



National Grid

AMENDMENT REPORT

CUSC Amendment Proposal CAP045

Cost reflective reactive power default payment rate indexation

The purpose of this report is to assist the Authority in their decision of whether to implement Amendment Proposal CAP045

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|---------------|---------------------------|
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1.0 SUMMARY AND RECOMMENDATIONS

- 1.1 CUSC Amendment Proposal CAP045 proposes that the reactive power default payment rate is indexed from April 2004 using an index derived from a composite of indices associated with costs attributed to the provision of reactive power. It is proposed that the index is calculated using 50% weighting of monthly RPI to represent wear and tear and labour costs and 50% of a monthly wholesale price index to represent lost opportunity and efficiency (energy) costs.
- 1.2 CAP045 was proposed by Innogy and submitted to the Amendments Panel on 21st February 2003. The Panel actioned the Balancing Services Standing Group (BSSG) to act as a Working Group to consider CAP045 and report back to the March CUSC Panel meeting. Following sign off of the BSSG's report on CAP045 at the March Panel meeting, the CAP045 Consultation Document was circulated on 1st April 2003 to CUSC Parties, Panel Members and interested parties, with comments requested by close of business on 22nd April 2003. In response to the consultation 6 representations were received, two of which put forward Alternative Amendments which are detailed in this report.

National Grid Recommendation

- 1.3 National Grid recommends that Alternative Amendment (B) as detailed in this Amendment Report is implemented with effect from 1st April 2004.
- 1.4 Both the Proposer of the CAP045 Proposed Amendment and a number of respondents to the CAP045 consultation noted that in order to facilitate the next Reactive Power Tender Round it would be beneficial if CAP045 received determination prior to the date for submission of Tenders for the 12th Tender Round, which is 30th May 2003.

2.0 INTRODUCTION

- 2.1 This Amendment Report has been prepared and issued by National Grid under the rules and procedures specified in the Connection and Use of System Code (CUSC) as designated by the Secretary of State. It addresses issues concerning the introduction of a cost-reflective default payment rate indexation for reactive power.
- 2.2 Further to the submission of Amendment Proposal CAP045 (see Annex 1) and the subsequent wider industry consultation that was undertaken by National Grid in accordance with the CUSC, this document is addressed and furnished to the Gas and Electricity Markets Authority ("the Authority") in order to assist them in their decision whether or not to implement Amendment Proposal CAP045 or the Alternative Amendments.
- 2.3 This document outlines the nature of the CUSC changes that are proposed by the Proposed Amendment and the two Alternative Amendments. It incorporates recommendations from National Grid and members of the Amendments Panel (where such views have been provided). Copies of all representations received in response to the consultation on CAP045 are included at Annex 4 to this document, together with a summary of the representations received.
- 2.4 This Amendment Report has been prepared in accordance with the terms of the CUSC. An electronic copy can be found on the National Grid website, at <http://www.nationalgrid.com/uk/indinfo/cusc>

3.0 DESCRIPTION OF THE PROPOSED AMENDMENT

3.1 Currently, the reactive power default payment rate is indexed on an annual basis by RPI. This mechanism expires on 31st March 2004.

3.2 Amendment Proposal CAP045 proposes that the index would be:

- Derived from a composite of indices reflecting the costs associated with reactive power provision;
- Applied monthly rather than annually; and
- Calculated ex-post rather than ex-ante.

Composite of indices

3.3 Amendment Proposal CAP045 proposes that the index be calculated using:

- 50% weighting of monthly RPI to represent wear and tear and labour costs; and
- 50% weighting of a monthly wholesale power price index to represent lost opportunity and efficiency (energy) costs.

3.4 The Amendment Proposal further proposed that the wholesale price index be calculated in the same manner as the Scottish energy price component. This is derived from the weighted EFA month ahead price indices published by Heren, Argus, Platts and Spectron.

3.5 The wholesale power price index would therefore be calculated using:

- 20% weighting of the cumulative OTC baseload month ahead Petroleum Argus Index;
- 20% weighting of the cumulative OTC baseload month ahead Heren index;
- 20% weighting of the cumulative OTC baseload month ahead Platts power index; and
- 40% weighting of the cumulative OTC baseload month ahead Anderson Spectron Power Index (ASPI).

3.6 In respect of the power price index, the 'base' period chosen (against which all subsequent indexation is calculated) is critically important in respect of calculating the index going forward. This is a particular issue if the price derived from the chosen period is particularly high or low. In respect of the Proposed Amendment, the baseline period is an annual average of the power price index (from October 2002 to September 2003).

Working Group Discussions

3.7 In acting as a Working Group in relation to CAP045, the BSSG considered each of the elements of the Amendment Proposal. These are considered below, along with the view of the BSSG.

Composite of indices

- 3.8 The BSSG debated the 50:50 weighting between RPI and power. The group discussed whether a 50% weighting for RPI was appropriate, particularly in the light of the views expressed by Ofgem in their determination on CAP019. The Proposer stated that RPI was a good index to account for changes in both labour and wear and tear costs, and that 50% seemed appropriate.
- 3.9 The BSSG also debated how the indices were 'baselined' i.e. what figure was used as the initial baseline from which all further months will be baselined. In respect of the RPI element, a March 2003 baseline was considered to be appropriate, to ensure that the payment rate was re-established to the level immediately prior to 1st April 2004.
- 3.10 The BSSG also discussed the 'base' period for the power price index and agreed that this was particularly important, as it will affect the calculation of the index going forward. To aid clarification for the purposes of the CAP045 Consultation document, further analysis was carried out to examine the likely behaviour of the proposed index and is attached at Annex 5 to this Amendment Report. This analysis was prepared by National Grid and discussed and agreed with the Proposer.

Monthly indexation

- 3.11 In general, the BSSG supported a move to monthly indexation as this would more accurately track cost variations across the year.
- 3.12 National Grid highlighted that there would be an additional overhead associated with calculating 12 indices per annum rather than one, however the computer systems associated with settlement of reactive power would not need amending to accept monthly changing prices.

Ex-post application

- 3.13 As proposed CAP045 would mean that the default reactive power payment rate would not be finalised in advance of the month to which it applied. This is because the RPI for a particular month is not published until around the 15th of the subsequent month. In general the BSSG were comfortable with this.
- 3.14 However National Grid raised a concern that the payment rate may not be finalised in time to ensure that the final statements reflected the correct rate. If this were the case then an additional overhead would be incurred performing a month on month reconciliation which would not be desirable.

Other issues

- 3.15 National Grid noted that additional resource would be required to establish and then track the relevant power price indices as no electronic data feed is currently sourced in respect of the data required.

4.0 IMPLEMENTATION AND TIME-SCALES

- 4.1 If the Authority is minded to give approval to the Proposed Amendment, it should become effective from 1st April 2004. The Proposer and a number of respondents to the consultation advocated early determination of CAP045 to remove uncertainty from the next reactive tender round which concludes on 30th May 2003.

5.0 IMPACT ON THE CUSC

- 5.1 The Proposed Amendment would require amendment of Paragraphs 3 and 4 of Appendix 1 of Schedule 3 of the CUSC.
- 5.2 The legal text required to give effect to the Proposed Amendment is contained at Annex 2 to this Amendment Report.

6.0 ASSESSMENT AGAINST APPLICABLE CUSC OBJECTIVES

- 6.1 The Applicable CUSC Objectives are set out in Paragraph 1 of Condition C7F of the Transmission Licence. CUSC Amendments Proposals should better facilitate achievement of the Applicable CUSC Objectives. These can be summarised as follows:

- (a) the efficient discharge by NGC of the obligations imposed on it by the Act and the Transmission Licence;
- (b) and facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.

- 6.2 The Amendment Proposal will facilitate achievement of the Applicable CUSC Objectives as follows:

- (a) By improving the cost-reflectivity of the reactive power default payment rate, the proposal will facilitate the choice of the most economic source of reactive power, thereby facilitating the efficient discharge by the licensee of the obligations imposed on it under the Act and by the Transmission License.
- (b) By improving the cost-reflectivity of the reactive power default payment rate, the amendment will encourage competition in the reactive power market, thereby facilitating effective competition in the generation and supply of electricity.

7.0 IMPACT ON CUSC PARTIES

- 7.1 The Proposed Amendment will facilitate the ability of CUSC Parties tendering to provide Reactive Power services to submit more cost-reflective tenders.

8.0 IMPACT ON CORE INDUSTRY DOCUMENTS

- 8.1 The Proposed Amendment will not impact on Core Industry Documents or other industry documentation.

9.0 ALTERNATIVE AMENDMENTS**Alternative Amendment (A) - Proposed by London Electricity****Description of Alternative Amendment (A)**

- 9.1 Alternative Amendment (A) was proposed as a response to the industry consultation on CAP045. Alternative Amendment (A) retains the proposed methodology of the Proposed Amendment, but proposes that the indexation is carried out on an annual and ex-ante basis rather than monthly and ex-post.
- 9.2 Alternative Amendment (A) proposes that the wholesale power price index is calculated by the mean average of the forecast summer and winter forward prices given by the power indices (Heren, Petroleum Argus, Platts and the Deloitte and Touche Spectron) for all days in the preceding March. The weighting of these indices in Alternative Amendment (A) does not differ from that proposed by the Proposed Amendment. RPI will be applied on a forecast basis as calculated under the current arrangements.
- 9.3 The specification below provided by the Proposer of Alternative Amendment (A), provides further information.

Indexation to be based on 50% RPI and 50% Power Price Index as per original amendment proposal.

The indexation factor I will be calculated as proposed by the original amendment proposal but with alternative definitions of some parameters as detailed below:

$$I = I_y$$

where

I_y = the indexation factor I for the settlement year in question

$$I_y = C * [(0.5 * RPI_y / RPI_x) + (0.5 * PI_y)]$$

where

$$C = RPI_x / RPI_1$$

RPI_x is the RPI for March, 2003 ([])

RPI₁ is as defined in sub-paragraph (a) above

RPI_y is the RPI for March of the immediately preceding twelve month period ending 31st March

and where PI_y is a wholesale power price index determined as follows:-

$$PI_y = [(p * HPI_y / HPI_1) + (q * PAPI_y / PAPI_1) + (r * PPI_y / PPI_1) + (s * ASPI_y / ASPI_1)]$$

Where

HPI_y is the mean average of the forecast summer and winter forward power price as given by the Heren power index for the year in question.

PAP_{1y} is the mean average of the forecast summer and winter forward power price as given by the Petroleum Argus power index for the year in question.

PPI_{1y} is the mean average of the forecast summer and winter forward power price as given by the Platts power index for the year in question.

ASPI_{1y} is the mean average of the forecast summer and winter forward power price as given by the Anderson Spectron power index for the year in question.

NB, the Anderson Spectron power index is now the Deloitte Touche Spectron power index.

and where

*p = 0.2 (subject always to sub paragraph 3.2(b))
q = 0.2 (subject always to sub paragraph 3.2(b))
r = 0.2 (subject always to sub paragraph 3.2(b))
s = 0.4 (subject always to sub paragraph 3.2(b))*

and where

HPI₁, PAP₁, PPI₁, ASPI₁ are as defined by the original amendment proposal.

Paragraph 4 on “information unavailable” in the original amendment proposal will also apply to this alternative.

- 9.4 The legal text to give effect to Alternative Amendment (A) in accordance with the detailed comments made in the consultation response is set out in Annex 3 to this Report.

Assessment Against Applicable CUSC Objectives

- 9.5 The Proposer of Alternative Amendment (A) asserts that annual indexation is adequate for the calculation of reactive power default prices and that it would be inefficient to calculate prices on a monthly basis when there is no obvious benefit to justify the additional administration costs associated with more frequent calculation.
- 9.6 The ex-ante calculation of the indices will provide greater certainty in the provision of reactive power services and will post fewer practical difficulties in respect of settlement. Also, default prices would be available at the time of tender round assessment enabling more economically efficient decisions to be made.

Implementation and Timescales

- 9.7 The implementation and timescale details for Alternative Amendment (A) do not differ from the Proposed Amendment i.e. an implementation date of ¹ April 2004 and early determination in order to remove uncertainty from the next tender round.

Impact on CUSC Parties

- 9.8 The proposed amendment will ensure greater cost reflectivity of default reactive payments. However, the proposal will not allow for within year volatility to be accounted for and uses forecast data as opposed to actual.

Impact on Core Industry Documents

- 9.9 Alternative Amendment (A) will not impact on Core Industry Documents or other industry documentation.

Alternative Amendment (B) – Proposed by National Grid**Description of Alternative Amendment (B)**

- 9.10 Alternative Amendment (B) proposes that the RPI element of the composite of indices is calculated on an ex-ante rather than an ex-post basis. This is due to the short timescales between actual RPI data being published, which is around the 15th – 18th day of each month, and the date of issue of the Final Monthly Statement, which is set out in Paragraph 4.3.2.6 of the CUSC as being on the 18th business day of the month following the month in question. The Proposer of Alternative Amendment (B) raises concerns that these timescales present a risk that Reactive payments may not be finalised in time, which would potentially require a form of ongoing reconciliation for default reactive payments. Alternative Amendment (B) does not propose to replace forecast numbers with actuals once they become available as it is the view of the Proposer that the forecast and actual RPI figures on a monthly basis do not differ materially.

Assessment Against Applicable CUSC Objectives

- 9.11 For the reasons noted above, the Proposer of Alternative Amendment (B) asserts that the short timescales imposed by the use of actual RPI data in the Proposed Amendment may lead to inefficiencies in the process if a form of ongoing reconciliation is required. The Proposer notes that it is their view that the use of RPI calculated on a monthly ex-ante basis enables Alternative Amendment (B) to better facilitate achievement of the Applicable CUSC Objectives over the Proposed Amendment by enabling National Grid to fulfil the obligations imposed on it under the Act and by the Licence without a reducing the benefit of the of improved cost-reflectivity of the reactive power default payment rate.

Implementation and Timescales

- 9.12 The implementation and timescale details for Alternative Amendment (B) do not differ from the Proposed Amendment i.e. early determination in order to remove uncertainty from the next tender round with an implementation date of 1st April 2004.

Impact on CUSC Parties

- 9.13 Alternative Amendment (B) will facilitate the ability of CUSC Parties tendering to provide Reactive Power services to submit more cost-reflective tenders. The use of RPI calculated on an ex-ante basis, rather than ex-post (as in the Proposed Amendment) will not adversely affect the ability of CUSC Parties to submit cost-reflective tenders. Moreover the impact of using forecast RPI on National Grid as a CUSC Party would be that the risk that settlement of

reactive payments not being finalised on time is mitigated and hence National Grid is able to more efficiently discharge it's obligations.

Impact on Core Industry Documents

- 9.14 Alternative Amendment (B) will not impact on Core Industry Documents or other industry documentation.

10.0 VIEWS AND REPRESENTATIONS

This Section contains a summary of the views and representations made by consultees during the consultation period in respect of the Proposed Amendment.

Summary of Views of Panel Members

- 10.1 No views received during consultation.

View of Core Industry Document Owners

- 10.2 No responses to the CAP045 Consultation were received from Core Industry Document Owners or owners of other Industry documents.

Responses to Consultation

- 10.3 The following table provides an overview of the representations received. Copies of the representations are attached in Annex 4.

| Reference | Company | Supportive | Comments |
|--------------|--|------------|---|
| CAP045-CR-01 | British Energy plc | Yes | Generally supportive of Proposed Amendment. Do not support an alternative based on forecast RPI as they note that the legal drafting for the Proposed Amendment includes provisions for dealing with instances of unavailability of information. |
| CAP045-CR-02 | British Gas Trading Limited | Yes | Support implementation of Proposed Amendment on 1 April 2004. Believe the use of indicative RPI will lead to inaccuracies in payments to service providers and an increase in overheads. |
| CAP045-CR-03 | Innogy plc, npower Limited, Innogy Cogen Trading Limited, npower Direct Limited, npower Northern Limited, npower Yorkshire Limited | Yes | Support the Proposed Amendment as a pragmatic and enduring solution to reactive power default payment rate indexation. Also believe that the Alternative Amendment (use of forecast RPI) may have some practical benefit for settlement and would better meet the objectives, but note that they are unconvinced that the potential inefficiencies in the Proposed Amendment are material. The respondent notes that the Proposed Amendment should be implemented as soon as possible to facilitate the next reactive power tender round. |

| Reference | Company | Supportive | Comments |
|--------------|------------------------------|--------------|--|
| CAP045-CR-04 | London Electricity Group plc | No | Propose an Alternative Amendment which uses annual rather than monthly indexation and ex-ante rather than ex-poste calculation. Believe that the Proposed Amendment does not address the fundamental failings of the existing reactive market mechanism which lacks transparency of the locational value of the service, clear investment signals and cost reflectivity through combined payment for capacity and utilisation. |
| CAP045-CR-05 | Powergen UK plc | Yes | Generally support the Proposed Amendment. Believe that NGC should be required to publish the 12 NGC monthly indices with each tender pack that will be used to evaluate tenders received. Do not support the use of forecast RPI which it is believed would introduce further uncertainty into the calculation. |
| CAP045-CR-06 | National Grid | In principle | NGC supports the principle of the Proposed Amendment, but raises an Alternative Amendment which uses forecast rather than actual RPI in the composite index to allow sufficient time for the settlement of payments to be undertaken. |

10.4 National Grid received a total of six responses to the consultation on CUSC Amendment Proposal CAP045. In general, the majority of responses were supportive of the Proposed Amendment as better facilitating achievement of the Applicable CUSC Objectives. Two respondents (LE & NGC) raised Alternative Amendments.

10.5 One respondent noted that they were disappointed that the issues of the current CUSC timescales being too short have only just come to light.

50:50 weighting of monthly RPI and monthly wholesale power price

10.6 All respondents supported a 50:50 weighting of monthly RPI and monthly wholesale power price. A number of respondents felt that the move away from 100% RPI was an improvement on the current situation and one of additionally commented that in support of the continued use of RPI in the indices.

10.7 One respondent noted that the CAP045 Consultation document incorrectly stated that the Proposer of CAP045 believed that power prices best reflect wear and tear, lost efficiency and lost opportunity costs. National Grid acknowledges this error and would reiterate the belief of the respondent that as set out in the Amendment Proposal form, the wholesale power price represents lost opportunity and reduced efficiency (energy) costs only and that the RPI component is intended to reflect wear and tear and labour costs.

Calculation of the wholesale power price index using the weightings set out in the Amendment Proposal

10.8 All respondents supported the proposed weightings for the calculation of the wholesale power price index as set out in the Proposed Amendment. A number of respondents noted that the proposed calculation is a proven approach as they are based on those used in the Scottish Energy Price Component.

- 10.9 One respondent (BE) noted that although the proposed mix avoids the issue of one index distorting the overall index, it seems over-complex for what may be little materiality as compared with using a single index.

Use of March 2003 RPI and an average of October 2002 to September 2003 power prices as a baseline for the wholesale power price index and the RPI element

- 10.10 All respondents supported using a baseline of March 2003 RPI for the RPI element and an average of October 2002 to September 2003 power prices as a baseline for the wholesale power price index element.
- 10.11 One respondent (LE) in proposing Alternative Amendment (A), noted that the proposed baseline would be appropriate for monthly indexation, but if an annual scheme was put forward (as in Alternative Amendment (A)), then the baselines should be reconsidered. National Grid subsequently contacted the respondent to clarify the appropriate baselines for Alternative Amendment (A), the respondent provided the information contained in paragraph 9.4 above.

Monthly vs. Annual indexation

- 10.12 The majority of respondents supported monthly indexation over annual. Two respondents specifically noted that indexation on a monthly basis will take account of short-term price movements (including seasonal variations), and will also increase the cost reflectivity of provision of the service.
- 10.13 Whilst supporting monthly indexation, one respondent felt that the move to monthly indexation would necessitate National Grid being required to publish with each tender pack, the 12 National Grid monthly indices for each tender period that will be used to evaluate tenders received.
- 10.14 National Grid believes that it would be inappropriate for National Grid to send out monthly indices for each tender period as put forward during the consultation. National Grid notes that the information is available in the public domain and for commercial reasons it would be more appropriate for all parties to undertake such forecasting themselves.
- 10.15 A further respondent proposed Alternative Amendment (A), which puts forward annual indexation. This is based on a belief that there is no obvious benefit for the introduction of monthly indexation which would justify the additional administration costs associated with the more frequent calculation.

Ex-post application

- 10.16 The majority of respondents were supportive of ex-post application of the reactive power indexation. One respondent felt that not being aware of the default price at the time of tender assessment would be only a minor difficulty and noted that the Power price forward curves and RPI forecast data would be available to enable the index to be forecast with considerable certainty. The same respondent believed that it would be less efficient to base tender decisions on an ex-ante price that cannot reflect seasonal variations in the cost of the service.
- 10.17 However, one respondent felt that ex-ante calculation would provide greater certainty in the provision of services and pose fewer settlement difficulties. The respondent also noted that an ex-ante arrangement would allow default prices to be available at the time of tender round assessment and enable more economically efficient decisions to be made.

Use of forecast or actual RPI (“Option B in the CAP045 Consultation Document and subsequently the basis of Alternative Amendment (B)

- 10.18 The majority of respondents to the CAP045 consultation did not believe that the use of forecast RPI was appropriate. One respondent noted that the legal drafting to give effect to the Proposed Amendment made provision for dealing with the unavailability of information and put forward a potential solution of using a month in arrears figure if it is a potential problem.
- 10.19 One respondent (BGT) felt that the use of forecast RPI data would lead to inaccuracies in payments and increases in overheads. National Grid believes that as set out in Paragraph 9.6 above the use of forecast data with no provision for a reconciliation process would reduce the resource burden. National Grid also believes that there is no material difference between forecast and actual RPI on a monthly basis.

Appropriateness of a 1st April 2004 Implementation date

- 10.20 All respondents supported the proposed implementation date of 1st April 2004. Two respondents noted that the proposed implementation date was appropriate but that a determination on CAP045 should take place as soon as possible to facilitate the October Reactive power tender round, which closes to submissions on 30th May 2003.

11.0 NATIONAL GRID RECOMMENDATION

- 11.1 National Grid recommends that Alternative Amendment (B) is approved as soon as practicable to facilitate the submission of tenders before 30th May 2003, with an implementation date of 1st April 2004.
- 11.2 National Grid is supportive of the principle of the Proposed Amendment to establish enduring reactive indexation arrangements which have a basis other than 100% RPI.
- 11.3 National Grid also supports the 50:50 RPI and Power Price combination and the weightings for calculation of the wholesale power price. National Grid also supports the use of March 2003 RPI as a baseline RPI and an average of October 2002 to September 2003 power prices as a base for the wholesale power price index as it ensures that the base price is reflective of power prices across the whole year.
- 11.4 However, on the recommendation that Alternative Amendment (B) is approved for implementation is made on the basis of concerns over the settlement of reactive services given that this may only take place once the index is finalised.
- 11.5 National Grid does not support Alternative Amendment (A) as there is some concern that the use average winter – summer prices may not be truly reflective of power price movements across the year. National Grid also notes that the mechanism as proposed by Alternative Amendment (A) was not raised for discussion at the CAP045 Working Group (BSSG).

12.0 COMMENTS ON DRAFT AMENDMENT REPORT

- 12.1 National Grid received two responses to the Draft Amendment Report, identifying a number of minor administrative errors, which have been amended.

- 12.2 London Electricity additionally commented that the point about the disappearance of an index which is noted prior to the text to give effect to Alternative Amendment (A) in Annex 3, would apply equally to the Amendment Proposal and Alternative Amendment (B). National Grid agrees with LE's comment that the disappearance of an index applies equally to the Amendment Proposal and the Alternative Amendments. However National Grid believes that the issue of the disappearance of an index part way through the month is more pertinent to Alternative Amendment (A) where the whole years indexation is based on one month alone. National Grid believes that the changes made to the legal text for Alternative Amendment (A) have addressed this.

ANNEX 1- AMENDMENT PROPOSAL FORM

| | |
|---|----------------|
| CUSC Amendment Proposal Form | CAP:045 |
| Title of Amendment Proposal: | |
| Cost-reflective reactive power default payment rate indexation. | |
| Description of the Proposed Amendment <i>(mandatory by proposer):</i> | |
| <p>It is proposed that the reactive power default payment rate is indexed from April 2004 using a base for the index as 2003/04. The index would be</p> <ol style="list-style-type: none"> 1. Derived from a composite of indices reflecting the costs associated with reactive power provision 2. Applied monthly rather than annually 3. Calculated ex-post rather than ex-ante. <p>It is proposed that the index is calculated using</p> <ul style="list-style-type: none"> <input type="checkbox"/> 50% weighting of monthly RPI to represent wear and tear and labour costs <input type="checkbox"/> 50% weighting of a monthly wholesale power price index to represent lost opportunity and efficiency (energy) costs <p>It is further proposed that the wholesale power price index is calculated in the same manner as the Scottish energy price component¹. This is derived from the weighted EFA month ahead price indices published by Heren, Argus, Platts and Spectron.</p> <p>The wholesale power price index would therefore be calculated using:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 20 per cent weighting of the cumulative over the counter ("OTC") baseload month ahead Petroleum Argus index; <input type="checkbox"/> 20 per cent weighting of the cumulative OTC baseload month ahead Heren index; <input type="checkbox"/> 20 per cent weighting of the cumulative OTC baseload month ahead Platts power index; and <input type="checkbox"/> 40 per cent weighting of the cumulative OTC baseload month ahead Andersen Spectron Power Index ("ASPI"). <p>National Grid would be required to calculate the default rate on a monthly ex-post basis. It is envisaged that the indices described will be available to enable this calculation within the preliminary settlement run timescales. Where index data is not available, NGC will provide a reasonable estimate of the indexation to apply to payments. Any adjustments to allow for actual data will be included in the payments for the following month.</p> | |
| Description of Issue or Defect that Proposed Amendment seeks to Address <i>(mandatory by proposer):</i> | |
| <p>The costs associated with the provision of reactive power include</p> <ul style="list-style-type: none"> <input type="checkbox"/> Labour and wear and tear costs associated with additional maintenance and component replacements as the result of consequential plant damage. <input type="checkbox"/> Lost output resulting from outages as a consequence of this damage. <input type="checkbox"/> Energy costs incurred due to loss of efficiency whilst providing reactive power. <p>The current indexation of the default rate for reactive power utilisation is due to expire on 31 Mar 2004. From this date, the default payment rate will have no mechanism associated with it that will</p> | |

¹ As described in the OFGEM document 'Administered Scottish wholesale price: monthly indices' www.ofgem.gov.uk/scotland/wholesale_price_indices.htm.

enable it to reflect movements in the cost of the service. The cost reflectivity of the current indexation suffers from being annual and thus cannot reflect significant variations in the costs throughout the year. Furthermore, since it is calculated ex-ante there is a lag between the period for which the indexation is calculated and the period to which it is applied.

The BSSG has debated alternative indexation methodologies. Broad agreement exists within the BSSG on a number of detailed issues associated with indexation, namely:

- some form of indexation for default reactive power utilisation payments is appropriate from April 2004 onwards;
- this indexation should take into account changes in the costs of labour, wear and tear, energy and power;
- indexation could be applied on a monthly basis to reflect the seasonal variation in the costs associated with the production of reactive power.

Impact on the CUSC (*this should be given where possible*):

Revision to CUSC Schedule 3 (Appendix 1, Clause 3 – Indexation).

Impact on Core Industry Documentation (*this should be given where possible*):

None envisaged

Impact on Computer Systems and Processes used by CUSC Parties (*this should be given where possible*):

National Grid would be required to calculate the default rate on a monthly ex-post basis. It is envisaged that the indices described will be available to enable this calculation within the preliminary settlement run timescales. Where index data is not available, NGC will provide a reasonable estimate of the indexation to apply to payments. Any adjustments to allow for actual data will be included in the payments for the following month.

Details of any Related Modifications to Other Industry Codes (*where known*):

None known

Justification for Proposed Amendment with Reference to Applicable CUSC Objectives** (*mandatory by proposer*):

The proposal will facilitate meeting the Applicable CUSC Objectives (as defined in Condition C7F of the Transmission License) as follows: -

(a) By improving the cost-reflectivity of the reactive power default payment rate, the proposal will facilitate the choice of the most economic source of reactive power, thereby facilitating the efficient discharge by the licensee of the obligations imposed on it under the Act and by the Transmission License.

(b) By improving the cost-reflectivity of the reactive power default payment rate, the amendment will encourage competition in the reactive power market, thereby facilitating effective competition in the generation and supply of electricity.

| | |
|---|---|
| Details of Proposer: Organisation's Name: | Innogy plc |
| Capacity in which the Amendment is being proposed: (i.e. CUSC Party, BSC Party or "energywatch") | CUSC Party |
| Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address: | Shona Watt Innogy plc 01793 892634 mailto:shona.watt@innogy.com |

| | |
|---|--|
| Details of Representative's Alternate: | |
| Name: | David Tolley |
| Organisation: | Innogy plc |
| Telephone Number: | 01793 892650 |
| Email Address: | david.tolley@innogy.com |
| Attachments (Yes/No): | |
| If Yes, Title and No. of pages of each Attachment: | |

Notes:

1. Those wishing to propose an Amendment to the CUSC should do so by filling in this "Amendment Proposal Form" that is based on the provisions contained in Section 8.15 of the CUSC. The form seeks to ascertain details about the Amendment Proposal so that the Amendments Panel can determine more clearly whether the proposal should be considered by a Working Group or go straight to wider National Grid Consultation.
2. The Panel Secretary will check that the form has been completed, in accordance with the requirements of the CUSC, prior to submitting it to the Panel. If the Panel Secretary accepts the Amendment Proposal form as complete, then he will write back to the Proposer informing him of the reference number for the Amendment Proposal and the date on which the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, then he may reject the Proposal. The Panel Secretary will inform the Proposer of the rejection and report the matter to the Panel at their next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform the Proposer.

The completed form should be returned to:

Richard Dunn
Panel Secretary
Commercial Development
National Grid Company plc
National Grid House
Kirby Corner Road
Coventry, CV4 8JY
Or via e-mail to: CUSC.Team@uk.ngrid.com

(Participants submitting this form by email will need to send a statement to the effect that the proposer acknowledges that on acceptance of the proposal for consideration by the Amendments Panel, a proposer which is not a CUSC Party shall grant a licence in accordance with Paragraph 8.15.7 of the CUSC. A Proposer that is a CUSC Party shall be deemed to have granted this Licence).

3. Applicable CUSC Objectives** - These are defined within the National Grid Company Transmission Licence under Section C7F, paragraph 15. Reference should be made to this section when considering a proposed amendment.

ANNEX 2 - TEXT TO GIVE EFFECT TO THE PROPOSED AMENDMENT

For the avoidance of doubt, the proposed changes are shown in **RED** marked up against the current version of the CUSC. Coloured underlined text will be inserted, and coloured strikethrough text will be deleted.

Paragraphs 3 & 4 of Appendix 1 - Obligatory Reactive Power Service - Default Payment Arrangements**3. Indexation**

3.1 ~~_____~~ The indexation factor I used in the formulae in paragraph 2 above shall ~~be determined as follows: with effect from 1st April in respect of each subsequent twelve month period ending 31st March, be determined as follows:-~~

~~(a) For all periods up to (and including) 31st March, 2004, I shall with effect from 1st April in respect of each subsequent 12 month period ending 31st March be determined as follows:-~~

$$I = \frac{RP1_2}{RP1_1}$$

where

For the period from (and including) 1st October, 1997 to (and including) 31st March, 1998 $RP1_2 = 155.4$, and thereafter $RP1_2$ is the RPI for March of the immediately preceding twelve month period ending 31st March.

$RP1_1$ is the RPI for March, 1994 (142.5).

~~(b) For all periods from (and including) 1st April, 2004, I shall in respect of each calendar month be determined as follows:-~~

$$I = I_m$$

where

I_m = the indexation factor I for the calendar month in question

$$I_m = C * [(0.5 * RPI_m / RPI_x) + (0.5 * P_m)]$$

where

$$C = RPI_x / RPI_1$$

RPI_x is the RPI for March, 2003 ([])

RPI_1 is as defined in sub-paragraph (a) above

RPI_m is the RPI for the calendar month in question

and where P_m is a wholesale power price index determined as follows:-

$$P_m = [(p * HPI_m / HPI_1) + (q * PAPI_m / PAPI_1) + (r * PPI_m / PPI_1) + (s * ASPI_m / ASPI_1)]$$

Where

HPI_m is the mean average of the OTC baseloads month ahead Heren power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

PAPI_m is the mean average of the OTC baseload month ahead Petroleum Argus power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

PPI_m is the mean average of the OTC baseload month ahead Platts power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

ASPI_m is the mean average of the OTC baseload month ahead Deloitte and Touche Spectron power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

and where

p = 0.2 (subject always to sub paragraph 3.2(b))

q = 0.2 (subject always to sub paragraph 3.2(b))

r = 0.2 (subject always to sub paragraph 3.2(b))

s = 0.4 (subject always to sub paragraph 3.2(b))

and where

HPI₁ is the mean average of the OTC baseload month ahead Heren power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PAPI₁ is the mean average of the OTC baseload month ahead Petroleum Argus power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PPI₁ is the mean average of the OTC baseload month ahead Platts power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

ASPI₁ is the mean average of the OTC baseload month ahead Deloitte and Touche Spectron power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

3.2 For the purposes of sub-paragraph 3.1 above:-

(a) the RPI Index used is the **Retail Price Index** with 1987 = 100 base, and the source of the RPI Index is the monthly Office for National Statistics "Business Monitor MM23"; and

(b) if in respect of any calendar month the mean average of any of the power indices more particularly referred to in sub-paragraph 3.1(b) is incapable of being derived and/or there is a material change in the basis of that power index, then subject as provided below, for the purpose of sub-paragraph 3.1(b) **NGC** shall determine the wholesale power price index PI_m for that calendar month by substituting for the original value of factor p,q,r or s as relates to that power index ("the Affected Factor") the value of zero, and by substituting for the original value of each of the remaining factors p, q, r or s a value which is increased from the original value by a pro rata proportion of the original value of the Affected Factor. Provided

always that if in respect of any calendar month the mean average of each of such power indices is incapable of being derived and/or there is a material change in the basis of each such power index, then **NGC** shall determine the wholesale power price index PI_m for that calendar month by substituting for the value PI_m in the determination of I_m the value RPI_m/RPI_x .

~~The index used is the Retail Price Index (RPI) with 1987 = 100 base. The source of the RPI index is the monthly Department for Education and Employment "Employment Gazette".~~

~~In respect of all periods from (and including) 1st April, 2004 the indexation factor I applicable for the period from (and including) 1st April, 2003 to (and including) 31st March 2004 shall apply.~~

4. **Information Unavailable**

Save where otherwise provided in this Part I, where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I is not available to **NGC** at the relevant time, **NGC** shall calculate payments using **NGC**'s best estimate of the unavailable information or data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the relevant period (including interest thereon at the **Base Rate** from the original date of payment or due date (as the case may be) until the date of such repayment or additional payment).

~~Where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I for any twelve month period ending 31st March is not available to **NGC** at the relevant time, **NGC** shall calculate payments for that twelve month period based upon the amounts payable to **Users** for the immediately preceding twelve month period adjusted by **NGC** to reflect its best estimate of the unavailable information or data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the period from 1st April in such year until the date of such repayment or additional payment (including interest thereon at the **Base Rate**).~~

ANNEX 3 - TEXT TO GIVE EFFECT TO ALTERNATIVE AMENDMENT (A) (Proposed by London Electricity)

For the avoidance of doubt, the proposed changes are shown in **RED** marked up against the current version of the CUSC. Coloured underlined text will be inserted, and coloured strikethrough text will be deleted.

Please note the following:

National Grid has clarified the treatment of a particular index if it disappears part way through March (as noted in the Draft Amendment Report) and the legal drafting has been amended accordingly.

Paragraphs 3 & 4 of Appendix 1 - Obligatory Reactive Power Service - Default Payment Arrangements

3. **Indexation**

3.1 ~~_____~~ The indexation factor I used in the formulae in paragraph 2 above shall ~~be determined as follows: with effect from 1st April in respect of each subsequent twelve month period ending 31st March, be determined as follows:-~~

~~(a) For all periods up to (and including) 31st March, 2004, I shall with effect from 1st April in respect of each subsequent 12 month period ending 31st March be determined as follows:-~~

$$I = \frac{RPI_2}{RPI_1}$$

where

For the period from (and including) 1st October, 1997 to (and including) 31st March, 1998 $RPI_2 = 155.4$, and thereafter RPI_2 is the RPI for March of the immediately preceding twelve month period ending 31st March.

RPI_1 is the RPI for March, 1994 (142.5).

~~(b) _____~~ For all periods from (and including) 1st April, 2004, I shall with effect from 1st April in respect of each subsequent 12 month period ending 31st March be determined as follows:-

$$I = C * [(0.5 * RPI_2 / RPI_x) + (0.5 * PI_y)]$$

~~where~~

$$C = RPI_x / RPI_1$$

~~RPI_x is the RPI for March, 2003 ([])~~

~~RPI_1 is as defined in sub-paragraph (a) above~~

~~RPI_2 is as defined in sub-paragraph (a) above~~

~~and where PI_y is a wholesale power price index determined as follows:-~~

$$PI_Y = \frac{[(p * HPI_Y/HPI_1) + (q * PAPI_Y/PAPI_1) + (r * PPI_Y/PPI_1) + (s * DTSPI_Y/DTSPI_1)]}{DTSPI_Y/DTSPI_1}$$

Where

HPI_Y is the mean average of the Heren power index forecast summer and winter forward power prices for all days in which the index is published during March of the immediately preceding financial year

PAPI_Y is the mean average of the Petroleum Argus power index forecast summer and winter forward power prices for all days in which the index is published during March of the immediately preceding financial year

PPI_Y is the mean average of the Platts power index forecast summer and winter forward power prices for all days in which the index is published during March of the immediately preceding financial year

DTSPI_Y is the mean average of the Deloitte and Touch power index forecast summer and winter forward power prices for all days in which the index is published during March of the immediately preceding financial year

and where

p = 0.2 (subject always to sub-paragraph 3.2(b))

q = 0.2 (subject always to sub-paragraph 3.2(b))

r = 0.2 (subject always to sub-paragraph 3.2(b))

s = 0.4 (subject always to sub-paragraph 3.2(b))

and where

HPI₁ is the mean average of the OTC baseload month ahead Heren power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PAPI₁ is the mean average of the OTC baseload month ahead Petroleum Argus power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PPI₁ is the mean average of the OTC baseload month ahead Platts power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

DTSPI₁ is the mean average of the OTC baseload month ahead Deloitte and Touche Spectron power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

3.2 For the purposes of sub-paragraph 3.1 above:-

- (a) the RPI Index used is the **Retail Price Index** with 1987 = 100 base, and the source of the RPI Index is the monthly Office for National Statistics "Business Monitor MM23";
- (b) if in respect of March (or part thereof) of any preceding financial year the mean average of any of the power indices more particularly referred to in sub-paragraph 3.1(b) is incapable of being derived and/or there is a material change in the basis of that power index, then subject as provided below, for the purpose of sub-paragraph 3.1(b) **NGC** shall determine the wholesale power price index PI_y for that March (or part thereof) by substituting for the original value of factor p,q,r or s as relates to that power index ("the Affected Factor") the value of zero, and by substituting for the original value of each of the remaining factors p q. r or s a value which is increased from the original value by a pro rata proportion of the original value of the Affected Factor. Provided always that if in respect of March (or part thereof) of any preceding financial year the mean average of each of such power indices is incapable of being derived and/or there is a material change in the basis of each such power index, then **NGC** shall determine the wholesale power price index PI_y by substituting for the value PI_y in the determination of I the value RPI_z/RPI_x ;
- (c) "financial year" means each period commencing 1st April to ending 31st March.

~~The index used is the Retail Price Index (RPI) with 1987 = 100 base. The source of the RPI index is the monthly Department for Education and Employment "Employment Gazette".~~

~~In respect of all periods from (and including) 1st April, 2004 the indexation factor I applicable for the period from (and including) 1st April, 2003 to (and including) 31st March 2004 shall apply.~~

4. Information Unavailable

Save where otherwise provided in this Part I, where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I is not available to **NGC** at the relevant time, **NGC** shall calculate payments using **NGC**'s best estimate of the unavailable information or data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the relevant period (including interest thereon at the **Base Rate** from the original date of payment or due date (as the case may be) until the date of such repayment or additional payment).

~~Where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I for any twelve month period ending 31st March is not available to **NGC** at the relevant time, **NGC** shall calculate payments for that twelve month period based upon the amounts payable to **Users** for the immediately preceding twelve month period adjusted by **NGC** to reflect its best estimate of the unavailable information or~~

~~data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the period from 1st April in such year until the date of such repayment or additional payment (including interest thereon at the **Base Rate**).~~

ANNEX 4 - TEXT TO GIVE EFFECT TO ALTERNATIVE AMENDMENT (B) (Proposed by National Grid)

For the avoidance of doubt, the proposed changes are shown in **RED** marked up against the current version of the CUSC. Coloured underlined text will be inserted, and coloured strikethrough text will be deleted.

Paragraphs 3 & 4 of Appendix 1 - Obligatory Reactive Power Service - Default Payment Arrangements

3. Indexation

3.1 ~~_____~~ The indexation factor I used in the formulae in paragraph 2 above shall be determined as follows: with effect from 1st April in respect of each subsequent twelve month period ending 31st March, be determined as follows:-

(a) For all periods up to (and including) 31st March, 2004, I shall with effect from 1st April in respect of each subsequent 12 month period ending 31st March be determined as follows:-

$$I = \frac{RP1_2}{RP1_1}$$

where

For the period from (and including) 1st October, 1997 to (and including) 31st March, 1998 $RP1_2 = 155.4$, and thereafter $RP1_2$ is the RPI for March of the immediately preceding twelve month period ending 31st March.

$RP1_1$ is the RPI for March, 1994 (142.5).

(b) For all periods from (and including) 1st April, 2004, I shall in respect of each calendar month be determined as follows:-

$$I = I_m$$

where

I_m = the indexation factor I for the calendar month in question

$$I_m = C * [(0.5 * FRP1_m / RPI_x) + (0.5 * P1_m)]$$

where

$$C = RPI_x / RPI_1$$

RPI_x is the RPI for March, 2003 ($I = 1$)

RPI_1 is as defined in sub-paragraph (a) above

$FRP1_m$ is the Forecast RPI for the calendar month in question

and where $P1_m$ is a wholesale power price index determined as follows:-

$$P1_m = [(p * HPI_m / HPI_1) + (q * PAPI_m / PAPI_1) + (r * PPI_m / PPI_1) + (s * DTSP1_m / DTSP1_1)]$$

Where

HPI_m is the mean average of the OTC baseload month ahead Heren power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

PAPI_m is the mean average of the OTC baseload month ahead Petroleum Argus power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

PPI_m is the mean average of the OTC baseload month ahead Platts power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

DTSPI_m is the mean average of the OTC baseload month ahead Deloitte and Touche Spectron power index bid and offer prices for all days on which this index is published in the calendar month immediately preceding the calendar month in question

and where

p = 0.2 (subject always to sub-paragraph 3.2 (c))

q = 0.2 (subject always to sub-paragraph 3.2(c))

r = 0.2 (subject always to sub-paragraph 3.2(c))

s = 0.4 (subject always to sub-paragraph 3.2(c))

and where

HPI₁ is the mean average of the OTC baseload month ahead Heren power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PAPI₁ is the mean average of the OTC baseload month ahead Petroleum Argus power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

PPI₁ is the mean average of the OTC baseload month ahead Platts power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

DTSPI₁ is the mean average of the OTC baseload month ahead Deloitte and Touche Spectron power index bid and offer prices for all days on which this index is published during the period from (and including) 1st October 2002 to (and including) 30th September 2003

3.2 For the purposes of sub-paragraph 3.1 above:-

- (a) the RPI Index used is the **Retail Price Index** with 1987 = 100 base, and the source of the RPI Index is the monthly Office for National Statistics "Business Monitor MM23";
- (b) Forecast RPI is as provided monthly by Experian Business Strategies Ltd; and

(c) if in respect of any calendar month the mean average of any of the power indices more particularly referred to in sub-paragraph 3.1(b) is incapable of being derived and/or there is a material change in the basis of that power index, then subject as provided below, for the purpose of sub-paragraph 3.1(b) **NGC** shall determine the wholesale power price index PI_m for that calendar month by substituting for the original value of factor p,q,r or s as relates to that power index ("the Affected Factor") the value of zero, and by substituting for the original value of each of the remaining factors p q. r or s a value which is increased from the original value by a pro rata proportion of the original value of the Affected Factor. Provided always that if in respect of any calendar month the mean average of each of such power indices is incapable of being derived and/or there is a material change in the basis of each such power index, then **NGC** shall determine the wholesale power price index PI_m for that calendar month by substituting for the value PI_m in the determination of I_m the value $FRPI_m/RPI_x$.

~~The index used is the Retail Price Index (RPI) with 1987 = 100 base. The source of the RPI index is the monthly Department for Education and Employment "Employment Gazette".~~

~~In respect of all periods from (and including) 1st April, 2004 the indexation factor I applicable for the period from (and including) 1st April, 2003 to (and including) 31st March 2004 shall apply.~~

4. Information Unavailable

Save where otherwise provided in this Part I, where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I is not available to **NGC** at the relevant time, **NGC** shall calculate payments using **NGC**'s best estimate of the unavailable information of data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the relevant period (including interest thereon at the **Base Rate** from the original date of payment or due date (as the case may be) until the date of such repayment or additional payment).

~~Where any information or data required by **NGC** for the calculation of payments to be made pursuant to this Part I for any twelve month period ending 31st March is not available to **NGC** at the relevant time, **NGC** shall calculate payments for that twelve month period based upon the amounts payable to **Users** for the immediately preceding twelve month period adjusted by **NGC** to reflect its best estimate of the unavailable information or data. Once such information or data is available, **NGC** shall accordingly make all consequential adjustments to the payments from itself to **Users** as soon as reasonably practicable thereafter to reflect any repayment or additional payment so required to be made by one party to the other in respect of the period from 1st April in such year until the date of such repayment or additional payment (including interest thereon at the **Base Rate**).~~

ANNEX 5 – POSSIBLE EFFECTS OF CAP045

As part of the Consultation document, the following was attached to form an illustration as to the effect of CAP045 on the default reactive payment has been provided. The following two examples are based on two scenarios,

- the default reactive price had CAP045 been effective from 1st April 2002, and
- the default reactive price from April 2004, based on forecast data.

Effective from 1st April 2002

This analysis has been based on actual data as recorded during 2002/3. The calculations have been applied to the default price for 2001/2 as calculated under the existing arrangements.

Actual Reactive Indexation

| | Composite Index | % Change | Reactive Default Price | MVArh (2001/2) | £m Reactive Default Monies |
|--------|------------------------|-----------------|-------------------------------|-----------------------|-----------------------------------|
| Mar-02 | 1.225 | | 1.33 | | |
| Apr-02 | 1.173 | 0.958 | 1.274 | 926,359 | 1.18 |
| May-02 | 1.169 | 0.954 | 1.269 | 899,797 | 1.14 |
| Jun-02 | 1.195 | 0.976 | 1.298 | 875,791 | 1.14 |
| Jul-02 | 1.159 | 0.946 | 1.258 | 1,181,041 | 1.49 |
| Aug-02 | 1.107 | 0.904 | 1.203 | 1,058,771 | 1.27 |
| Sep-02 | 1.113 | 0.909 | 1.208 | 935,725 | 1.13 |
| Oct-02 | 1.196 | 0.977 | 1.299 | 868,253 | 1.13 |
| Nov-02 | 1.387 | 1.133 | 1.507 | 1,055,528 | 1.59 |
| Dec-02 | 1.478 | 1.207 | 1.605 | 1,054,850 | 1.69 |
| Jan-03 | 1.481 | 1.209 | 1.608 | 1,067,373 | 1.72 |
| Feb-03 | 1.329 | 1.086 | 1.444 | 787,475 | 1.14 |
| Mar-03 | 1.227 | 1.002 | 1.332 | 870,304 | 1.16 |

Total **£ 15.8**

Forecast default reactive price for 2004/5

This analysis has been based on both actual and forecast data. All base data has been provided where possible from actual sources where this is available. Data for 2004/5 has been based on summer / winter forward prices as per 18th March 2003, which has then been profiled according to 2002/02 prices.

Forecast Reactive Indexation

| | Composite Index | % Change | Reactive Default Price | MVArh (2001/2) | £m Reactive Default Monies |
|--------|-----------------|----------|------------------------|----------------|----------------------------|
| Mar-03 | 1.258 | | 1.386 | | |
| Apr-04 | 1.241 | 0.987 | 1.368 | 926,359 | 1.27 |
| May-04 | 1.273 | 1.012 | 1.403 | 899,797 | 1.26 |
| Jun-04 | 1.235 | 0.982 | 1.361 | 875,791 | 1.19 |
| Jul-04 | 1.175 | 0.934 | 1.295 | 1,181,041 | 1.53 |
| Aug-04 | 1.177 | 0.936 | 1.297 | 1,058,771 | 1.37 |
| Sep-04 | 1.271 | 1.011 | 1.401 | 935,725 | 1.31 |
| Oct-04 | 1.407 | 1.119 | 1.551 | 868,253 | 1.35 |
| Nov-04 | 1.505 | 1.197 | 1.659 | 1,055,528 | 1.75 |
| Dec-04 | 1.507 | 1.199 | 1.661 | 1,054,850 | 1.75 |
| Jan-05 | 1.358 | 1.080 | 1.497 | 1,067,373 | 1.60 |
| Feb-05 | 1.248 | 0.992 | 1.375 | 787,475 | 1.08 |
| Mar-05 | 1.251 | 0.995 | 1.379 | 870,304 | 1.20 |

Total **£ 16.66**

It should be noted that the above data is provided for illustration purposes only, and will not form part of the actual calculations should CAP045 be approved.

ANNEX 6 – COPIES OF REPRESENTATIONS RECEIVED TO CONSUTLATION

This Annex includes copies of any representations received following circulation of the Consultation Document (circulated on 1st April 2003 requesting comments by close of business on 22nd April 2003).

Representations were received from the following parties:

| No. | Company | File Number |
|------------|--|--------------------|
| 1 | British Energy plc | CAP045-CR-01 |
| 2 | British Gas Trading Limited | CAP045-CR-02 |
| 3 | Innogy plc, npower Limited, Innogy Cogen Trading Limited, npower Direct Limited, npower Northern Limited, npower Yorkshire Limited | CAP045-CR-03 |
| 4 | London Electricity Group plc | CAP045-CR-04 |
| 5 | Powergen UK plc | CAP045-CR-05 |
| 6 | National Grid | CAP045-CR-06 |

| | |
|------------------|--------------------|
| Reference | CAP045-CR-01 |
| Company | British Energy plc |

From: Morris John [john.morris@british-energy.com]
Sent: 16 April 2003 17:24
To: Groves, Emma
Cc: Phillips Steve; Capener John
Subject: Consultation CAP045 Response from British Energy

Emma,

The following is the British Energy response to the consultation on changes to reactive power default payment rate indexation:-

1. British Energy is generally supportive of the proposed amendment.
2. A 50:50 weighting of monthly RPI and wholesale power price is deemed a suitable alternative to the existing RPI only methodology.
3. The weightings set out in 4.5 can clearly be used as they are currently used in calculating the Scottish energy price component. Whilst the mix avoids the issue of one index distorting the overall index it does seem to be over-complex for what might be little materiality compared with using a single index.
4. BE believes the proposed baseline will be satisfactory.
5. Monthly indexation will better take account of short term price movements and should be more cost reflective of the service provided.
6. Ex-post application of payment is supported.
7. BE would not support an alternative amendment based on forecast RPI. The legal drafting includes provisions for dealing with individual instances of unavailability of information. Alternatively, if this is seen as a potential regular problem for the monthly RPI index then why not use a month in arrear figure?
8. The proposed implementation date of 1 April 2004 is accepted with the proviso that the amendment should be in place before the October contracting round.

John Morris
Trading Arrangements and Network Access
BE Power & Energy Trading
Barnett Way
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| Reference | CAP045-CR-02 |
| Company | British Gas Trading Limited |

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For the Attention of Emma Groves
- Commercial Development

energy management group

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Tel. (01753) 758156
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Our Ref. CAP045
Your Ref.
22 April 2003

Dear Emma

CUSC Amendment Proposal 45: Cost-reflective reactive power default payment rate indexation

Thank you for the opportunity to comment on this Amendment proposal. British Gas Trading Ltd (BGT) welcome the work carried out by the Balancing Services Standing Group (BSSG) that has led to the development of this proposal. We agree that this proposal will improve on the current baseline and as such support its implementation on 1 April 2004.

We note and support the continued inclusion of RPI within the indices. This solution most accurately reflects the costs involved in provision of mandatory services whilst maintaining a degree of simplicity in approach. It is also an improvement on the current use of RPI alone although we note NGC's concerns with regards to the potential increase in payments. In our view these increases are not material when weighed against the benefits that this new mechanism will bring.

It is our understanding that during the development of this proposal that the existing payment schedule under CUSC was not seen to be a big issue. We are disappointed that it has only just come to light that the current CUSC timescales are too short. We agree a solution is required and support the first of the two options suggested by NGC. To use the option B, indicative RPI data, will inevitably lead to inaccuracies in the payments to service providers and increases in overheads, despite the benefit of a reconciliation process. We recognise that option A will necessitate an Amendment to CUSC but notwithstanding this, we believe the solution is the most efficient.

In summary, we support this amendment proposal, as it will enable payment for reactive power to more accurately reflect the value of the product. In addition, the payment mechanism will bring the reactive power market closer to real time pricing.

We trust these comments are helpful. Should you wish to discuss any of the points raised further please do not hesitate to contact me.

Yours sincerely

Danielle Lane
Contracts Manager

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| Reference | CAP045-CR-03 |
| Company | Innogy plc, npower Limited, Innogy Cogen Trading Limited, npower Direct Limited, npower Northern Limited, npower Yorkshire Limited |

**Innogy's comments on CAP045 Consultation document submitted on behalf of
Innogy plc, npower Limited, Innogy Cogen Trading Limited, Innogy Cogen
Limited, npower Direct Limited, npower Northern Limited, npower Yorkshire
Limited**

CAP045

General

1. As proposer of CAP045, Innogy's view is that it represents a pragmatic and enduring solution to reactive power default payment indexation. Innogy supports the original Amendment proposal but also believes that the Alternative Amendment would better facilitate the CUSC objectives.

The appropriateness of a 50:50 weighting of RPI and wholesale power price

2. The consultation paper incorrectly states that the proposer believes that power prices best reflect the wear and tear, lost efficiency and lost opportunity costs associated with the provision of reactive power. As stated in the amendment proposal, the power price component of the proposed indexation is designed to reflect changes in the lost opportunity costs and reduced efficiency costs. Wear and tear costs and labour costs are reflected by the RPI component. RPI was chosen for wear and tear costs based on historical data showing that the cost of replacement generator rotors and stators has largely risen in line with RPI over the last ten years.
3. The use of a materials index, as suggested by National Grid, was discussed at the BSSG. A consensus was not reached on an appropriate materials index as the only such index suggested was a British index clearly unrepresentative of the world-wide market place in which British companies have a small and declining market share. The use of a separate labour index was also discussed by the BSSG who agreed that the most appropriate index would be the BEAMA Labour (Electrical) index. This index varied by no more than 2% from RPI over the last 10 years. It is therefore our conclusion that RPI can be used as an accurate reflection of changes to both wear and tear, and labour costs.
4. We disagree with National Grid's assertion that there is little loss of efficiency if the generator is operating within its "reactive envelope". Efficiency losses associated with reactive power provision are already recognised in CUSC in the Schedule 3 charging principles. The consensus at the BSSG was that lost efficiency was indeed a major component of the cost of provision of reactive power and should be reflected in any indexation.

Wholesale Power Price Index Weightings

5. The weighting in the wholesale price component are based on those used in the Scottish Energy Price Component. Since the formulation has been approved by Ofgem as representative of England & Wales electricity prices we believe it to be eminently suitable.

Baseline

6. The power price baseline is appropriate since it uses an annual average power price. The RPI baseline of Mar 2003 is appropriate as it is consistent with that used in the last year of the current indexation methodology.

Monthly Indexation

7. The application of a monthly index rather than an annual index has the merit that seasonal variations in the costs of providing reactive power can be reflected.

Ex-post application

8. Although the ex-post application of the index implicit in CAP045 means that the the default price will not be known at the time of tender assessment, this creates only a minor difficulty.. Power price forward curves and RPI forecasts will be readily available to enable the index to be forecast with a considerable certainty. The uncertainties associated with such a forecast will be immaterial in relation to the many other uncertainties involved in the tender assessment (viz. plant availability, running regimes etc.) It would be less efficient to base tender decisions on an ex-ante price that can not reflect seasonal variations in the cost of the service.
9. It would be extraordinary if the System Operator who is continuously analysing active power prices up to one hour before real time was incapable of analysing reactive power price information a day in advance one day a month.

Alternative Amendment using Forecast RPI

10. We recognise that the Alternative Amendment proposed by NGC may have some practical benefit for settlement. However, we remain unconvinced that the potential settlement inefficiencies suggested for CAP045 are material.

Implementation Date

11. Although the Amendment Proposal will take effect from 1 April 2004, it should be implemented as soon as possible in order to facilitate the next reactive power tender round.

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| Reference | CAP045-CR-04 |
| Company | London Electricity Group plc |

From: Judson, Rupert [Rupert.Judson@le-group.co.uk]
Sent: 22 April 2003 16:48
To: Groves, Emma
Subject: CAP045 Consultation Response

Dear Emma,

Please note the following comments in response to the CAP045 consultation on behalf of all the LE Group CUSC parties.

LE Group believe that an alternative amendment should be proposed that retains the proposed methodology of the original proposal but on an annual and ex-ante basis. However, we agree with the other main elements of the proposed amendment for indexation of reactive power default prices. Our detailed comments on each of the elements of the proposal are given below.

Annual rather than monthly indexation.

We do not believe that monthly indexation is necessary for reactive power default prices but that annual indexation is more than adequate for these purposes. It would be inefficient to calculate prices on a monthly basis when there is no obvious benefit in doing so to justify the additional administration costs associated with more frequent calculation.

Ex-ante rather than ex-post calculation.

We do not support the proposal for ex-post calculation of reactive power indexation. We believe that ex-ante calculation of reactive power will provide greater certainty in the provision of reactive power services and will pose fewer practical difficulties in respect of settlement. Under an ex-ante arrangement, default prices would be available at the time of tender round assessment enabling more economically efficient decisions to be made.

50:50 weighting of monthly RPI and monthly wholesale power price. We agree with the view expressed by the BSSG that RPI provides a good index for changes in the costs of labour and maintenance costs and that the power price index would be broadly reflective of the energy efficiency costs of providing reactive power services. We also agree that a 50:50 weighting of these indices will provide a reasonable reflection of the overall costs of providing reactive power.

Calculation of the wholesale power price index using the weightings as set out in Paragraph 4.5 of the consultation document. We believe that the proposed calculation of the wholesale power price index is a reasonable and proven approach.

The appropriateness of March 2003 RPI and an average of October 2002 to September 2003 power prices as a baseline month for the wholesale power price index and the RPI element.

We agree that the proposed baseline periods for RPI and Power Price Indices are appropriate for use with a monthly indexation scheme. However, if an annual scheme were to be put forward as an alternative amendment these baselines would need to be reconsidered to ensure that the default price in the first year was indexed from the baseline price. As discussed at the BSSG, the baseline price taken over a whole year should avoid any adverse effects on the baseline due to short term power price volatility.

Proposed Implementation date of 1 April 2004.

We believe that it is important that there should be some method of indexation in place for reactive power default prices and, given the expiry of the current arrangements on 31 March 2004, an implementation date of 1 April 2004 for any replacement arrangements is appropriate.

Our views on the above issues are based on the relative merits of the proposed default price indexation against the existing or no indexation arrangements. We do not believe that the proposed arrangements address the fundamental failings of the existing reactive market mechanism, which are the lack of:

- transparency of locational value of reactive power services;
- clear investment signals; and,
- cost reflectivity through combined payment for capacity and utilisation.

We hope that you will find these comments useful. If you have any queries please do not hesitate to contact me.

Best regards

Rupert Judson

Transmission Infrastructure & Development Manager

Tel: 0208 266 0433

Mobile: 0797 115 2638

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| Reference | CAP045-CR-05 |
| Company | Powergen UK plc |

Christopher Price
Trading Arrangements



Emma Groves
Commercial
National Grid Company plc
National Grid House
Kirby Corner Road
Coventry
CV4 8JY

April 22nd 2003
Reference

Dear Emma

Response to CAP045 – Cost-reflective Power Default Payment rate Indexation

In general, Powergen supports the implementation of CAP045 as described in the Amendment Proposal, as we believe it will better meet the CUSC objectives in addressing the payment for reactive power.

However, we believe that the move to monthly indexation will necessitate NGC being required to publish with each tender pack, the 12 NGC monthly indices for each tender period that they will use to evaluate tenders received. We believe that publication will be necessary for continued credibility in the tendering process by participants due to the increased number and complexity of variables involved with tendering and payment of reactive power.

Powergen will now comment on the individual questions posed in the consultation document.

We support the weighting of 50:50 for RPI and wholesale power prices and also the method of calculation of the wholesale price.

The use of RPI is a pragmatic approach to take account of changes in labour and wear and tear costs.

The basket of prices of prices to be used for the whole sale price were discussed at length between industry and Ofgem at the start of NETA and therefore participants should be comfortable that this basket will provide a quick and easy approach to calculating the wholesale price.

The historic analysis to date has shown that the use of the proposed 50:50 split and composition of the basket would have had negligible effect on the annual payments awarded for reactive power. Therefore, the composition and split proposed would seem appropriate.

We agree that the proposed dates for the baselining of RPI and wholesale price are appropriate.

The move to monthly indexation is appropriate to reflect changing costs but please note comments made at the start of this response regarding NGC having to publish its own indices as part of the tender pack.

Powergen are happy with the ex-post approach to the calculation and would rather have payment deferred than introduce another uncertainty into the calculation (ie the use of a forecast RPI figure).

We do not believe that an alternative proposal is required and support 1 April 2004 as the proposed implementation date.

If you have any questions with regard to the comments put forward, please do not hesitate to contact me

Yours sincerely

C Price
Trading Arrangements

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|------------------|---------------|
| Reference | CAP045-CR-06 |
| Company | National Grid |

Dear Emma

National Grid Response to CAP 45 Consultation

National Grid welcomes the opportunity to respond to CAP45: Cost reflective reactive power default payment rate indexation.

We remain supportive of the move to establish indexation arrangements which have a basis other than 100% RPI. As part of our “initial views” within the consultation process, we expressed a number of concerns regarding the practicalities associated with monthly reactive indexation based upon a composite index of actual RPI and Power Prices.

In particular, we would like to concentrate our response on the implications associated with settling of reactive contracts that include an ex post calculation of monthly RPI.

RPI data for any particular month is finalised around the 15th- 18th day of each month, and therefore in accordance with the CAP45 proposal, this offers the first opportunity for any settlement of reactive payments to be initiated. In conjunction, the CUSC specifies in paragraph 4.3.2.6 that the Final Monthly Statement is issued on the 18th business day of the month following the month in question. This should contain the finalised reactive payments for the preceding month. These timescales together present a risk that Reactive payments may not be finalised in time, which would then potentially require some form of ongoing reconciliation for default reactive payments. In National Grid’s view, this process would be inefficient.

We would therefore like to propose an Alternative Amendment Proposal which uses forecast RPI rather than actual RPI as part of the monthly calculation. It is our view that forecast and actual RPI figures on a monthly basis do not differ materially, we would not therefore propose to replace forecast numbers with actuals once they became available. It is our view that this Alternative Amendment Proposal would better facilitate the Applicable CUSC objective of “the efficient discharge by the Licensee of the obligations imposed upon it under the Act and by the Licence”.

In order to aid the amendment process, we have attached draft legal text to facilitate this alternative amendment.

Should you wish to discuss this further, please do not hesitate to contact me.

Yours sincerely

Louise Petchell
Commercial Frameworks
National Grid

