise any strategic bidding.
52. The next approach seeks additionally to limit the risks of high congestion/constraint costs by limiting the initial firm access rights allocated to only those generators deemed to be existing users of the transmission networks in GB.

Approach III) Allocate existing GB users firm rights in accordance with the date that terms were offered

53. This approach would allocate firm GB access rights to users who have existing agreements for immediate access to transmission networks and also certain users seeking new access, subject to their offer having been received prior to a **BETTA access transition date**. Users who have received an offer after this date or who apply for access after this date would receive an offer for firm GB access rights in accordance with the enduring BETTA access arrangements (i.e. TEC will be allocated contingent on the completion of specified reinforcements). The **BETTA access transition date** is intended to reflect the different access rights arising for those users who had agreements prior to when the BETTA access issue was flagged, and those who received offers thereafter.
54. It is for consideration what the **BETTA access transition date** should be. Given the number of new applications for access in Scotland, earlier dates would reduce the potential shortfall between the physical capacity of the network and the requirements of the security standards. Such early dates would reduce the potential for significant congestion/constraint costs. However, an early date would increase the number of users with existing agreements who's access rights will depend on the completion of contingent reinforcements. A potential **BETTA access transition date** could be 26 January 2004, corresponding to Ofgem's statement on GB access and, we understand, a change in offer terms made by Scottish transmission licensees.
55. Some advantages of this approach are:
- It permits all existing generators and those with offers received prior to the **BETTA access transition date** to access the GB transmission system with firm access rights.
  - By having locational charges derived from the GB charging methodologies, it would be consistent with Ofgem and DTI policy decisions with respect to transmission charges for renewable generation in remote areas and small generators connected to 132kV transmission network in Scotland. (However, the number of generators who would qualify for such rebates would be curtailed prior to system reinforcement.)
  - It allocates initial rights in a manner that is fully consistent and compatible with subsequent operation of the proposed enduring BETTA transmission access and charging processes.

- It could reduce the extent that the network physical capacity might shortfall from the requirements of the security standards and so could reduce the congestion/constraint costs that could occur in Approach II).
56. Some disadvantages of this approach are:
- Depending on the choice of **BETTA access transition date**, this option would not provide access consistent with existing agreements for future network access and so could severely affect developer plans and market confidence.
  - It would reduce the extent that new renewable generation in Scotland and the North of England could access the GB market prior to major system upgrades and so would not assist in meeting Government targets for renewables.
  - Certain executed agreements would be re-opened via clauses in the “change of offer terms” previously mentioned.
57. Overall, a key criteria of this approach is the selection of an appropriate **BETTA access transition date**. This date will determine the extent to which the network capacity shortfalls from that required to meet the security standards by delaying the allocation of access rights to new entrants.
58. The final approach seeks to find a compromise between Approach II) and Approach III) by providing customers with a choice of less-firm/non-firm access rights.

Approach IV) Allocate existing GB users firm rights and offer new users non-firm/less-firm access options

59. This approach applies different access criteria to different categories of GB user requiring entry rights as follows:
- a. **A firm category:** Parties with existing agreements to access networks in GB (either immediate or future access) that were offered prior to **BETTA access transition date**, are allocated firm GB access rights.
  - b. **A transitional category:** Parties who have or will sign agreements that were offered following the **BETTA access transition date** but prior to **BETTA access start date** are provided with a choice between either:
    - waiting for an allocation of firm access rights contingent upon network reinforcements necessary to meet the requirements of security standards (as required in Approach III), or
    - accepting access arrangements with rights less firm than those that would be allocated under the enduring access regime until reinforcements are completed.
  - c. **The enduring process category:** (Which is identical with each of the approaches to transmission access identified.) Parties offered terms for access after **BETTA access start date** would be processed in accordance with the enduring BETTA access arrangements (firm rights contingent on necessary reinforcements).
60. As discussed in the previous two approaches, it is for consideration what the **BETTA access transition date** and the **BETTA access start date** should be. One example of the potential arrangement that could be adopted would be:

- **BETTA access transition date** could be 26 January 2004 (corresponding to the different access rights arising for users before and after Ofgem's statement on GB access and the change in offer terms made by Scottish transmission licensees);
  - **BETTA access start date** could be the same as BETTA Go-Live 1 April 2005.
61. The nature of the access arrangements provided to users in the **transitional category** is also for consideration. If such users are allocated firm access rights then this would equate to Approach II) above. If such users were required to wait for transmission reinforcements then this would equate to Approach III) above. The options for non-firm/less-firm access rights could span the following:
- a. less-firm or non-firm rights with an obligation to pay full GB transmission use of system charges. The specific non-firm/less-firm measures could include:
    - agreement to specific operational arrangements which permit the GBSO to request reduced output for specified operation conditions which may not be recompensed;
    - agreement to provide congestion management services at an agreed maximum price;
    - acceptance of a system to generator intertripping scheme (where such a scheme is acceptable from an operational perspective);
    - agreement to combinations of the above.
  - b. less-firm or non-firm access rights, such as in sub-option a) above, an obligation to pay GB transmission use of system charges but an agreed schedule of TNUoS rebates when network capacity is not delivered.
  - c. Less-firm or non-firm access rights, such as in sub-option a) above, with reduced obligations to pay GB transmission use of system charges (for example, no liability to pay TNUoS).
62. Some advantages of this approach are as follows:
- It may achieve a broadly economic outcome if users choose their location on the basis of cost-reflective TNUoS charges. There is also less risk that the cost of congestion/constraint services will increase to the extent that may occur in Approach II).
  - It is consistent with Ofgem and DTI policy decisions with respect to transmission charges for renewable generation in remote areas and small generators connected to 132kV transmission network in Scotland.
  - It could reduce the extent that new renewable generation would need to wait for major system upgrades and so could assist in helping to meet Government targets for renewables.
  - If non-firm/less-firm arrangements for the **transitional category** fall away as required network reinforcements are completed then the initial rights would be compatible with subsequent operation of the enduring BETTA transmission access and charging processes.
63. Some disadvantages of this approach are:

- Creating a **transitional category** whereby some parties have agreements that have to be re-assessed and introducing non-firm/less-firm access rights in the transition codes will create timeline challenges in terms of defining robust processes for assessing and processing these agreements. In particular, there are issues concerning how such non-firm/less-firm arrangements are to be assessed in respect of future applications, their implications for security of supply, and their interaction with incentives on the GBSO to undertake economic and efficient balancing decisions.
  - There will need to be additional customer specific agreements for users in the **transitional category** to describe and agree non-firm/less-firm arrangements and the associated implications for their liability to transmission charges.
  - The network would not have capacity in accordance with the requirements of security standards and some risk of significant congestion/constraint costs would be expected to arise. However, these costs would be mitigated to some extent by the use of non-firm/less-firm access arrangements.
  - Non-firm/less-firm arrangements introduce complexity into system operation and uncertainties for the user subject to them. In particular, users subject to non-firm/less firm arrangements will be subject to different terms that users with firm access and so judging whether such users are receiving acceptable service can be more difficult. For this reason, the establishment of agreements with individual customers in the **transitional category** may be time consuming and complex.
  - The introduction of non-firm/less-firm access arrangements represents a departure from earlier policy direction which has sought to ensure firm rights to all users.
64. Overall, the benefits of this approach compared to Approach II) above depend on the particular operational and commercial agreements that are put in place with customers in the **transitional category** and the extent to which they need to be used. Whereas in Option II) users would be free to agree the provision of congestion/constraint management services at commercial terms acceptable to them, this Approach would permit the GBSO to set out less-firm/non-firm arrangements as a condition for use of system.
65. To minimise the potential for unacceptable service to these customers, it is advantageous that the specific circumstances in which actions under the non-firm/less-firm agreements are called should be defined in advance and in such a way that the scope for interactions with other balancing activities and congestion/constraint management in other areas is minimised. On this basis, it may be appropriate for such customers to pay transmission use of system charges (as payable by customers with firm rights) but with pre-agreed refunds if appropriate, i.e. sub-options a) or b) above. In this way, if such arrangements are not called upon, such users in the **transitional category** do not receive an undue advantage over other customers with firm rights.

#### Summary of Alternative Approaches

66. A table summarising the comparison of alternative approaches described above is included in Appendix 1.
67. A preliminary assessment of the potential transmission congestion/constraint volumes that may arise for these approaches is given below in Table 3.

<b>Approach</b>	<b>2005/6 Constraints</b>	<b>2007/8 Constraints</b>
I) Auction all GB firm rights	Less than Approach III.	Less than Approach III.
II) Allocate GB firm rights to all users with agreements established before <b>BETTA access start</b> (April 05)	Similar to Approach III. (entry in 2005/6 limited by construction lead-time)	Up to 10 TWh (4.6GW wind in Scotland)
III) Allocate GB firm rights to all users with agreements established before <b>BETTA access transition date</b> (26 Jan 04)	2 – 3 TWh (1.5GW wind in Scotland)	2 – 3.5 TWh (2.3GW wind in Scotland)
IV) As III) but offer non-firm/less-firm access rights	Similar or slightly larger than Approach III)	Between volumes estimated for Approach III) and Approach II).

## Notes on estimates:

- Constraint volumes are estimated using a limited number of simple Scottish and England & Wales merit rankings with the central case agreed with SP Transmission Ltd and Scottish Hydro Electric Transmission Ltd.
- Constraint volumes have been estimated for the Anglo-Scottish boundary only. At present, constraints arising within Scotland have not been represented.
- Intact network conditions have been assessed and so the effects of outages, particularly those that may be required to undertake upgrades and reinforcements (which could take place as early as 2007/8), have not been represented.
- The constraint estimates also do not include any special operational measures that may be agreed with the Scottish network owners to optimise capacity “on the day”.

**Table 3: Preliminary assessment of congestion/constraint volumes****Views Invited**

68. Potential alternative approaches to the task of allocating GB access rights from BETTA go-live have been identified. National Grid would welcome views on these approaches and the associated advantages and disadvantages. In particular respondents may wish to provide views on:
- a. The various approaches identified for providing users with existing access to the Scottish and England & Wales networks with a transition to the access to the GB transmission system. In particular, identifying the most appropriate approach and why.
  - b. If an auction were to be conducted (as per Approach I), views on the most appropriate design of auction (see paragraph 40).
  - c. If firm GB access rights were to be provided to all users with existing agreements to use the Scottish and England & Wales network and those users accepting agreements prior to a **BETTA access start date**, (as per Approach II), the appropriate date at which access rights can be distinguished and subsequent applications for access should be processed by the GBSO in accordance with the proposed enduring BETTA access arrangements. (I.e. the appropriate choice of a **BETTA access start date**).
  - d. If firm GB access rights were to be provided only to users with existing agreements to use the Scottish and England & Wales network offered before

a suitable **BETTA access transition date**, (as per Approach III), the appropriate choice for such a date.

- e. If users within a **transitional category**, (as per Approach IV) were to be offered the choice of non-firm/less-firm access arrangements, the appropriate approach for determining such arrangements and setting transmission charges (paragraph 61 refers).
69. In addition, respondents may wish to provide views on the proposed enduring regime for allocating access to the GB transmission system (the so-called “invest then use” approach) and any alternative approaches to the allocation of transmission access capacity for BETTA.
70. Responses are requested by 4 June 2004. Please send responses electronically to [Lewis.Dale@ngtuk.com](mailto:Lewis.Dale@ngtuk.com)
71. National Grid will then prepare a summary of the responses received for Ofgem/DTI by June 14 2004. Ofgem/DTI have stated that they will then develop the transitional legal framework and, as soon as possible after the Energy Bill receives Royal Assent, designate the appropriate legal text for BETTA transition.

<b>Appendix 1: Summary of alternative Approaches</b>				
	I) Auction firm access rights to GB transmission system for a period, e.g. prior to completion of transmission reinforcements.	II) Allocate firm GB access rights to all users with agreements made before <b>BETTA access start date</b> (assumed April 2005)	III) Allocate firm GB access rights to all users with agreements offered before <b>BETTA access transition date</b> (assumed 26 January 2004).	IV) Allocate firm GB access rights to all users with agreements offered before <b>BETTA access transition date</b> . Offer non-firm/less-firm rights to users <b>in transitional category</b> (i.e. prior to <b>BETTA access start date</b> ).
1. Degree to which users with existing agreements for access to Scottish and England & Wales transmission systems will receive consistent rights to GB transmission system.	Depends on volume of rights auctioned, bidding qualification criteria and auction outcome. However, in general, users with existing access to networks would receive reduced rights to the GB transmission system.	Users with existing agreements for access to Scottish and England & Wales networks will receive firm access rights to GB market (as will others securing agreements prior to BETTA access start).	Only users with existing agreements offered prior to the <b>BETTA access transition date</b> will receive firm GB access rights. Other users will not receive access in accordance with their agreements but will need to wait for reinforcements.	Users with existing agreements offered prior to the <b>BETTA access transition date</b> will receive firm GB access rights. Other users would be able to choose to accept non-firm/less-firm GB access rights.
2. Effects on benefits delivered by BETTA: - competition benefits; - renewable entry benefits.	Initial entry to GB energy markets restricted in accordance with auctioned network capacity – potentially less total access than was provided pre-BETTA.	Entry to GB markets will include all users with agreements for Scottish & England & Wales networks including new entrants who have agreed access prior to BETTA access start.	Entry to GB markets will include all existing participants and a limited number of new entrants offered prior to <b>BETTA access transition date</b> .	Entry to GB markets greater than Approach III) but rights for certain customers less firm than Approach II).
3. Extent that transmission costs may increase in the short-term.	Limited risk of significant congestion/constraint costs because auctioned firm rights can reflect physical capacity of the network.	Network will not have the physical capacity required by security standards and so potential for significant congestion/constraint costs. Actual costs will depend on availability and price of suitable congestion/constraint management services.	Depending on choice of <b>BETTA access transition date</b> , network may not be as congested as will be the case under Approach II).	Depending on choice of <b>BETTA access transition date</b> , and effectiveness of non-firm/less-firm arrangements, network may not be as congested as will be the case under Approach II).

4. Effect on incentives to use, operate and develop the GB transmission system efficiently.	Efficient rationing of existing capacity. Longer-term investment signals depend on the development of an enduring access regime based on suitable auction products.	Potential for strategic bidding of congestion/constraint management services, particularly during network outages to facilitate required reinforcements.	Scope for uneconomic congestion/constraint costs reduced compared to Approach II).	Scope for uneconomic congestion/constraint costs reduced compared to Approach II).
5. The potential for discrimination arising from inappropriate or inaccurate representation of existing access rights.	Depends on agreement to bidding qualification criteria.	Very limited – all users who have agreements to enter Scottish and England & Wales networks will have rights to GB network.	Depends on agreement to suitable <b>BETTA access transition date</b> .	Depends on agreement to suitable <b>BETTA access transition date</b> and associated non-firm/less-firm access arrangements.
6. Practicalities of implementing the access arrangements before the BETTA go-live date of 1 April 2005.	Auctions complex to design and implement. Serious knock-ons to other proposed BETTA policies, systems and processes. Large risk of go-live delay.	No significant additional developments required for BETTA implementation. Little knock-on to other policies, systems and processes.	No significant additional developments required for BETTA implementation. However, significant issue of determining revised access dates for users with existing agreements for future access.	Significant additional risk to BETTA associated with determining form of non-firm/less-firm agreements and knock-ons to other aspects of the BETTA access policies, systems and processes.