



CHARGING CONDITION 6 REPORT
Charging Arrangements for Site Specific
Maintenance

Draft for Industry Comment

11 September 2006

Table of content

Executive summary	2
Introduction	3
Non-capital connection charges.....	3
Industry consultation	5
Summary of industry responses	5
Appropriateness of existing arrangements	5
The case for changing the present charging arrangements.....	6
Support for options reforming connection charging arrangements.....	6
TO responses	7
Appropriateness of existing arrangements	7
The case for changing the present charging arrangements.....	7
Support for options reforming connection charging arrangements.....	8
National Grid's views and conclusions	9
Next steps	11

Executive summary

1. The Authority's approval of the GB Connection Charging Methodology was agreed subject to National Grid satisfying a condition. This required National Grid to review and potentially revise its calculation of charges relating to the maintenance of connection assets with a view to furthering the relevant objectives to charge cost reflectively and to facilitate competition in connection works. The condition requires any changes to the methodology to be brought forward for implementation by 1st April 2007.
2. Industry opinion on whether the existing methodology for charging for the maintenance of connection assets was appropriate and cost reflective was sought with a questionnaire and through various forums, such as the Transmission Charging Methodology Forum (TCMF). Opinions on a number of options for change to the methodology were also requested. In addition, views from the Scottish Transmission Owners were sought, with both providing written comments.
3. The view was expressed that the cost of providing complex cost capture systems and processes outweighs the intended benefits of increased cost reflectivity and competition in the maintenance of connection assets. The responses received state that the level of competition achievable in connection maintenance does not seem a sufficient driver to change the connection charging methodology. Accordingly, National Grid does not believe it would be efficient for it and the Scottish TOs to undertake the investments necessary to develop systems to capture maintenance costs on a site, asset and user specific basis.
4. National Grid believes that while some users saw benefit in rolling up the Transmission Running Costs (TRC) and Site Specific Maintenance (SSM) components of connection charges this would decrease the transparency of the signal and produce a barrier to competition for connection asset maintenance. At present the SSM element reflects the forecast costs and therefore users have a value against which connection asset maintenance costs could be compared.
5. National Grid believes that TO specific SSM factors are not consistent with the BETTA principles. There is little evidence that the marginally increased cost reflectivity of this charge would enhance or facilitate competition. As a result it is difficult to justify the costs associated with increased calculation complexity and loss of consistency and transparency.
6. Accordingly, National Grid's conclusions are that the current connection charging arrangements should remain unchanged but be kept under constant review in accordance with the Transmission Licence. Against this background, the conclusions from Ofgem's ongoing competition in connections review will be considered, once available, to understand whether these would necessitate future methodology changes.

Introduction

7. As part of the Authority's approval¹ of the GB Charging Methodologies a number of conditions were imposed. Charging Condition 6 related to the GB Connection Charging Methodology. It requires that National Grid:

“Reviews and potentially revises ... its calculation of charges relating to the maintenance of connection assets with a view to furthering the relevant objectives to charge cost reflectively and to facilitate competition in connection works.”
8. National Grid is required to bring forward changes such that they could be implemented by 1st April 2007. National Grid believes that if, following a review of the charges for maintenance of connection assets, it was felt that no methodology changes were required, it would be appropriate to prepare a report setting out the conclusions of the review. This draft report is intended to communicate the current position and gather industry comments to be included in the final report that would be submitted to the Authority.
9. The charging methodology is kept under constant review, where any modifications proposed must be for the purpose of better achieving the relevant objectives. The relevant objectives for the connection charging methodology are described in Licence Condition C6 and briefly are to:
 - Facilitate competition in generation and supply of electricity;
 - Develop charging methodologies that when applied, set charges that reflect the costs incurred by Transmission Licensees;
 - Facilitate competition in the works for connection to the GB transmission system, and
 - Properly take account of the developments in the Transmission Licensee's transmission businesses, as far as is reasonably practicable.
10. National Grid also has obligations under Condition 7 of its Transmission Licence to not discriminate between any persons or classes of persons.

Non-capital connection charges

11. The existing charging arrangements for maintenance of connection assets are divided into two parts. Firstly, a Site Specific Maintenance (SSM) charge which recovers the costs and direct overheads for maintenance of connection assets. This factor is currently determined by dividing the total forecasted maintenance budget for all TOs by the GB connection asset base. It is calculated annually and without reconciliation to actual costs.
12. The second part, the Transmission Running Cost (TRC), is firstly determined by apportioning a proportion of each TO's forecast operating expenditure to the TO's connection assets. For each TO, the proportion is calculated from the ratio of connection asset GAV to total asset GAV. The resultant individual connection asset transmission running costs are summed and divided by the

¹ NGC's proposed GB electricity transmission use of system charging methodology: The Authority's Decisions, March 2005, 80/05. Available from: www.ofgem.gov.uk/ofgem/index.jsp

total GAV of GB connection assets. The TRC is calculated at the Price Control Review and reflects rates, system operation and the remaining indirect overheads related to connection assets.

13. Prior to the implementation of BETTA, in England and Wales the SSM charge was based upon actual site costs using National Grid's cost capture system. The TRC component was calculated annually from the forecast total TO running costs divided by the total Transmission business GAV, therefore producing a TRC charge expressed as a percentage of the asset's GAV. The Scottish TOs were not able to apply these arrangements Post BETTA Go-live, as their accounting and cost capture systems could not provide the required level of cost breakdown for SSM.
14. Given the timescales and magnitude of the BETTA works, at implementation it was stated that² the authority did not believe:

“This change [implementation of BETTA] detracts from the facilitation of competition in connection works, and accepts that it is an appropriate approach given the cost and practical difficulties in applying the approach that applies in England and Wales in full from the BETTA go live date. “

However, the Authority did require National Grid to review these changes as part of Charging Condition 6.

15. For 2006/7 the SSM factor is 0.47%, recovering £9.5m from a total GB connection GAV of £2.04bn. This compares to a TRC of 1.64%, of the total GB connection GAV, or £33.5m.

Ofgem's review of competition in connections

16. During May 2006, Ofgem initiated a Review of Competition in Gas and Electricity Connections³, publishing an open letter inviting the industry's views on detailed scope and aims. The main aim of the review is to “assess the extent of changes required to better protect the interests of customers requesting connections”. Specifically in relation to electricity transmission, views were sought on why, historically, the uptake to self-build and contestable maintenance has been limited and whether it is the case that specific assets and sites may benefit most from improved openness to competition.
17. The full open consultation document, inviting the industry's view on competition in connections, was published on 31st August 2006. It was confirmed that the current industry appetite for contestability in self build and Site Specific Maintenance is to be sought.
18. This differs from National Grid's own review, discussed in this paper, which is focusing on the charging methodology for maintenance of connection assets

² GB transmission charging methodologies: transmission charging. 10/12/2004. Available from www.ofgem.gov.uk/index.jsp

³ [Ofgem Review of Competition in Gas and Electricity, May 06](#)

and whether methodology changes could be brought forward to enhance cost-reflectivity and promote competition in SSM.

Industry consultation

19. A driver for changing the SSM charging arrangements is the facilitation of competition in the maintenance of connection assets. It needs to be established to what extent users are interested in competition in this area in order to avoid overstating any possible benefits, which could result in inefficient expenditure by transmission licensees. A “tick-box” questionnaire (posted on the National Grid charging website) was sent to industry participants to seek views on various issues, including:

- The appropriateness of the existing arrangements for recovering the costs of site-specific maintenance;
- The perceived benefits and liabilities associated with assuming responsibility for site-specific maintenance and, against this background, the case for changing the present charging arrangements; and
- A number of options for reforming the connection charging arrangements.

20. Six responses were received for the questionnaire, from the, approximately, fifty connected customers. The responses represent 5 Distribution Network Operators and 3 Generators, as some responses reflect multiple parties.

21. This was followed up by an invitation to the Scottish Transmission Owners to provide comment whom both did and their views are discussed later in this report.

22. The issue has been discussed at several industry forums, initiated at the TCMF on 22nd December 2005. Following from this the questionnaire was discussed at the CISG on 26th April 2006. The initial results and conclusions were presented in a paper to the TCMF on 22nd June 2006, where it was agreed that a summary report was the appropriate way forward.

Summary of industry responses

23. The questions were aimed at assessing participants’ views on the degree to which the SSM charges meet the Relevant Objectives. The users’ replies have been posted on the National Grid Charging Website (www.nationalgrid.com/uk/Electricity/Charges) and the broad conclusions have been drawn out below and are summarised into the three main areas where views were sought.

24. It is felt that the relatively low response rate reflects a certain apathy towards the area and indicates a broad industry acceptance of the existing arrangements.

Appropriateness of existing arrangements

25. None of the parties believe that the present connection charging methodology is disproportionate to both the magnitude of the cost of Site Specific Maintenance, typically £30k per site, and the current contestability arrangements.
26. The two parties representing DNOs believed the existing arrangements were not cost reflective, in part because not enough information is available to judge otherwise stating they are not informed of “the amount of maintenance carried out, the frequency of this work or the actual site cost per site”. This is examined below in an additional section, ‘Additional Information Provision’. The other parties did not support this view. No parties believed that the existing arrangements discriminate against any type of connectee.

The case for changing the present charging arrangements

27. No respondents believed that significant benefit exists in contesting Site Specific Maintenance. One party stated a negative benefit to their organisation of contestability, with liabilities outweighing benefits, increased cost of overseeing the outsourced work, and increased risks associated with separating asset ownership and responsibility for asset maintenance.
28. Against this background, only one respondent supported changing the charging arrangements and no respondents supported developing systems and processes to capture costs on a site, asset, and user specific basis. The support for change was for more simplified charging arrangements discussed below.

Support for options reforming connection charging arrangements

29. Views were sought on a range of alternative means by which SSM charges could be charged without introducing cost capture systems. The following options were proposed:
 - I. Absorb site-specific maintenance costs within the Transmission Running Costs factor (which would result in a connection GAV-related non-locational charge) set for the duration of the price control period;
 - II. Absorb within the Transmission Running Costs factor, as in above, but determine this factor on an annual basis;
 - III. Introduce regional site-specific maintenance factors for each TO area;
 - IV. Maintain the status quo for the time being and keep the methodology under constant review in accordance with the requirements of the National Grid’s Transmission Licence.
30. Two of the options include the combination of Transmission Running Costs and Site Specific Maintenance charge. For one variation (Option I), this combined value would be set for the duration of the Price Control, which would provide stability and predictability of the non-capital related components of the connection charge, and for the second (Option II) it would be recalculated on an annual basis, which would more closely reflect the forecast costs. In both cases, the associated reduction in transparency may

hinder competition, as users would not have visibility to what the cost saving would be to taking on the responsibility for performing the connection asset maintenance. Both options received support and rejection although the majority were neutral.

31. No users supported Option III, the regional solution based on separate Site Specific Maintenance factors for each TO region, although one respondent was neutral. National Grid believes that as local maintenance costs are taken into account it could be argued that this option is more cost reflective but it is not wholly in the spirit of BETTA.
32. The final option is to retain the existing methodology, keeping under constant review, which had one respondent against, one neutral with the remainder supporting. The party opposing this option felt that it should be included within the TRC component, as both were similar and if considered together could be optimised more effectively.

TO responses

33. The Transmission Owners raised a number of comments when asked to provide views on the current Charging Methodology for Site Specific Maintenance. The complete responses are listed on the charging website (at www.nationalgrid.com/uk/Electricity/Charges) with some key points summarised below.

Appropriateness of existing arrangements

34. The TOs expressed no views on the appropriateness, or otherwise, of the existing charging arrangements.

The case for changing the present charging arrangements

35. The TOs believed that there are limited benefits and high liabilities associated with changing the current contestability arrangements, the introduction of which is unlikely to be an attractive option for their regions. The TO made the following points:
 - Substantial operational efficiency improvements have been made since privatisation through the 'RPI-X' price control mechanism so the potential for further significant cost reduction for connection asset maintenance is unlikely;
 - Where there is financial or strategic benefit in outsourcing certain activities, such as reactive compensation maintenance, this is already performed. It is believed unlikely that a users would be able to perform the tendering more efficiently themselves with reduced scale of economies and experience;
 - The TO is responsible for replacing failed connection assets but with loss of control of maintenance could experience an increased risk of failure, the cost of which may be ultimately passed through to connectees;
 - The connection assets remain in the ownership of the Transmission Licensee who therefore has associated obligations and liabilities. By giving the user the right to maintain the assets, via third party contractors,

the TO has much less control over the quality of work than if it performed or contracted the maintenance directly;

- The set up costs and magnitude of changes to the charging methodologies must be proportional to the benefit and expected uptake by the users;
- Competition should be focused on areas where customer volume is high, potential benefit to customers is high and arrangement costs are low. It is believed that these characteristics do not exist in the transmission connection maintenance market.

Support for options reforming connection charging arrangements

36. With respect to capturing costs on a site specific basis, the following views were expressed:

- Existing information systems do not capture maintenance at a site specific level and the required development costs of the necessary processes would be substantial and would ultimately be borne by all users for little benefit;
- The TOs feel that the set-up costs are disproportionate to the expected benefit to users. Providing total cost reflectivity would cause an exchange of a predictable annual stable charge for an unpredictable, instable charge, which is not beneficial to the user.

37. Of the other options considered for changing the connection charging methodology, both TOs supported the rolling up of SSM and Transmission Running Cost charges to produce a transparent, predictable and stable charge, and subject to the rigorous price control process. Steady charges facilitate the market and avoid 'cost shocks' that may be generated from the lumpy nature of triennial maintenance.

Additional information provision

38. Through a response to the questionnaire a view was expressed on the difficulty of accurately judging the cost reflectivity of Site Specific Maintenance charges without detailed information on what work is performed, its frequency and the actual costs incurred within a specific year. National Grid has sympathy with this view, given the information presently available to users at a site and asset level. The total SSM charges are cost reflective and accurate when compared to actual costs incurred but with the limitations of existing Information Systems the user could not break this information easily down to, for instance, site level.

39. National Grid believes that the principle of cost reflectivity is important to enable the assessment of value for contestable works. This ensures that connection asset maintenance is performed by the most efficient party whether that is the TO or contracted third party. The costs associated with providing detailed data at a site, or lower level, would be considerable and therefore the magnitude of benefits must be significant. At present, a user is able to compare their SSM charge to the estimated maintenance service cost provided by a third party contractor. Additional data provision requires additional processes and procedures and hand-offs between TOs.

40. The information that is required by the user depends upon the wider framework for contestability, including those activities and assets that are within scope. For example, if responsibility for statutory inspection only is being undertaken, a different level of information is needed compared with the full acceptance of all maintenance, inspection and refurbishment responsibilities. Considering the pending Ofgem review on contestability, implementing additional data provision requirements may be premature and duplicating efforts.
41. As a result of the dynamic nature of a work and outage plan, additional communication of any revisions to a future plan necessitate additional resource and procedures, both externally and internally to the TO, especially if the level of detail is at the asset level. The full maintenance cycle for connection assets is typically 12 years and such long runs of reliable, data is not easily available to allow historic analysis. There would be substantial costs associated with putting the data into a meaningful and consistent format for the user.
42. National Grid believes that with the provision of asset level data increases the risk of 'cherry picking'. This may take the form of selecting only assets that are of low maintenance families or even just the years between periods of substantial planned maintenance. The remaining 'high cost' activities would remain and would be socialised across less assets, increasing the costs and therefore charges. This would require codification of permitted practices for contestability which may further inhibit the uptake of the option.
43. It is important that the full costs and implications associated with any increased data provision are measured against any potential increase to cost reflectivity, to avoid hindrance of the SSM market. Requirements for change to the industry code and legislation must also be assessed especially concerning additional information supply.
44. National Grid believes that considering the magnitude of contestable SSM works, the potential cost of additional information provision and the pending full Ofgem review in the area, the existing arrangements for information provision are appropriate and efficient. National Grid would be happy to participate on a bilateral basis to improve the use of existing available information to facilitate value assessment, in the interim.

National Grid's views and conclusions

45. The Connection Charging Methodology must balance the objectives of enabling competition, cost reflectivity and the wider responsibility of efficiency. Clearly, it is important not to focus on one objective to the detriment of the others.
46. National Grid believes that where competition in connections is effective, this can be an important element in protecting the interest of consumers. Historically there has been very little evidence that an appetite for competition in the maintenance of connection assets exists, confirmed by the absence of uptake observed in England and Wales since such provisions were introduced in 1994. The volume of, and views expressed within the responses

to the recent questionnaire also appear to support this view. We anticipate that Ofgem's review of competition in connections will seek further views in this area.

47. Against this background, National Grid believes that it would be inefficient for it and the Scottish TOs to invest in the charging systems needed to capture maintenance costs on an asset, site, and user specific basis at this point in time. Furthermore, the prevailing view from users is that the present charging arrangements are proportionate to the costs recovered through the charges and the arrangements for contestability. National Grid agrees with these views because historically the uptake of contestable maintenance has not occurred and feels that the existing level of cost reflectivity is appropriate for the scale of maintenance charges. Considering these factors the case for changing the charging methodology to facilitate contestability is currently weak.
48. National Grid believes that rolling up the TRC and SSM charges would decrease the transparency of the signal and produce a barrier to competition for contestable maintenance. At present the SSM element reflects the forecast costs and therefore users have a value against which comparison is possible with third-party quotes for contestable maintenance activities.
49. National Grid believes that TO specific SSM factors are not consistent with the BETTA principles. There is little evidence that the marginally increased cost reflectivity would enhance or better facilitate competition. As a result it is difficult to justify the costs associated with increased calculation complexity and loss of consistency and transparency.
50. More cost reflective charges could be produced with sufficient investment in cost capture systems by each of the TOs. A number of additional processes and procedures would be required and there would be an increased number of data hand-overs between the TOs and National Grid, as GBSO. National Grid believes that this could lead to 'cherry picking' rather than an increase in genuine efficient outsourcing, without the necessary amendments to the Statement of the Connection Charging Methodology.
51. National Grid believes that total cost reflectivity would result in unpredictable and 'lumpy' charges depending upon asset age, failures and maintenance interval.
52. National Grid considers the existing arrangements for information provision of connection asset maintenance are appropriate and efficient. The comparable cost of additional data to the benefit of increase cost reflectivity of the SSM and the pending Ofgem review in contestability does not justify additional investment, at this time.
53. Accordingly, National Grid's conclusions are that the current connection charging arrangements for Site Specific Maintenance should remain unchanged but be kept under constant review in accordance with the Transmission Licence. The conclusions from the Ofgem competition in connections review may indicate effective ways in which competition in connection asset maintenance could be enhanced and, importantly, a demonstrable demand for such arrangements. If this were the case, National Grid believes it would be consistent with its obligations contained in the transmission licence to revisit these conclusions.

Next steps

54. Our intention is to submit this report formally to Ofgem, however, if users want to express views or comments on this report please email them to Thomas.ireland@uk.ngrid.com or alternatively in writing to:

Tom Ireland
Electricity Charging and Access Development
National Grid
National Grid House
Warwick Technology Park
Gallows Hill Road
Warwick
CV34 6DA

55. Any comments should be received by 9th October. All responses will be published on National Grid's industry website unless marked clearly as confidential.