

CONSULTATION DOCUMENT

**Modification Proposal to the Use of
System Charging Methodology**

UoSCM-M-08

**Proposal for new winter peak
“capacity” proxy for half-hourly
metered demand TNUoS charges**

11 November 2002

Table of Contents

EXECUTIVE SUMMARY.....	1
1. INTRODUCTION.....	1
2. BACKGROUND TO THE ISSUE	1
3. EXPLANATION OF THE ISSUES	2
4. PROPOSED MODIFICATIONS	3
5. RESPONSES TO THIS CONSULTATION	5
APPENDIX 1 – PROPOSED AMENDMENT TO CHAPTER 4 OF THE USE OF SYSTEM CHARGING METHODOLOGY	6
APPENDIX 2 - OTHER CHANGES TO USE OF SYSTEM CHARGING METHODOLOGY TEXT	8

Executive Summary

This paper sets out for consultation National Grid's proposed modification to the Use of System Charging Methodology to introduce a new capacity "proxy" measure for calculating TNUoS charges for half-hourly metered demand. This paper is published on the National Grid website at the following address:

www.nationalgrid.com/uk/indinfo/charging/mn_modifications.html

1. Introduction

National Grid is obliged under the Transmission Licence:

- (i) to make revisions to the Charging Statements in order that the information set out in these statements shall continue to be accurate in all material respects;
- (ii) to keep the Use of System Charging Methodology at all time under review;
- (iii) to make such modifications of the Use of System Charging Methodology as may be requisite for the purpose of better achieving the relevant objectives, which are:
 - a. to facilitate effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;
 - b. to result in charges which reflect, as far as reasonably practicable, the costs incurred by National Grid in its Transmission Business; and
 - c. to take account of the developments in National Grid's Transmission Business.

In addition National Grid is obliged under Condition C7C of its Transmission Licence to ensure that National Grid shall not make charges which unduly discriminate between classes of customer.

Before making a modification to the Use of System Charging Methodology, National Grid is required by the Transmission Licence to consult CUSC Users on the proposed modification and allow them a period of not less than 28 days within which to make written representations, except with the consent of the Authority.

The purpose of this document is to set out for consultation National Grid's proposal to modify the methodology to better meet the Relevant Objectives in Licence Condition C7A 5 (a) and (b) as listed above under (iii) a and b, and the terms of Condition C7C.

2. Background to the Issue

Currently, the Triad mechanism is used to calculate demand charges for half-hourly metered demand. The Triad is defined as the three settlement periods of highest transmission system demand between November and February of a Financial Year. The half-hour settlement period of peak demand and the two periods of next highest demand must be separated from each other by at least 10 Clear Days.

Through the Charging Review process, the issue of whether the Triad is the most appropriate method for determining half-hourly metered user's demand charges has been the subject of considerable debate. In this debate a number of Users have queried the cost reflectivity and predictability of charges given by the Triad method, and have requested that National Grid review the current Triad basis. National Grid has since carried out analysis work on a number of alternative methods, and this modification proposal is a result of that review work. A more detailed description of the analysis work can be found in the Use of System Charging Review Initial Conclusions Report, which is published on the National Grid website at the following address:

http://www.nationalgrid.com/uk/indinfo/charging/pdfs/use_of_system_initial_conclusions_report.pdf

3. Explanation of the Issues

National Grid has reviewed its current charging methodology with regard to charges applied to half-hourly metered demand, and has looked at a number of alternative approaches against the Relevant Objectives as set out in the Transmission Licence. This work has assessed the drivers of transmission investment in order to ensure that the charging methodologies reflect, as far as possible, the costs incurred in the transmission business. A number of Users have suggested that National Grid's investment in transmission assets is not solely driven by conditions during the very highest peak periods, and therefore that a charging basis based on demand taken during only the highest peak periods is not cost reflective. National Grid have reviewed this issue, and we continue to believe that the most significant driver of transmission investment are demand conditions over the winter peak period, and therefore the charging method should be based on demand taken over that winter peak period.

It has also been suggested that the Triad method can result in very unpredictable costs for certain classes of Users, such as Interconnector Users. Interconnector Users in particular have argued that the unpredictability of the timing of the Triad legs potentially impacts on their ability to carry out arbitrage between connected markets efficiently. In addition, it could be argued that the Triad method potentially results in an element of cross subsidisation between competing parties. Users whose capacity requirement is not continuous, such as those that load manage to avoid taking demand over the Triad legs and interconnectors, can avoid paying any demand Transmission Network Use of System (TNUoS) charges by avoiding taking demand during the few periods of the highest system peak demand. However, as transmission investment costs are not solely driven by conditions during the few periods of highest peak demand, the presence of these Users at other times during the winter peak period may cause transmission investment costs. In these cases other Users, who cannot avoid taking demand during the Triad would, to some extent, be subsidising the transmission capacity used by the more flexible Users.

In order to address these issues it is proposed to use a new basis to establish charges for half-hourly metered demand to be known as the Winter Peak Period method. The Winter Peak Period method would base the charges for each User on the average half-hourly metered demand take over the period 16:00-19:00 on weekdays (excluding Bank Holidays) between November and February inclusive. This method is designed to capture all peak periods, and would provide a better proxy for the "capacity" requirement of each demand User over the winter period in the absence of a clearly defined demand capacity, and would better reflect the costs

incurred in the transmission business in providing this capacity. In addition it would reduce the potential for any cross subsidisation, as Users would be charged based on their demand take over the periods that most significantly drive transmission investment costs. In removing the potential for cross subsidisation and providing more predictability of charges for Users, the proposal should better facilitate competition in electricity supply.

Clearly the proposed method would reduce the incentive for large industrial Users to reduce load over the highest peak periods. Historically such Users have load managed to avoid taking demand over the Triad legs, the result of which has been to reduce the system peak by up to 1700 MW. More recently, however, the amount of load management notified to National Grid¹ has been lower. Load management over the highest peak periods could still be of benefit to the system, and such peak load management could be handled through Balancing Services Agreements as appropriate. The proposed method would, however, provide incentives for all half-hourly metered demand to reduce demand take over the Winter Peak Period, which at present represents around one third of peak demand.

4. Proposed Modifications

Proposed Changes to the Use of System Charging Methodology

It is proposed to change the half-hourly metered demand charging basis to a method which would use each User's average MW demand taken between 16:00 and 19:00 (Settlement Periods 33 to 38), Monday to Friday (excluding Bank Holidays) between November and February inclusive. This period will be known as the Winter Peak Period. Bank Holidays would be excluded as they are not representative of peak demand conditions.

This is proposed for implementation from April 2003 and to apply for the first time in winter 2003/04.

Justification for Proposed Modification

The proposed modification would better meet the Relevant Objective in Licence Condition C7A 5a to facilitate competition in generation and supply in the following ways:

- By providing a methodology which results in more predictable charges for demand users.
- By better reflecting the capacity requirement of each user over the period that drives the majority of transmission costs, thus reducing the potential for cross subsidisation between half-hourly metered demand users.
- By providing suppliers with the opportunity to offer tariffs to all half-hourly metered customers which encourage load management over the winter peak period

The proposed modification would better meet the Relevant Objective in Licence Condition C7A 5b to reflect, as far as reasonably practicable, the costs incurred in the transmission business in the following way:

¹ Paragraph OC1.5.5.2 of the Grid Code obliges Suppliers to notify National Grid of any Customer Demand Management that may result in a demand changes of 12MW or more averaged over any Settlement Period.

- By better reflecting each half-hourly metered demand user's contribution to demand over the periods which drive transmission investment costs.

The modification would also ensure that National Grid's charges do not discriminate between similar classes of customer as required under Condition C7C of the Transmission Licence by reducing the potential for cross subsidisation between half-hourly metered demand users.

Implementation date

1 April 2003.

Proposed Changes to the Statement of the Use of System Charging Methodology

It is proposed that the Statement of the Use of System Charging Methodology be modified in line with the agreed methodology. The majority of changes to the methodology would be in Chapter 4, which describes Demand TNUoS charges, and some suggested text for Chapter 4 in line with the proposal is shown in Appendix 1. Other consequential changes are summarised in Appendix 2.

Proposed Changes to the Statement of Use of System Charges

The Statement of Use of System Charges will be updated with the new tariffs which are required to be delivered with 2 months' notice to Users. National Grid has given Ofgem 150 days notice of its intention to amend Use of System charges as required by the Transmission Licence.

Indicative Impact on the Use of System Charges

The precise impact of the new proposal on system demand would depend on how the demand taken by half-hourly metered demand users over the winter period changes as a result of the different charging basis. However, the proposed method would result, all other things being equal, in each User being charged on the basis of a lower MW figure than under the Triad method, as the figure would be averaged over a much greater number of periods. For this reason the zonal demand tariffs would increase to ensure that the same revenue is recovered. As the base over which charges would be recovered would be approximately 8-10% lower (based on historical data) than under the Triad method, the zonal tariffs would, on average be approximately 8-10% higher.

Impacts on Other Industry Documents

None.

5. Responses to this Consultation

Comments and views are invited on all the issues raised in this consultation document. In order that your comments and views are included in National Grid's report to the Authority, responses must be received by **9th December 2002**. If you wish to provide comments on this review, then responses are welcome via e-mail to:

Mark.lissimore@uk.ngrid.com

Or alternatively, written comments may be addressed to:

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If you have further queries, please do not hesitate to contact Mark on **024 7642 3230**.

Appendix 1 – Proposed Amendment to Chapter 4 of the Use of System Charging Methodology

Chapter 4: Demand Charges

This modification proposal would not result in any changes to paragraphs 4.1 or 4.2 of the Use of System Charging Methodology. The proposed changes will affect the wording of Chapter 4 from paragraph 4.3 to 4.8, and suggested wording is shown below.

Basis of Demand Charges

- 4.3 The values of **Winter Peak Period** demand (kW) and energy consumption (kWh) to be multiplied by the relevant demand or energy consumption tariff, for the calculation of demand charges, is set out below.

Supplier BM Unit

- 4.4 The demand charges for a Supplier BM Unit will be based on:
- The average of the Supplier BM Unit's half-hourly metered demand during the Winter Peak Period (and the kW tariff), *and*
 - The average of the metered import during the Winter Peak Period by all the Exempt Export BM Units belonging to the same Trading Unit as the Supplier BM Unit (and the kW tariff), *and*
 - The Supplier BM Unit's non half-hourly metered energy consumption over the period 16:00 hrs to 19:00 hrs inclusive every day over the Financial Year (and the kWh tariff), *less*
 - Any netting-off according to the rules described in Netting-Off Demand Charges – *this section would be revised as appropriate to replace references to Triad to refer to the Winter Peak Period. The Netting-Off Rules may, however, be revised by Modification UoSCM-M-07, which deals with the Treatment of embedded LEGs and Distribution Interconnectors.*

Licensable Power Station

- 4.5 The demand charges for a Licensable Power Station will be based on the average of the net metered import of the Power Station (including metered additional load) during the Winter Peak Period.

Exempt Export BM Unit in a Trading Unit Without Any Supplier BM Units

- 4.6 The demand charges for an Exempt Export BM Unit in a Trading Unit without any Supplier BM Units will be based on the average of the net metered import of the Exempt Export BM Unit during the Winter Peak Period.

Interconnector

- 4.7 The basis of the demand charges for an Interconnector will be the average net metered import of the Interconnector during the Winter Peak Period

(including interconnector errors with the exception of Emergency Assistance actions).

The Winter Peak Period

- 4.8 The Winter Peak Period is the shorthand way of describing the basis for half-hourly metered demand changes. The Winter Peak Period is the period 16:00 to 19:00 (Settlement Periods 33 to 38) hours, between Monday and Friday inclusive (excluding Bank Holidays), between November and February of the Financial Year inclusive.

Appendix 2 - Other Changes to Use of System Charging Methodology text

Changes would also be required to other sections of the charging methodology text. This section briefly summarises those changes.

Chapter 1

Chapter 1 would be updated to reflect the changes made to the Charging Methodologies for April 2003.

Chapter 2

Paragraph 2.27 would be amended to change the use of total forecast Triad demand to total forecast Winter Peak Period demand.

Chapter 3

Chapter 3 would be amended as follows:

- 3.2 would be amended such that in the derivation of the energy consumption tariff the parameter $NHHD_F$ would refer to the forecast of non half-hourly metered Winter Peak Period Demand, rather than Triad.

Chapter 4

Aside from the draft text shown above, Chapter 4 would change as follows:

- 4.9 – 4.17 All references to Triad would be changed to Winter Peak Period. However, these changes are dependent on the outcome of modification proposal UoSCM-M-07.
- 4.19 would be amended to refer to Winter Peak Period rather than Triad.
- 4.20 would be removed
- 4.22 would be amended to refer to Winter Peak Period rather than Triad.

Chapter 5

Chapter 5 would be amended as follows:

- Paragraphs 5.4, 5.6 and 5.7 would be amended to change the use of total forecast Triad demand to total forecast Winter Peak Period demand. However, these changes are dependent on the outcome of modification proposal UoSCM-M-06.
- In paragraphs 5.13 and 5.15 references to Triad would be removed. However, these changes are dependent on the outcome of modification proposal UoSCM-

M-06.

- 5.17 would be amended to change the use of total forecast Triad demand to total forecast Winter Peak Period demand. Again, this change is dependent on the outcome of modification proposal UoSCM-M-06.

Chapter 6

Chapter 6 would be amended as follows:

- 6.2 i and ii would be amended to change the use of total forecast Triad demand to total forecast Winter Peak Period demand.
- 6.2 iii, iv and v will be amended to change the use of total forecast Triad demand to total forecast Winter Peak Period demand. However, these changes are dependent on the outcome of modification proposal UoSCM-M-06.
- 6.2 vi would be amended to add a requirement on Interconnector Asset Owners to provide a forecast of demand over the Winter Peak Period.

Appendix TN-4

Appendix TN-4 would be amended to change all references to triad to Winter Peak Period.