

## **Report to the Industry**

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

**UoSCM-M-11**

**Introduction of Year Round TNUoS charges**

10 February 2004

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## **1. INTRODUCTION**

A consultation document for modification proposal UoSCM-M-11 was issued on 12 September 2003. The document set out for consultation National Grid's proposal to modify the Use of System Charging methodology to introduce a non-locational flat year round tariff to recover 10% of the annual Transmission Network Use of System (TNUoS) revenue across daytime hours, specifically daily between 0700hrs and 1900hrs.

It provides consistency with the proposed Connection and Use of System Code (CUSC) Amendment CAP054: "Adoption of Year Round TNUoS charges".

Comments on the modification proposal were invited by 10 October 2003.

## 2. TERMS OF THE ORIGINAL PROPOSED MODIFICATION

### Description of proposed modification to the Use of System Charging Methodology

National Grid proposed to modify the Use of System Charging methodology to introduce a non-locational flat year round tariff to recover 10% of the annual Transmission Network Use of System (TNUoS) revenue across daytime hours, specifically daily between 0700hrs and 1900hrs.

### Explanation of the issue

National Grid undertook analysis of its drivers for transmission investment and drew the following conclusions:

- (i) National Grid's own analysis of the drivers of its transmission investment indicated that 11% was required to meet non-peak related conditions but highlighted there was a degree of subjectivity in its derivation. Hence it was deemed appropriate to recover, in round terms, a 10% level of TNUoS revenue from a year round charge for the remainder of the Price Control period. It was intended that the 10% level would be reviewed for each Price Control period.
- (ii) National Grid's assessment of the drivers of year round TNUoS charges indicated that the vast majority is driven by daytime considerations and thus a charge applied in daytime hours, specifically between 0700hrs and 1900hrs, would be the most cost reflective application of a year round TNUoS charge.
- (iii) National Grid's assessment of potential different options for year round charging deemed that simple application of the annual methodology into distinct seasons or periods would not only require major changes to industry codes and contracts but would present significant risks to system security.
- (iv) The locational nature of year round costs is likely to be different from the locational nature of peak/capacity based costs. Therefore using the peak tariffs to derive locational year round tariffs may introduce inappropriate incentives. Furthermore, any newly introduced model able to derive the relevant locational nature of such costs would introduce a significant and undesirable amount of complexity into the tariff setting process. Hence National Grid believed that a flat charge would avoid inappropriate incentives and retain acceptable transparency, stability and predictability of charges for Users.
- (v) National Grid believed it would remain appropriate for such a year round charge to be levied in the same proportion as peak/capacity based TNUoS charges, for example, if applied for 2003/04 in the ratio circa 27:73 for generation and demand respectively. This would maintain the overall generation/demand balance of transmission revenue recovery i.e. that recovered from connection and TNUoS charges.
- (vi) National Grid believed it would be most appropriate to apply a rolling monthly billing and reconciliation process based on outturn settlement data. This seemed to be most appropriate in the context of administrative considerations for both Users and National Grid as well as providing for

acceptable predictability of cashflow and reasonable credit risk management.

National Grid therefore proposed to introduce a non-locational flat year round p/MWh charge for both generation and demand applied daily between 0700hrs and 1900hrs. Specifically, National Grid proposed to recover 10% of its allowed TNUoS revenue for a relevant year from such a charge.

#### **Justification for proposed modification**

The proposed modification would better meet the Relevant Objective in Licence Condition C7A 5(b) of reflecting the costs incurred by National Grid in its transmission business. This would be achieved by better reflecting the fact that c.10% of incremental investment in transmission assets is driven by year round conditions, rather than system demand peak or peak generation capacity.

#### **Suggested alternatives**

None.

#### **Implementation date**

1 April 2004.

#### **Proposed changes to the Statement of the Use of System Charging Methodology**

An illustration of the impact of this modification on the Statement of the Use of System Charging Methodology was provided in the separate Appendices document<sup>1</sup> published on 12 September. It should be noted that the Appendices document is drafted to assume adoption of CCM-M-07 – “Implementation of Plugs”.

#### **Proposed changes to the Statement of Use of System Charges**

The Statement of Use of System Charges will be updated with the new TNUoS tariffs which are required to be delivered with 2 months’ notice to Users.

#### **Impacts on existing Use of System charges**

Under the proposed modification to recover 10% of TNUoS revenue via Year Round charges, the year round generation charge would be approximately 12.5p/MWh and the year round demand charge would be approximately 34p/MWh.

The impact on “peak” capacity based TNUoS charges would be to reduce zonal generation £/kW tariffs by approximately £0.34/kW (in each zone) and zonal demand £/kW tariffs by approximately £1.11/kW.

There would also be a reduction in NHH zonal demand p/kWh “peak” consumption tariffs of approximately 0.15p/kWh.

<sup>1</sup> Appendices Document “Illustrative Revised Draft of The Statement of the Use of System Charging Methodology” available at [www.nationalgridinfo.co.uk/charging/mn\\_modifications.html](http://www.nationalgridinfo.co.uk/charging/mn_modifications.html)

**Impacts on other Industry Documents**

Metered volume data for the final months of the Charging Year would not be available in time to complete generation charge reconciliation by the end of the Charging Year as required by the CUSC. A CUSC amendment would therefore be required in order to enable reconciliation of year round charges related to generation after the end of the Charging Year. This was raised under CAP054 "Adoption of Year Round TNUoS Charges".<sup>2</sup>

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<sup>2</sup> CAP054: Adoption of Year Round TNUoS Charges Amendment Consultation Document available at [www.nationalgridinfo.co.uk/cusc/admin/scripts/uploads/CAP054\\_Consultation\\_Paper\\_v1\\_0.pdf](http://www.nationalgridinfo.co.uk/cusc/admin/scripts/uploads/CAP054_Consultation_Paper_v1_0.pdf)

### 3. RESPONSES TO THE MODIFICATION PROPOSAL

Comments and views were invited on all the issues raised in the Modification Proposal by 10 October 2003. National Grid received 22 responses, of which two were marked confidential. The non-confidential responses are included in Appendix 1 to this document.

7 respondents supported the proposal and 14 respondents were against. 1 respondent commented generally on the timing of the proposal, but not on the detail.

#### 3.1 Support for the proposal

National Grid received support for the proposal from 7 respondents who agreed with National Grid that a proportion of investment was driven by non-peak conditions and therefore it was more cost reflective for a proportion of use of system revenue to be recovered on a non-peak basis.

#### 3.2 Issues Raised

##### ***Extension of year round charge to all hours in the year***

Two of the respondents that supported the proposal wanted to see the period covered by the charge extended so that it covered all hours in the year, as opposed to the 12 hours per day proposed. The rationale for this suggestion was that the Users believed that the charge should be levied on Users at all times when they use the transmission system to ensure the charge is equitable. The respondent also felt that this would be better for Users from the point of view of administrative and system costs incurred.

*National Grid would like to reiterate the comments it made in the Initial Charging methodologies consultation and in the UoSCM-M-11 consultation document that it feels that it is unlikely that investment would be required for night-time conditions within off peak periods. Further analysis indicated to National Grid that off peak investment requirements almost exclusively relate to daytime periods and predominantly reflect conditions imposed by particular patterns of generation and daytime demand, locally, regionally or indeed nationally.*

##### ***Proposal weakens incentive to load manage***

The proposal was rejected by four respondents who expressed concerns that they represented a weakening of the triad signal to load manage. One of the respondents suggested that this would result in a decrease in load management on the part of customers which in turn could impact security of supply.

*Although clearly there would be a weakening of the signal to load manage, National Grid does not believe that Users who currently load manage to avoid the triad would cease to do so under the revised methodology to such an extent that security of supply would be seriously impacted. This view has not been contradicted to date by the provision of evidence to the contrary.*

##### ***Proposal is not consistent with proposed European Regulation***

One respondent rejected the proposal for the Year Round charge on the basis that it would be in conflict with the proposed EC Regulation on access to the network for

cross-border exchanges in Electricity<sup>3</sup>, proposed for implementation from 1 July 2004, which states “There shall be no specific network charge on individual transactions for declared transits of electricity<sup>4</sup>”.

*National Grid recognises that European Regulation may impact on the TNUoS methodology in future and has highlighted areas of potential impact at previous meetings of the Transmission Charging Methodologies Forum. However, National Grid cannot make decisions on modifications to the charging methodologies based on speculation on the outcome of proposals that have not yet been implemented. In addition, National Grid does not believe that the proposed charge relates to declared “transits” as defined in the Regulation.*

**Proposal potentially discriminates between different classes of User**

Two Users considered the proposal to have a potential for discrimination against certain Users. One gave an example that charges could be transferred between weather sensitive and non-weather sensitive load that might not reflect the end users’ impact on the system. The other suggested that the proposal would result in the transfer of costs from low to high load factor generators.

*As noted in the consultation document, National Grid does not agree that the proposal would result in discrimination between, for example, weather sensitive and non-weather sensitive load. In response to the example given, National Grid notes that air conditioning load is weather sensitive demand and a relatively new phenomenon in the UK and is one of the reasons for the increasing need for transmission investment for off peak considerations. Another example is industrial load, which is largely non-weather sensitive and imposes a year round requirement on the transmission system. As such a change in the allocation of charges is clearly more cost reflective, it cannot be discriminatory by definition. These examples reinforce National Grid’s view that a year round TNUoS charge would better reflect the costs incurred in the transmission business.*

*National Grid accepts that under the proposed methodology there would be some transfer of costs from low to high load factor generators, but does not believe that this would necessarily constitute discrimination, as the change to the methodology has been proposed on the grounds of providing greater cost reflectivity.*

**National Grid recovers over 10% of revenue via NHH energy demand charge**

One User argued that National Grid already recovers over 10% of TNUoS revenue via the NHH demand charge which is an off-peak charge and therefore an additional off peak charge is not required.

*National Grid does not accept this argument as the NHH demand tariffs are derived from the peak TNUoS charging model and are therefore locational peak TNUoS charges applied to wider definition of peak than HH demand. National Grid believes its proposal is a genuine addition to the charging structure and consistent with the concept of applying peak and year round charges to all Users.*

**Interconnector charging**

Two respondents raised issues regarding charging for interconnectors in their responses to the modification proposal. One User stated that it did not believe the

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<sup>3</sup> Draft “Regulation (EEC) No .../2003 of the European Parliament and of the Council on Conditions for Access to the Network for cross-border exchanges in electricity” published 26 June 2003

<sup>4</sup> Article 4 “Charges for access to networks”, paragraph 5

current Triad demand charging methodology meets licence objectives C7A 5(b) or C7A 5(c) (cost reflectivity and taking account of developments in the transmission business respectively), as the User felt that the true cost of development is avoided by managing over triads. The User suggested an alternative charging methodology, whereby imports and exports are charged for through an annual energy charge, as this would meet the licence objective of “costs incurred with developments” and “accounting for system developments”, in the User’s view.

A second User also disagreed with the current methodology, stating that it creates artificial distortions and a high level of uncertainty, leading to reduced export flows over winter. The User reiterated its view that Interconnectors should be treated differently from other Users, due to the security of supply advantages provided by the interconnector. The User suggested that National Grid should have taken the opportunity to bring interconnector charging more in line with the treatment by other European TSOs (Transmission System Operators).

*National Grid has aimed to discuss issues pertaining to all areas of the Use of System charging methodology throughout the Charging Review, including issues that affect Interconnector Users and Interconnector Asset Owners. The issue of interconnector charging has been raised and discussed on a number of occasions throughout the Charging Review process. The issue of the treatment of interconnectors was raised by a User at the July 2002 Use of System and Interconnector Charging workshop<sup>5</sup>, which prompted National Grid to undertake an informal consultation on the issues raised. The User proposed that Interconnectors should be treated differently from other demand Users and that a modification to the charging methodology reflecting this should be brought forward in time for winter 2002.*

*The consultation, entitled “Demand TNUoS charging for the UK-France Interconnector<sup>6</sup>”, asked for views on whether the UK-France Interconnector was sufficiently different from other demand Users to warrant a change to the existing Use of System charging methodology. The paper also provided details of a potential modification to the charging methodology for implementation prior to winter 2002/03. Following responses to the consultation<sup>7</sup>, National Grid concluded in August 2002 that Interconnectors should not be treated differently for winter 2002/03<sup>8</sup>.*

*National Grid reiterated its view that Interconnectors should not be treated differently from other demand Users in its Initial Conclusions Report to the Use of System and Interconnectors Charging Review, published in November 2002<sup>9</sup>. In light of responses to the August consultation, no changes to the treatment of interconnector demand TNUoS charging were proposed for April 2003.*

*The issue of interconnector TNUoS charging was next raised by National Grid in its July 2003 Initial Charging Methodologies consultation document<sup>10</sup>. Following further comments received from Interconnector Users, National Grid invited these Users to*

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<sup>5</sup> AEP Energy Services Ltd presentation available on the Charging website at <http://www.nationalgridinfo.co.uk/charging/pdfs/AEP-triad-presentation.ppt>

<sup>6</sup> Consultation paper available at [www.nationalgridinfo.co.uk/charging/pdfs/Demand\\_TNUoS.pdf](http://www.nationalgridinfo.co.uk/charging/pdfs/Demand_TNUoS.pdf)

<sup>7</sup> Responses available at [www.nationalgridinfo.co.uk/charging/pdfs/Demand-Responses2.pdf](http://www.nationalgridinfo.co.uk/charging/pdfs/Demand-Responses2.pdf)

<sup>8</sup> Conclusions paper available at [www.nationalgridinfo.co.uk/charging/pdfs/Summary\\_conclusions.pdf](http://www.nationalgridinfo.co.uk/charging/pdfs/Summary_conclusions.pdf)

<sup>9</sup> Initial Conclusions Report available at [www.nationalgridinfo.co.uk/charging/pdfs/use\\_of\\_system\\_initial\\_conclusions\\_report.pdf](http://www.nationalgridinfo.co.uk/charging/pdfs/use_of_system_initial_conclusions_report.pdf)

<sup>10</sup> Initial Charging Methodologies consultation document available on the Charging website at [www.nationalgridinfo.co.uk/charging/pdfs/Initial\\_Charging\\_Meths\\_consultation\\_July\\_2003\\_FINAL\\_\(z6\).pdf](http://www.nationalgridinfo.co.uk/charging/pdfs/Initial_Charging_Meths_consultation_July_2003_FINAL_(z6).pdf)

*comment on the application of Triad demand charges and specifically whether they believed that a competition issue existed. Only one Interconnector User's response referred to demand charging for the interconnector and did not specifically refer to the issue of competition. National Grid concluded that there were no grounds to propose changes to the basis of demand charges within the Use of System methodology for April 2004.*

*In response to the suggestion that National Grid should align interconnector charging in England and Wales with the treatment of such charging by European TSOs, National Grid notes that it is bound by the licence objectives contained in its Transmission Licence in force in England and Wales, against which all changes must be assessed.*

*National Grid believes it has taken every opportunity to review the Use of System charging methodology pertaining to interconnector demand charging in an open manner with the industry and to discuss other potential charging options. National Grid's decision not to propose any changes to the methodology for interconnector demand charging has been based on an assessment of any potential changes against its relevant licence objectives and on Users' responses to its consultations, detailed above. National Grid will continue to keep its methodologies under review at all times in line with its licence obligation and, where it believes it would better meet the relevant licence objectives, bring forward modifications to the methodologies. National Grid will also take into account the impact of any relevant European legislation on the charging methodologies.*

#### **Changes are not required**

The changes proposed were deemed unnecessary by one respondent.

*National Grid is required by its Transmission Licence to keep the charging methodologies under constant review and to bring forward modification proposals that it considers would better meet its licence objectives. National Grid believes that this modification would better meet the relevant objective in Licence Condition C7A 5(b) of reflecting costs incurred in its transmission business and has therefore proposed the change in accordance with its Transmission Licence.*

#### **Insufficient supporting information provided regarding cost reflectivity**

Nine respondents commented on the cost reflectivity of the proposal and the analysis and information provided by National Grid in support of this modification.

Two respondents believed it was not clear that the proposed modification to the methodology would reflect costs incurred by National Grid's transmission business. One of the respondents qualified their comments with the suggestion that National Grid's analysis was vague and subjective.

The proposal was not supported by one respondent who felt that insufficient supporting analysis had been provided by National Grid regarding costs and benefits of the charging model or its economic efficiency. The User felt this amounted to a lack of transparency in the choice of model over other potential options and the criteria used in their development. In particular, the User suggested a study should be carried out to ensure that the proposal does not discriminate between classes of User. Two respondents suggested that the proposals had been insufficiently developed by National Grid and required further work before being presented for consultation.

Another User expressed a more general view that National Grid had not given the impact of the modifications sufficient consideration, either individually or in total, and commented that the proposals contain elements which had not been discussed during the charging review process. In addition, the User considered that insufficient information had been made available to allow Users to assess the impact of the changes on their businesses.

Two respondents suggested that the evidence provided by National Grid to date was not transparent and would therefore be insufficient for Users to be sure that costs were accurate and being properly recovered.

One respondent commented that the proposals highlighted the unnecessary complexity of the current charging methodologies and that the modification proposals were of such complexity that it was impossible for industry parties to understand the detail or assess the implications of the proposals on their businesses.

One User noted that the issue of over recovery of charges had not been resolved and raised a number of questions regarding the treatment of over recovery and how the Year Round charges would be levied. Another User suggested that National Grid should bear the risk of overall revenue recovery.

*National Grid believes that this proposal would better meet the relevant objective in licence condition C7A 5(b) of levying charges that reflect the costs incurred by National Grid in its transmission business.*

*It has been National Grid's intention to make the Charging Review process as inclusive as possible to ensure that industry participants are aware of the potential impact of any modification proposals. To this end, National Grid undertook an informal consultation on Within Year charging in June 2003 to gather industry views on the potential introduction of a Within Year Tariff regime from April 2004. National Grid then held an initial charging methodologies consultation in July 2003 to allow Users an opportunity to understand and respond to potential change proposals, before undertaking the formal methodology modification process, and presented its proposals at the Transmission Charging Methodologies Forum (TCMF) in July 2003.*

*With regard to the specific criticism levied at the lack of information provided during development of the Year Round TNUoS proposals, National Grid believes that the information provided in May and July 2003 and in the appendices to the UoSCM-M-11 consultation document was sufficient to explain the reasoning for the introduction of year round charges. In response to the call for a study regarding potential discrimination issues, National Grid wishes to reiterate its statement that it does not believe that this proposal discriminates between any User or class or classes of User.*

*National Grid recognises, however, that Users have subsequently raised issues over certain elements of the proposal and, in response to requests made at the October TCMF, published additional information regarding analysis of cost breakdowns, reproduced in Appendix 2 to this conclusions report. National Grid accepts that this information was provided after the closing date for the UoSCM-M-11 consultation, but notes that Users were offered an opportunity to feed comments specific to the cost breakdown into this consultation report, should they wish to do so.*

*National Grid received comments from one User in response to the additional information provided following the October TCMF meeting (see Appendix 2). The User responded that it felt that the information provided was "too little, too late" and*

*did not, in its view, add any weight to the argument for the proposed Year Round Tariff. The User also noted that it had hoped the additional information would be more detailed, thereby providing more support for the modification proposal.*

*In response to the comments above and those received in response to the original consultation document, National Grid believes that it has provided as much information as possible, given restrictions placed upon it with regards to commercial confidentiality. It would not be possible, for example, for National Grid to reveal current or historic contract costs for specific schemes. In response to claims that National Grid has not justified its rationale for proposing this modification, it is National Grid's responsibility to decide whether a case exists for proposing a change to the methodology and the outcome of any such decisions will be subject to the scrutiny of the Authority who will ultimately have the final say.*

*With regard to a question raised on the treatment of over recovery and the exact nature of levying the year round charge, National Grid does not believe that there would be any need to revise the current mechanism for dealing with under or over recovery. A consumption type charge already exists for NHH demand TNUoS charges and a methodology for reconciliation of this charge is included in the Statement of the Use of System Charging Methodology. In addition, the Illustrative Drafting provided in the Appendices to consultation proposal UoSCM-M-11 refers to matters pertaining to reconciliation in paragraphs 5.11 and 5.12 onwards.*

*In response to the suggestion that National Grid should bear the overall revenue recovery risk, National Grid does not believe that this is strictly a charging methodologies issue, as revenue recovery is governed by National Grid's Transmission Licence. However, in response to the point raised, National Grid does not believe that the User's proposal would give the right incentives and could cause National Grid to err on the side of over recovery when setting TNUoS tariffs.*

*Although National Grid does believe that it has published as much supporting information as possible for this modification, it recognises that it may have been beneficial to have developed the proposal further to allay some concerns expressed by industry participants and respondents to this consultation.*

#### **Proposal does not offer sufficient benefit to be worthwhile**

Three respondents expressed the view that the modification proposal did not offer enough benefit to be worthwhile overall. Although the respondents recognised that the proposal had some merit, for example, increased cost reflectivity, they did not believe that this would outweigh the changes required to industry systems and the negative impact on the stability and complexity of the charging methodology. One User suggested that the proposal would not offer any additional flexibility or have any positive impact on competition or improve the efficient operation of the transmission system. A further two respondents suggested that the proposal would offer no benefit in terms of facilitating competition.

*National Grid recognises the issues raised by Users with regard to the overall benefits offered by this proposal and accepts the view that the merits of improved cost reflectivity may be overshadowed by other detrimental effects, such as the cost of implementing the changes.*

#### **Cost impact of system development**

Five respondents commented on the impact of the proposed modification on industry systems. Three Users commented that the proposal would require changes to suppliers' pricing and billing systems and Customer Service systems, which would

represent a significant additional cost to the suppliers affected. Two of the respondents suggested that these additional costs would act as a barrier to entry for new suppliers and could result in a hastening of market exits.

One User suggested that the additional level of forecasting that would be required by demand and generation customers alike would represent an increased level of risk, in addition to the extra costs this would entail, and that these factors would prove detrimental to competition.

In addition, one User suggested that the accuracy of customer billing might be threatened due to insufficient time to develop suitable systems. Another respondent suggested that a minimum lead time of one year would be required in order to modify supplier systems and end user contracts.

*In the consultation document for UoSCM-M-11, National Grid accepted that there would be an impact on Users' systems, but stated that it did not feel that the costs incurred would be of sufficient proportions to restrict supplier competition. Following responses to the consultation document, National Grid still believes that these costs would not be so great as to cause a sudden spate of market exits, but does accept that the additional costs could impact the ability of smaller suppliers to enter the market, thereby representing a potential barrier to competition.*

*National Grid also recognises concerns that implementing the changes required in challenging timescales could present a risk to the accuracy of billing.*

#### **Proposal represents perverse incentives**

One User commented that the proposal seemed to offer perverse incentives to generators in negative TNUoS zones, as the benefit the generator would receive from being present in that zone and generating over the winter period could be overshadowed by the positive Year Round TNUoS charge proposed, depending on the type of generator.

*National Grid accepts that generators in negative zones would pay more with the Year Round TNUoS tariff the more they generate and that the proposal could therefore be seen to incentivise generators in negative zones to generate for only three half hour settlement periods over winter and not to generate for the rest of the year.*

#### **Proposal does not cover part year charges**

One respondent reiterated its concern raised during the initial charging methodologies consultation that National Grid's proposal does not cover part year charges. The User considered this to fall short of National Grid's commitment to Ofgem published in March 2003.

*National Grid does not agree that it has not met its commitment to Ofgem, which was "to use all reasonable endeavours to review and, if appropriate, bring forward proposals for reform of the contractual framework and charging methodologies, for implementation in April 2004, in respect of the time period over which TNUoS charges apply, looking specifically at charges applicable to periods of less than one year...". National Grid believes it has met this commitment in reviewing charges, determining some form of within year charge was appropriate and bringing forward a proposal consistent with better meeting its Licence objectives.*

*National Grid does, however, accept the view from some Users that there may be further scope to address charging those Users who are unable to use the system for*

*the entire year due to commissioning timescales of network or generation assets, as an example. National Grid will therefore continue to review this area to see if some suitable additional reform should be developed.*

#### **4. CHANGES TO THE PROPOSAL IN LIGHT OF REPRESENTATIONS MADE**

National Grid recognises that this modification proposal has raised a number of significant issues that need to be addressed. It has been our aim to respond to concerns raised by industry participants throughout the Charging Review and initial charging methodology change process. To this end, issues raised in the initial consultation and National Grid's response to them were published in the consultation document for this modification proposal, available on our Charging website at [http://www.nationalgrid.com/uk/indinfo/charging/mn\\_modifications.html](http://www.nationalgrid.com/uk/indinfo/charging/mn_modifications.html).

National Grid has extracted the relevant issues raised by parties in their responses to this consultation, with regard to the obligations placed upon National Grid by its Transmission Licence, in section 3 of this document. National Grid's conclusions are summarised below.

##### ***National Grid Conclusions***

National Grid has carefully considered the comments made by Users and industry participants in response to this modification proposal. National Grid recognises comments made by Users that the majority of respondents to the Initial Charging Methodologies consultation were not in support of the introduction of a Year Round TNUoS charge.

National Grid believes that analysis has shown that 10% of investment costs are driven by off peak conditions and therefore a charge recovering 10% of TNUoS revenue via a flat year round tariff would better meet the relevant objective in licence condition C7A 5(b).

A number of Users stated that they do not believe that the proposals would facilitate competition and that significant system costs would be incurred in implementing such a change. Furthermore, questions were raised regarding whether system changes could be implemented in the necessary timescales.

A number of Users questioned the transparency of the data used to justify the introduction of the year round charge. National Grid does not believe it is possible to publish data in sufficient detail due to the commercially sensitive nature of the information. National Grid cannot publish data which would illustrate specific contract or budgetary costs.

Users have also stated that there is no significant benefit to be gained from a Year Round TNUoS charge based on only 10% of TNUoS revenue.

Under the terms of its transmission licence, National Grid is required to bring forward modifications to the charging methodologies that better meet the relevant objectives set out in its licence. National Grid firmly believes that the Year Round TNUoS charge would better meet the objective to levy charges that reflect the costs incurred in its transmission business [C7A 5(b)]. However, this is offset by the view that the benefits gained from the increase in cost reflectivity are small, particularly compared to the costs of implementing the necessary industry system changes, which are not insignificant.

Therefore, on balance, National Grid does not intend to proceed with the proposed implementation of this modification.

## **APPENDIX 1 – RESPONSES TO MODIFICATION PROPOSAL**

### **AEP Energy Services Ltd**

Dear Alex

#### **Proposed Connection Charging Methodology**

Thank you for your letter on 12 September 2003 inviting comments on the above consultation.

AEP Energy Services does not fully support the proposed modifications.

#### **CCM-M-07: Implementation of “Plugs”**

The proposed ‘plug’ methodology for definition of boundaries is a more simplistic and transparent approach. The principal may encourage new connections and therefore may facilitate competition in generation and supply. However, AEP are not of the opinion this is the case nor is it reflective of the true cost of system development nor does it meet the criteria of the Licence Objective C7A (5a).

The cost of connection for participants who locate near to current transmission assets would be better reflected by a ‘plug’ approach. But existing users will subsidise participants who are a significant distance from existing transmission assets. As the distant connectee will not incur any connection charge, the economic signals for location of new assets will be lost, invariably existing connectee pick up the cost via the Use of System charge.

National Grid believes that locational signals will be transferred into the TNUoS charge by modifications to the zoning criteria applied to the TNUoS charging methodology. AEP of the opinion that this does not facilitate Licence Objective C7A (5a) by promoting competition as the zoning criteria utilises a bandwidth principal and zoning by nature will have a cross subsidy on other local zones.

Also AEP do not believe that the proposal meets Licence Objective C7A (5c) of promoting efficient transmission development, again due to the cross subsidy effect and the effect creation of a additional zones will have on locally adjacent zones.

AEP do not believe that this meets the criteria of Licence Objective C7A (5a) in promoting competition between existing and new participants.

With reference to the Environmental Audit Committee – Eighth report<sup>11</sup> recognizes that large-scale investment is likely to be needed to modernize the grid to accommodate higher levels of distributed processing and major new sources as offshore wind farms.

The plans for increase in renewable energy, especially offshore wind farms<sup>12</sup> will drive large investment at the fringe of the transmission system. The proposal would create an environment where existing users subsidize new participants on the fringe of the transmission system – by increasing the system charges. Again, Licence Objective C7A (5a), this does not facilitate effective competition within the industry, neither does the proposal reflect of the true cost of system developments if a new

<sup>11</sup> Environmental Audit – Eighth Report, Fuel Poverty, note 58  
<http://www.parliament.the-stationery-office.co.uk/pa/cm200203/cmselect/cmenvaud/618/61802.htm>

<sup>12</sup> DTI, Energy White Paper, section 4.47 <http://www.dti.gov.uk/energy/whitepaper/ourenergyfuture.pdf>

entrant does not have to consider location or location of connection to the transmission system.

We understand the need for renewable energy producers and appreciate that the periphery location of these participants is unavoidable. Yet we believe that there is a need to reflect the true cost of infrastructure improvements and incentives for encouraging renewable energy that is not detrimental to existing participants.

AEP understands that a simplified and transparent methodology has benefits, and would recommend that transmission connections specific for remote generators – generator only spurs - are not included in the infrastructure charge. We would also recommend that termination charges remain as this method ensures the true cost of system development is considered with the additional benefit of preventing unnecessary system development that would be passed to existing users.

AEP does not agree with the National Grids view that site-specific charges should be reconciled on an annual basis. Maintenance is generally predictable and a forecast should be made on expected expenditure. We believe the site-specific maintenance charge should be smoothed across a defined time period.

We appreciate that reconciliation will be required as an exact charge will not be available, but through reconciliation the full revenue would be recovered. Increasing volatility creates more uncertainty to the users existing charges. By implementing a recovery factor the annual charge can be adjusted so full recovery is smoothed over a set period (for example 3 to 5 years).

#### **UoSCM-M-10: Calculation of Locational TNUoS Tariffs**

AEP believes that the total elimination of termination charges will not drive efficient transmission development – Licence Objective C7A (5c). Without some form of financial obligation from new entrants, existing participants will be exposed to additional increases in charging to cover developments where the new entrant fails to materialise.

AEP supports moving substation assets to infrastructure and agree that this action would better facilitate the licence objectives. We also support the approach of flat charging for these assets. We understand that shared sites may cause uncertainty for existing and new users at that particular site, and the proposals will create stability and transparency with the charging regime.

AEP, in principal, does support the transition from a transport model to a load flow model. Although a DC load flow model will increase complexity, the benefits from a more realistic model will reflect the true costs of use of system

The concept of a security factor against a more complex secure load flow model is desirable. However, we are concerned that a security factor is being included on a locational basis via the expansion constant. The principal of a locational security factor seems perverse. As National Grid apply the same security standards to all users, it would be fitting that the security factor is applied as a flat charge across all users. The inference that a higher level of security is required in the north of England and Wales than the south does not match the justification given in the consultation report where the differentials between the normal DC load flow and Secure DC load flow are approximately 1.9 nationally.

Under the current arrangements zones are created using a fiscal and locational bandwidth principal. The principals behind the zoning criteria use sound methodology and simplify the tariff process.

### **UoSCM-M-11: Introduction of Year Round TNUoS Charges**

AEP is supportive of within year tariffs. The nature of a within year charge shows that the system is designed for more than demand system MW peak. We appreciate that a high proportion of the system is required for system peak and this will be the main developmental driver for the transmission system.

The current methodology considers exports from the UK as demand. The Triad charging scheme sets the charge for supply companies. This charge can be derogated by reducing the demand taken at the time of triad, or for Interconnector users, not exporting during possible triad periods. It does not meet Licence Objective C7A (5c) as the true cost of development is avoided by managing over triads.

AEP believe that a charging regime for imports or exports should be levied on an annual energy basis. The current triad charging methodology on the Interconnector is neither cost reflective nor takes into account the cost of development.

An annual energy charge, levied on exports and imports would meet the two Licence Objectives of costs incurred with developments – C7A (5b) and accounting for system developments – C7A (5c). It would also create stability in the charging regime. The charge should be levied on a continuous basis so that the full recovery reflects the true nature of the imports and exports rather than charging during peak periods during the day.

Yours Sincerely

Mick Walbank  
Transmission Analyst

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### **BOC Gases**

#### **BOC GASES RESPONSE TO NGC CONSULTATION ON CCM-M-11, YEAR ROUND TNUoS**

BOC does not support the introduction of year round TNUoS. BOC believes that this will have the effect of weakening the “Triad “ signal, especially in the away from the North East of England.

BOC believes that demand response has an important part to play in system security particularly at a time when plant margins have fallen from historical levels. A year round tariff may depress the amount of load management carried out by customers.

The introduction of the year round tariff will put an extra burden on large and intensive power users who due to their high usage will pay large amounts. Such an increase would be most unwelcome at a time of rising power prices.

BOC therefore urges OFGEM to veto this modification.

Hugh Mortimer, 9 October 2003

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## **British Energy Power and Energy Trading**

Dear Alex,

### **Response to National Grid's Consultation Documents: Modification Proposal to the Connection Charging and Use of System Methodologies** **UoSCM-M10; UoSCM-M-11 and CMM-M-07**

Thank you for the opportunity to comment on the above.

With respect to the current National Grid Transmission Charging Review process, BE has continuously expressed concerns at appropriate industry fora (TCMF and Charging Review Seminars). These concerns are re-iterated in this response to NGT's current consultation on the derivation of use of system tariffs and connection charges.

Currently DTI, Ofgem, National Grid, Elexon and the wider industry are engaging in BETTA consultations. It is notable that the effects of NGT's far reaching changes have not been considered in the context of BETTA. Therefore it is essential that a subsequent review of the charging methodology would be undertaken prior to any implementation for GB. This would be consistent with National Grid's specific licence obligations, Ofgem's wider statutory powers, and is in the interests of economic efficiency and the protection of consumers.

#### **Key Generic Points:**

- **These transmission charging developments do not take account of the creation of the single GB market being developed under the BETTA reforms. Should these reforms to the England and Wales arrangements be introduced it will be important to re-assess the position in a GB context ahead of BETTA go-live.**
- **The overarching objectives of any charging arrangement should be economic efficiency and stability. Cost-reflectivity is problematic as an objective in the context of a mature network where the vast majority of costs are sunk and cannot be specifically identified.**
- **The development of the charging methodologies should avoid creating windfall winners and losers. Transitional relief arrangements should be introduced if there are significant changes to the costs to be recovered.**
- **The arrangements for cost recovery in England and Wales must be consistent with the broad direction of transmission charging policy across the EU.**
- **BE maintains that any changes to transmission charging should be fully justified on economic efficiency grounds via a full regulatory impact assessment, as we have previously commented to Ofgem.**
- **The current review has highlighted the need for a more inclusive governance regime for the Charging Methodologies.**

- **The timescales for completion of the review to allow the potential implementation of proposals from 1<sup>st</sup> April 2004 is ambitious. The current programme will only provide a decision for approval during November.**
- **The extent and complex nature of the review to date has inevitably meant that key information has been either unavailable, limited or provided progressively during the process making it extremely difficult to understand and therefore comment in an informed manner. This raises concerns about the consultation process itself.**

If you have any queries associated with this response, please do not hesitate to contact me to discuss further. A copy of this response has been supplied to both DTI and Ofgem.

Yours sincerely,

Gayle Cairns

Trading Consultant  
Market Development  
British Energy Power & Energy Trading

### **Consultation Document: Modification Proposal to the Use of System Charging Methodology Introduction of Year Round TNUoS Charges (UoSCM-M-11)**

#### **Key Points**

- **British Energy is not supportive of the introduction of the Year Round TNUoS charge.**
- **Suppliers' pricing and billing systems will have to change to match the revised Transmission Charging Methodologies. As well as representing an additional cost, these changes will take time. There is a high risk to the accuracy of billing from the start of April 2004 as there will be insufficient design and development time to implement these changes**
- **It is essential that there is no delay in determining tariffs applicable for April 2004 to allow time for any changes in charges to be built in to pricing by generators and suppliers.**

#### **Specific comments on National Grid's Detailed Proposals**

With regard to the Consultation document itself BE has a number of specific comments to make which are detailed below.

#### **Introduction of Year Round TNUoS Charges**

As stated above British Energy is not supportive of the introduction of the Year Round TNUoS charge.

- **Fundamental changes to the existing balance of connection charges and zonal use of system charges should proceed only where it can be shown that the proposed new structure is demonstrably more efficient than the structure it**

replaces and does not create windfall winners and losers for existing system users.

- Given the difficulty in defining 'cost reflectivity' for a mature network, National Grid should develop charges that are equitable on the basis of economic efficiency and demonstrable cost-benefits. The introduction of charging based on total volume needs to be assessed in the light of the costs incurred by the network and the way in which these costs are driven.
- The Regulatory framework applicable to NGT will require fundamental review and potential reform to ensure that the risk of overall revenue recovery falls directly on NGT and not industry participants should NGT introduce differing tariff products (e.g. the "Year Round" tariff).
- The NGT proposal to change the basis of charging from Capacity to a hybrid capacity and energy product remains unproven. In particular there needs to be a detailed study of this system to ensure that it does not discriminate between classes of user.
- There is still little supporting analysis that demonstrates the costs and benefits. The overall economic efficiency of this hybrid model has yet to be shown.
- Given the multitude of options generated in this charging review, there were potentially many other ('hybrid') options. There has been no explanation of the criteria for the models. This lack of transparency to industry participants has resulted in a lack of appreciation of the inevitable trade-offs occurring within the review.
- The potential impact on the 'value' of ancillary services in providing network support from generators does not appear to have been clearly addressed here. Whilst generators may be compensated for services on market-based contracts, this is a second-order revenue stream. The consequences of implementing this hybrid approach on the provision of these services have not been adequately addressed.
- The 90%/10% split has not been adequately modeled and NGT have stated publicly that they are unable to do so and hence it is a 'best view'. This is in no way transparent to users and means that they are unable to identify if it meets with NGT licence conditions.
- There is the added difficulty of a variety of responses on the part of NGT to voltage support, constraints etc. There can either be actions in building of infrastructure where the costs would end up in TNUoS or there will be demand and generation shifts that would be reconciled through BSUoS. This is perhaps the more appropriate method to recover these costs.

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## **British Gas Trading Ltd**

Dear Alex,

### National Grid Transco Charging Modifications

British Gas Trading (BGT) welcomes the opportunity to provide comments to NGT on their recently published Charging Modification Proposals.

We are very disappointed that there is a severe lack of detail in NGT's justification for these modifications measured against the relevant objectives. We suggest that the process for raising charging modifications needs to be more formal in this respect (following the example set by code modifications). We believe that NGC should publish a detailed description, detailed justifications and impact assessment as early as possible within the process, this document could then be updated reflecting any minor ongoing changes. This would ensure that all users were aware of the all the implications of any proposals at the very beginning of the process and would also ensure that every modification raised had associated unambiguous detailed justifications published. Furthermore, we fail to see the connection between a ratio of support of 2:1 by respondents and reinforcement of the view that the change better meets the relevant objectives.

We still have major concerns over the implementation of these modifications with regard to the GB wide transmission charging regime. We are concerned that if these changes are implemented, then largely unproven and untested methodologies will be used as the basis of the charging arrangements for GB. In addition to this, the impact both to the Scottish transmission users and their associated impact on the England & Wales parties are unquantified at this time. Although, NGT do have a Licence requirement to keep the charging methodologies under review at all times in line with the relevant objectives, we fail to see how some of these proposed modifications materially better these objectives, as such we cannot offer support for these modifications at this time.

#### **CCM-M-07 Implementation of "PLUGS" methodology and associated changes.**

BGT does not support this proposed change to the Connection Charging Methodology.

As we have previously stated, BGT is extremely concerned that the proposed change to the connection boundary will result in no, or very little, locational signals arising from connection charges. This will, we suggest, mean that potential connectees will have little commercial regard to the consequential costs incurred by other users (via TNUoS charges) arising from their specific connection.

Furthermore, we do not support NGT's assertion that this will result in cost reflective charges and better apportionment of costs. We therefore do not agree with NGT's stated justification for this modification. We maintain that this proposal will place greater costs on demand customers (who are currently charged 73% of TNUoS charges), rather than charge specific users for the costs that they directly impose on the system through their connection requirements.

Additionally, we believe that this modification alters the cost base of individual stations. BGT believes that it is vital and appropriate that greater emphasis is placed on the stability of charges to enable industry players to make long term commercial decisions. We suggest that this modification will place embedded generators liable for TNUoS charges in a commercially disadvantaged position to directly connected generators, thus we suggest this modification is in opposition to NGT's Licence Condition C7AS 5(a) that covers the facilitation of effective competition in the generation of electricity. We do not believe that Ofgem should approve this modification until a satisfactory resolution of the embedded generation issue is found.

We can see no positive reason for making such a dramatic change to the connection policy and suggest that it would be more equitable to maintain location signals that would influence to some degree, via the use of existing assets, where potential connectees locate. We suggest that it would be possible to develop simpler, practical rules for shared assets and that this would represent a more efficient way forward than the proposed super shallow policy.

We suggest that it is unfortunate that NGT decided to combine the original multiple connection charge modifications into a single modification. Although, we can see the merit of combining linked modifications, such as the boundary charge and associated land and termination charges, we suggest that unrelated areas should be raised separately. NGT's action will result in either an acceptance or rejection of this modification as a whole by Ofgem. We believe that the proposed change to site specific maintenance charges does have merit, and should this modification be rejected, as we believe it should, then we suggest that this part of the modification should be raised separately.

#### **UoSCM-M-10 - Locational TNUoS tariffs**

Again, we would like to express concern over the combining of proposals into a single use of system modification.

Whilst we would support the majority of this Modification Proposal in principle, we have serious concerns, along with the majority of the industry, over the implementation of the locational security factor. We are not convinced on the evidence provided by NGT that there is a strong locational pattern to the provision of assets for security reasons. As such, we do not support NGT's proposal to charge for them on a locational basis. It also appears directly contrary to the "national" approach proposed for connection assets and appears designed to introduce a stronger locational element that the super shallow connection policy eliminates.

We would support the move from the current ICRP model to a DCLF model and the introduction of forward looking expansion constants and would welcome an alternative modification containing only these two proposals.

#### **UoSCM-M-11 - Introduction of Year Round TNUoS charges**

We support the introduction of this modification. We strongly believe that as a use of system tariff, the costs associated with non-peak related conditions should be charged out on a flat basis to all system users as proposed in this modification.

However, we suggest that the tariff should be introduced on a 24 hour basis, rather than the 12 hour (07:00-19:00) basis proposed. We suggest that all users should be charged the appropriate flat rate at all times when they use the transmission system, in short this charge should be a standard commodity charge, this will ensure the charge is made on an equitable basis. We believe that this will also have a positive impact on the potential administrative and associated system costs incurred by users.

I hope these comments have been of use and please contact me if you require any further clarification.

Yours sincerely,

Sarah Owen

Commercial Manager  
British Gas Trading

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## **Chemical Industries Association**

Dear Mr Thomason,

I am writing in response to the Consultation Document 'Modification Proposal to the Use of System Charging Methodology' issued by NGC on 12 September 2003. Given the chemical industry's position as the largest industrial electricity user, accounting for some 6% of UK supply, and the high degree of load management carried out by chemical companies in response to the Triad incentives, the CIA continues to take a keen interest in these reforms. I have already set out our arguments in my letter to you of 31 July 2003, and do not intend to repeat them here. However, to recap, our position can be summarised briefly as follows:

- CIA supports the idea of reducing the connection charges to the Grid where this can bring competition in supply;
- We are concerned that if TNUoS charges increase, as a result of the above, there remains no obvious process to pass the concomitant reduction in distribution charges back to customers;
- We do not support the proposal that only 90% of TNUoS will be avoidable via Triad Load Management. We continue to believe that such changes will not better the current incentives to manage peak demand. Moreover we strongly believe that the triads remain as one of the few signals that demand-side players can respond to simply and flexibly. We do not support any proposals to weaken this signal, especially at a time when there is a renewed emphasis on demand-side flexibility;
- We question the benefits of altering the charging methodology prior to the introduction of a GB wide electricity market under the BETTA project.

We were disappointed that, despite the balance of respondents not being for the changes, NGC has chosen to pursue them. We acknowledge the effort put into explaining NGC's position, particularly with regard to responding to the concerns raised in the July 2003 initial consultation. However, we do not find the arguments sufficiently compelling to be convinced of the necessity of the changes or that they should be carried out at this time.

I trust this input is useful.

Yours sincerely,

Robert Siddall  
Utilities Policy Manager

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## **ConocoPhillips/Immingham CHP LLP**

***Review of National Grid's Transmission Charging Methodologies, covering both connection and use of system.***

Immingham CHP support National Grid's commitment to establishing charges for the provision of a connection to the transmission system that represents the costs of connection attributable to a single user, thus improving cost reflectivity and encouraging competition in the provision of connections.

***Modification Proposal to the Connection Charging Methodology, CCM-M-07.***

In order to achieve the objective of a single user cost of connection, it is necessary to implement National Grid's proposed 'Plug' concept, specifically the change of definition of connection/infrastructure boundary. It is vital to ensure all shared assets are moved into infrastructure. We support sub-stations, generation only spurs and shared transformer circuits moving out of connection and into infrastructure.

The primary concern Immingham CHP has with CCM-M-07 is associated with the proposed change to calculating site-specific maintenance charges. The modification proposes to levy the charge on an indicative basis, with a reconciliation process in the following year. There has been no analysis provided with regards to the likely site-specific maintenance charge to be incurred by market participants and the variation to be expected via the reconciliation exercise. Therefore, it is difficult to accept National Grid's comment, 'Given the relative magnitude of the charges and the small magnitude of likely variations from a national average figure.' Immingham CHP would like to stress its concern of the site-specific maintenance cost becoming an unpredictable, volatile yearly charge.

***Modification Proposal to the Use of System Charging Methodology, UoSCM-M-10.***

Immingham CHP was disappointed with National Grid's approach of bundling the DCLF model, forward-looking expansion constant and locational security factor, within the revised methodology proposal. The responses to the 'Initial Charging Methodology Consultation' in June 2003, clearly illustrated that the locational security factor within the calculation of TNUoS tariffs was the least supported element, thus only 5 in support whilst 9 against. We believe it would have been more reflective of market participants' view to propose the locational security factor as a separate proposal. Market participants attending the Transmission Charging Methodology Forum (TCMF) on 10<sup>th</sup> September 2003, were lead to believe National Grid would combine the DCLF and forward looking expansion constant as a consequence of a supportive majority, whilst the locational security factor would be consulted upon separately. The majority of the industry believes that the present methodology of charging secured transmission capacity on flat basis is the appropriate means thus reducing distortions associated within a locational security factor.

***Modification Proposed to the Use of System Charging Methodology, UoSCM-M-11.***

We continue to believe that the development of a within year TNUoS charge proposal requires further work. We do not support National Grid's proposal to modify the statement of use of system charging methodology to introduce a flat, non-locational, year round charge based on MWh usage to recover 10% of the TNUoS revenue. We believe that the proposal does not consider part year charges and could be construed as a mechanism for allocating charges within year, and therefore falls short of the commitment given by National Grid and reflected in the March 2003 SO incentives decision document.

Please do not hesitate to contact me on 0207 408 6233 if you have any questions on the issues raised.

Yours sincerely,  
Rekha Patel  
Regulatory Affairs Analyst

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## Corus Group

### NGC Charging Methodology Consultation Corus Submission October 2003

#### 1. General

We are uneasy about the extent of change being proposed, particularly at this juncture with BETTA potentially due only a year after NGC's current proposals would be implemented (unless vetoed by OFGEM). This stems in part from the unfortunate wording in the licence which requires NGC to keep the Use of System Charging Methodology *at all time* under review. Threats to the triad system of charging seem to have become an annual event, creating much uncertainty for consumers.

#### 2. CCM-M-07

In general, we favour the move of assets from connection to infrastructure. This is because the method of cost-recovery in respect of infrastructure is via the triads which enables end-users, who are prepared to load manage, to influence system margins at peak periods, thereby enhancing security of supply for all consumers. This benefit overrides any reservations that consultees may have about potential winners and losers under the plugs proposal, e.g., different age assets, generation spurs, shared/non-shared assets, etc.

In respect of the potential discrimination of moving shared but not non-shared connection assets into infrastructure, we referred to this in our earlier response but remain unconvinced by NGC's rebuttal in its final consultation document. One of the reasons stated for not allowing a user or NGC to deem assets as shareable is that NGC has defined the boundary change to exclude such possibility. This circular argument has a catch-22 ring to it! Moreover, the proposed changes to the Statement of Connection Charging Methodology, Section 1.6, supports our desire to be able to deem assets to be shareable – "In general, connection assets are now defined as those assets solely required to connect an individual user to the Transmission System, which are not and *could not be shared* by any other connected party." Clearly the wording which we have italicised is forward looking and unless NGC can show that for all time an asset could never be shared, we believe users should be entitled to deem the assets shareable.

The other main issue for us is to ensure that DNOs pass through the reduction in connection charges to embedded customers fully, ensuring that EHV customers are not discriminated against as a result of falling outside the scope of DNO price controls. We realise that this is beyond the vires of NGC, but NGC could boost transparency by publishing in its final modification

proposals to OFGEM the saving each DNO (by name) would see by the fall in its connection charges. As NGC exit charges can be passed through in full in D-U-o-S charges there is no reason why the DNOs could possibly object to this. In addition, OFGEM should elicit from each DNO a clear and comprehensive statement of how the DNO intends to allocate the reduced charges to each category of consumer.

3. UoSCM-M-10

We do not have a strong view on this proposed modification but would observe that the effect is a rebalancing of locational signals. Demand in the south and west would now have a reduced incentive to locate (or relocate) further north. Ironically, this runs counter to BSC Modification 82, which is designed to have the opposite effect through the introduction of zonal losses.

4. UoSCM-M-11

We opposed the introduction of a within year charge (WYC) in our response to the initial consultation and subsequent concerns about security of supply have reinforced our view that it would be foolhardy to dilute the triad signal by the introduction of a WYC.

The reasons why we believe that a WYC should not be introduced are

- We are not convinced by NGC's cost reflectivity arguments. There is an air of vagueness and subjectivity about the level of investment to meet off-peak requirements. Recovering these alleged costs by a unit charge applicable to the day-time throughout the year is hardly cost-reflective. Moreover, the use of a unit charge is inappropriate for recovering capacity costs.
- NGC already collects significant revenue from NHH demand by a unit charge. NGC's counter-arguments in the consultation paper on this seem self-serving.
- There will undoubtedly be significant extra costs on suppliers resulting from changing billing and pricing models to introduce a new element of charge. Unless a customer has currently a tariff which exactly matches 0700-1900, new STOD slots will have to be produced to accommodate the WYC. Compared to the delivered all-in cost (upwards of £20 per MWh), implementing change for the value of an average 19p/MWh is total disproportionate.
- The imposition of further costs on suppliers will not facilitate competition in supply. In fact just the opposite will occur; further barriers to entry will be created, and market exit hastened.
- Customers such as Corus who have bid analysis models will also be faced with extra cost as a result of incorporating a WYC into the models.
- We are surprised that NGC argues that reducing the triad signal by £1.11 per kW would not affect incentives to load manage. Perhaps it no longer believes in the effect of marginal costs and prices. The reality is that users assess the saving by avoiding the triad against the cost to their

business of not consuming electricity. Clearly an available cost of £1.11 per kW would swing the balance in favour of new or more triad avoidance load management for some users.

- We are also unimpressed by the argument that the WYC would create a small incentive to reduce demand year round. No consumer will load manage to avoid a charge of 34p per MWh when it applies for 4380 hours in the year.

## 5. Overall Conclusion

|                   |            |
|-------------------|------------|
| We support        | CCM-M-07   |
| We are neutral on | UoSCM-M-10 |
| We oppose         | UoSCM-M-11 |

Viewing the interactions of these modifications, because security of supply would be adversely affected to an even greater extent, the worst outcome would be implementation of UoSCM-M-11 without CCM-M-07.

10<sup>th</sup> October 2003

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## EDF Energy plc

Dear Alex,

### UoSCM-M-11 – Proposal to Introduce Year Round TNUoS Charges

EDF Energy welcomes the opportunity to comment on National Grid's proposal UoSCM-M-11 to introduce year round TNUoS charges.

We have provided a summary of our views below followed by detailed comments.

#### Summary

- ***EDF Energy believes that there is scope for a charging framework that better reflects the costs imposed by users with differing patterns of generation or consumption but that this is not achieved by modification proposal UoSCM-M-11.***
- ***We do not believe that National Grid's proposal of a tariff based on 90% capacity and 10% energy will deliver any significant benefits to the efficiency or competitiveness of the electricity market.***
- ***We agree that National Grid has met their relevant commitment to Ofgem using all reasonable endeavours to review and bring forward proposals for reform.***
- ***We would like to see further consideration of within year charging as part of the development of a GB transmission charging methodology.***

#### Detailed Comments

EDF Energy believe that there is scope for a charging framework that offers a more flexible approach to the differences in the patterns of generation and consumption of different users of the transmission system. However, we do not believe that National Grid's proposal of a tariff based on 90% capacity and 10% energy will deliver sufficient additional flexibility and remain unconvinced that any significant benefits would be realised by the proposed introduction of a flat commodity element of the TNUoS tariff.

EDF Energy support tariffs that more accurately reflect the costs and value of generation as well as capacity requirements as this could potentially create opportunities that could lead to a more efficient transmission network. We accept National Grid's argument that this approach more accurately reflects investment costs, however we cannot see any driver for this proposed change as it does not seem likely to have any major impact on competition or improvement to the efficient operation of the transmission system. We agree that National Grid has met its relevant commitment to Ofgem using all reasonable endeavours to review and bring forward proposals for reform, but with no clear benefit to be gained by introducing this within year tariff, we can see little point in making this change.

EDF Energy believes that stability and predictability are fundamental requirements of the transmission charging arrangements. In order to provide this it is necessary to have long term stability in the charging methodology. We note that the proposal does not consider certain areas such as the impact on off-peak tariffs, embedded generation, interconnectors, pumped storage and the partial use of the system by some users. We would therefore like to see further consideration of within year charging as part of the development of a long term charging methodology for Great Britain.

We hope that you will find the above comments useful. If you have any queries regarding the issues raised in this letter, please do not hesitate to contact me.

Yours sincerely,

Rupert Judson  
Transmission Infrastructure & Development Manager

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## **EDF Trading Ltd and EDF (Generation)**

In response to the NGC consultation documents on the Charging Methodology Modification Proposals CCM-M-07, UoSCM-M-10 and UoSCM-M-11 issued on the 12th September, please find below the comments made on behalf on EdF Trading Ltd and EdF (Generation).

### **Overall Position on the Proposals**

We continue to support in principle the moves towards the use of the DCLF model and the transfer of the Connection Assets to the Infrastructure Assets ("with plugs"), but we still remain to be convinced of, or at least understand, the arguments for the adoption of the proposals for the revised Expansion Constant, Security Factor and the All-Year Energy Charge. These elements have only evolved since July this year, but their effects are far-reaching. One of the most important effects is that seemingly the implementation of the new charging methodology results in increased TNUoS charges for Generation in the South and reduced charges for Generation in the North (compared to current TNUoS + connection charges) which is against the general

trend of what Ofgem has been saying for the last 3 years about effective economic signals for the siting of generation and the Use of System.

We note the comments and the explanations given in the consultation document but they are assertions rather than proven. Consequently we would strongly advocate leaving the charging methodology as it is until such time as these other elements have been adequately communicated and clearly shown to be more appropriate for use in England and Wales.

Moreover, this course of action is seen as being prudent since BETTA is only 18 months away and, as was acknowledged at the last TCMF, BETTA is now a subject for discussion at the TCMF. These proposals will have a profound effect on the transmission charges for the Scottish parties and, indeed, there will be consequent and significant changes to the E&W charges as a result of their inclusion. Therefore, everybody should be making judgements on the complete picture. To do otherwise, would result possibly in significant changes to the charges within one year of their introduction and hence parties' commercial decisions.

### **Interconnector Issues**

Without wishing to repeat the arguments put forward in the earlier consultation responses, we are disappointed that many of the issues that are of concern to the Interconnector Owners/Users have not been accepted, or appear not to have been addressed or adequately covered. We firmly believe that the Interconnectors should be viewed differently from the simple model of being both generation and demand and hence chargeable twice. In our view, this charging review was an ideal opportunity to have made such a change and identified a specific interconnector charge, or to have sought to have the interconnector assets recognised as infrastructure assets, or at the very least to have explained the rationale of their present treatment. For instance, why are they included in the charge model as a generator but then charged both G and D charges and why are they charged two amounts of Security and Residual charges? It is worth noting that in France, where the transmission charges are made on Demand only, Interconnectors are regarded as neither Generation or Demand and hence Interconnector Users do not pay any transmission charges to RTE either as Connection or Use of System Charges.

Furthermore, the proposals as put forward all increase the transmission charges faced by the IO/IUs for the Anglo-French Interconnector (I have attached a spreadsheet to show the impact on IFA). Therefore, they will not only reduce the likelihood of trading between systems and hence provide support to the E&W market, but they will reduce the value of the interconnector assets.

### **European Issues - IEM**

The Energy Charge amounts to another transaction based charge on cross-border trades. This is on top of the BSUoS and BSC charges already in operation and increases the conflict with the new EC Regulation on "Conditions for Access to the Network for Cross-Border Exchanges in Electricity" and specifically Article 4 (Charges for Access to networks) item 5: ".....5. There shall be no specific network charge on individual transactions for declared transits of electricity". For that reason we are opposed to the implementation of an Energy Charge.

### **Conclusion**

Whilst we have been supportive of the charging review and of some of the findings, the recent proposals are such that we cannot yet support their full introduction. We note the assertions that certain changes are more cost reflective and appropriate, but we remain unconvinced when we see the charges for the Anglo-French

Interconnector increase by up to 60% or more. As such we oppose the new charging methodology as proposed by NGT and we advocate leaving the charging methodology as it is, at least and until when BETTA is introduced.

Yours sincerely

Dr Nick F Frydas  
Transmission Issues Manager – EDF Trading Ltd.

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## **Edison Mission Energy**

Dear Alex

### **National Grid Charging Review**

#### **Overview and Process**

First Hydro has been actively involved in the process for developing the charging proposals over the last 12 months but is deeply concerned by issues of governance and process that have occurred over the three months of the consultation process.

Despite industry views being sought on the charging proposals through the initial consultation, no substantive changes have been made to the proposals as a result of concerns raised by the industry - primarily over the inclusion of a locational security factor. In fact the inclusion of the security factor as part of a combined modification (with DCLF and Forward looking expansion constants which have received wide support) inhibits proper debate on this controversial change.

First Hydro supports many elements of the proposals but does not support the inclusion of the locational security factor which we believe does not meet licence objective C7A 5a in that it does not encourage competition in the generation and supply of electricity. We also believe that the implementation of a security factor is unduly discriminatory to Northern players and the imposition of such a differential charge where this does not match the costs involved, would place NGC in breach of licence condition C7C 1.

We hope that NGC withdraws modification UoSM-10 with the objective of splitting it into two modifications - one for DCLF and FLEC (UoSM-10a) and a second one for the security factor UoSM-10b. In response to this consultation we comment on UoSCM-M-10 as if it had been split in this way.

#### **CCM-M-07 Implementation of Plugs**

We fully support the super shallow approach that is proposed by NGC. The movement of NGC owned substation and generator only spurs into infrastructure is a major step forward in providing cost reflective signals to the market:

- It removes unwelcome barriers to entry to the generation and demand market.
- It creates the potential to facilitate development of a tradable access market.
- Entry and exit signals are simplified under the super shallow approach.

It also has the advantage of placing NGC owned assets in the control of NGC thus simplifying the process for changes to these assets.

#### **UoSCM-M-10 a DCLF and FLEC**

*DC Load Flow model* – we support the move to DCLF as we concur that it should provide a more accurate basis on which to derive charges.

*Forward Looking Expansion Constants* – in principle the use of FLECs is an improvement to the charging process and we would support using forward looking costs as a basis for deriving a constant to apply to the model. However we have major concerns with respect to the treatment of cables. There are a number of different types of transmission lines with varying cost - we strongly believe that in order to provide the correct investment signals across the market, an average cost should be used. Under the current proposals, in zones containing cables, the differential cost is focused to produce a very sharp signal that does not sit well with the objectives of providing clear and stable cost indications. Furthermore these sharp signals are likely to bear no relation to the actual cost of reinforcement in that zone.

There is also an environmental case. Dinorwig Power Station is fed by a pair of 400 kV cables of significant length; these cables were installed for environmental reasons and not due to the physical needs of the site. The benefit of cables over overhead lines is an environmental one based on visual impact and not on the zonal location. The application of a high cable factor within the transport model provides the wrong message. Given the growing unacceptability of new overhead transmission lines (the second North Yorkshire line debate) new lines will need to be developed taking account of environmental impact which will lead to the increased use of cables. Given this back ground we think that it will damage the ability of new generation to enter the market (e.g. wind farms) and provide a significant closure message for existing cable connected generation.

Therefore, we believe that the cable factor should be set to 1 and all transmission assets treated equally. In other words, a single forward looking expansion should be applied, based on a weighted average cost of all types and specifications of overhead lines and cables.

#### **UoSCM-M-10 b Security Factor**

*Security Factor* - We do not support the use of a locational security factor. Security of supply is a benefit to the system as a whole and should therefore not be charged on a locational basis. **This has been an underlying principle of transmission charging to date and the premise for this has not changed.** This proposal is a major change to current arrangements for which there is insufficient justification. A clear example of this is Dinorwig which was built primarily to provide security of supply in the case of a substantial loss of generation on the system and has performed successfully in this role.

According to the proposals, Dinorwig is subject to the highest TNUoS charges on the system. This is driven by the chosen cable factors previously discussed, but then nearly doubled by applying this security factor. NGC argue that this is more cost-reflective, however the reality is that the current mix of cables and overhead lines is not necessarily relevant when considering the position of a potential connectee into the Dinorwig zone. Where cable factors are involved, the resulting zonal cost signals are hugely sensitive to these modelling assumptions on which type of line will transport any incremental MW injection.

NGC has a licence obligation to ensure that the charging methodology meets the charging objectives, one of which (C7A 5a) is to facilitate effective competition in the generation and supply of electricity. FHC believes that a security factor of 1.9 does not meet this objective. The cost base of Northern power station is significantly (differentials are changed from £7/kw with a security factor of 1 to £17.5/kw with a security factor of 1.9) higher than that of its southern competition. The result of this is to skew the market such that the consumer pays more for services as the effective price at which competition occurs must be higher. We also believe that the implementation of a security factor is unduly discriminatory to Northern players and the imposition of such a differential charge where this does not match the costs involved would place NGC in breach of licence condition C7C 1.

A secondary concern is that from the information available setting the security factor to 1.9 is incorrect. From the chart on page 31 of the initial consultation, it would appear that whilst the first and last node points are reasonably well aligned, (between SECULF and Strawman 5), the correlation between intermediate nodes is less well matched - particularly in the North where the Strawman 5 line of the chart is clearly well above the fully modeled SECULF case. This simplification has the potential to materially disadvantage generation in the North. This should be reviewed as a matter of urgency.

We would be keen to know whether an alternative approach (maybe a simple least squares regression) would yield a better fit between the security adjusted modelling (Strawman 5) and the full N-2 study (SECULF) - whilst retaining the use of a simple factor, or set of factors.

#### Other issues - Treatment of zones

NGC's combined proposals (DCLF, FLECs, with a security factor of 1.9) have the effect of stretching the nodal values such that the relative differences between nodes which may be geographically close are magnified. At the limit, outlying nodes can be forced into their own zone. For instance, Dinorwig has been affected in this way through a combination of a high and unrealistic cable expansion constant and a security factor that has little or no relevance to the driver of ensuring that the correct price signals are fed through to the market.

A number of NGC's previous working scenarios explored significantly increasing the number of zones by tightening the nodal grouping tolerance down to £0.5/kW. This resulted in a large number of very small zones, some of them consisting of a single node. The problems with this were recognised at the time – in particular the potential impact on individual sites/players of unstable price signals. However, the latest proposals can clearly still produce very localised signals which are unacceptable. Additionally, we believe that in order to create a robust framework for the future which could support a credible market in fully tradable transmission access rights, the size of zones should be tending to increase to aid potential liquidity.

### **UoSCM-M-11 Introduction of Year Round TNUoS**

#### Commodity charging

For generation, we support the proposal to set part of the charges based on peak (12 hours) MWh generation figures. This would deliver a more cost-reflective charge for generators, given that transmission costs are not solely defined by Winter peak half hour periods. It would have the additional benefit of reducing fixed avoidable costs for

many generators which is likely to improve the efficiency of plant entry and exit decisions, significantly aiding system security.

Should you require any further information please contact either myself or Kevin Dibble.

Yours sincerely

Simon Lord

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## **Gaz de France Energy Supply Solutions Ltd**

Dear Alex

Thank you for the opportunity to respond to the consultation on National Grid Transco's Charging Methodologies. I have a number of points Gaz de France Energy Supply Solutions would like to raise, which I have addressed below.

The key part of this modification proposal is to change the existing method of TNUoS collection so that 10% of TNUoS will be collected via a flat locational charge – introduction of a within year tariff (WYT).

### **Comments in Relation to NGT licence conditions**

It is unclear how a WYT will increase and improve competition for the generation, transmission and supply of energy. The potential for discrimination against a class of end-user exists under the WYT proposals because differing methods of revenue recovery could potentially shift the payment of TNUoS from one class of user to another that may not fairly reflect their impact on the system. For example changes in TNUoS caused by investment to meet needs of weather sensitive demands should not be paid for by non-weather-sensitive demands.

Gaz de France Energy Supply Solutions also do not believe the temporal split of a WYT is appropriate, as it would lead to additional recovery of TNUoS from industrial type demand and less recovery from weather sensitive/heating loads. This sends the wrong message to users.

The WYT proposals will incur significant costs to suppliers. This will come in two main areas:

1. Change in reconciliation processes with National Grid. A minor change to systems and processes will be needed to monitor and reconcile the demand between 07:00 and 19:00.
2. Massive change to Customer Service systems will be required. Suppliers will need to modify their CRM and Billing Systems to take into account the new WYT charges. It is impractical to assume that Suppliers will be able to do this in time for April 2004 (when all modifications need to be complete to allow billing of the new charges). Even if suppliers started changes today, it leaves 5 months to complete a major IT change. And as the decision on the change may happen in November, then it leaves but 4 months. There will also be a major cost to suppliers in making these changes.
3. Tariffs and pricing structures and systems will need to be revised. This is to allow any inclusive tariffs to reflect the changes. Any inclusive tariffs that

already exist may cause suppliers losses if they cannot be changed to reflect the changing TNUoS regime.

These things act as a barrier to entry for new suppliers and may hasten market exits. The increases in costs for suppliers may even act as a barrier to competition for smaller suppliers who are less able to support the investment.

The introduction of a WYT acts as an erosion of the Triad signal at a time when system capacity is a major issue. It is not valid to quote CCM-M-07 as "increasing TNUoS" as a justifying factor. The fact remains that UoSCM-M-11 will reduce the "peak" signal and hence reduce the capacity made available on the system at times of stress. This capacity must then be sought and paid for from other sources, increasing the costs to users and moving cost from the TNUoS pot to BSUoS. In addition it seems unlikely that end-users on the demand side will provide any significant reduction in use over the "off-peak" times and NGT suggest. Thus Gaz de France Energy Supply Solutions believe that this modification will decrease capacity at peak and increase costs with no benefits at other times.

In excess of 10% of TNUoS is already collected "off-peak" via Non Half-Hourly (NHH) TNUoS charges. Gaz de France Energy Supply Solutions do not think it is acceptable to say this done only to facilitate competition and as such additional collection is needed. The basis remains that more than 10% is already collected off peak. Additionally what does changing how the revenue is collected add? The revenue is still spent in the same fashion. Simply stating that the collection of TNUoS revenue in this way better reflects the costs incurred by National Grid is not correct as NHH already exceeds this.

In addition it can be argued that as long as the annual TNUoS charge reflects correctly the annual costs of the Transmission system it meets licence condition C7A 5(b). To this end, suppliers incurring the cost of changing this collection adds nothing.

The main analysis to support the 1:9 split for a WYT has been carried out "qualitatively" and the quantitative analysis provided to support this appears open to interpretation. Gaz de France Energy Supply Solutions do not believe this provides a clear and transparent indicator that 10% of investment in transmission is "off-peak".

The subject of Within Year Tariffs was discussed at TCMF on 10th June at Brandon Hall. When the split of 9:1 was questioned, Mike Calviou stated that this 9:1 ratio was NGC's best view and that an auditable model could not be produced. Gaz de France Energy Supply Solutions believe this is not acceptable in that the basis of this whole change is that some transmission costs are not peak driven, yet we are to understand that this amount cannot be modelled or audited and is just a "best view". How are users to be sure that these costs are correct, properly recovered and fair and meet licence objectives?

Gaz de France Energy Supply Solutions would like NGT to clearly indicate what the driver behind this methodology is. Is it the emergence of new load patterns? If so can these please be clearly identified so that the types of user causing these costs can be identified? This way the costs can be targeted in such a way as to discourage this behaviour (if possible) and hence reduce costs and in many ways better meet the licence objectives.

Something not discussed in respect of WYT is the level of over-recovery that will occur and exactly where this will come from? How could over-recovery be fairly

treated? How exactly would the charges be levied? Monthly, annually, based on forecast, post event?

Overall Gaz de France Energy Supply Solutions do not support a Within Year Tariff (WYT) regime.

If you require any further information or clarification on the above, please feel free to contact me.

Yours sincerely

Russell Reading  
Products and Services Manager

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## **Magnox Electric plc**

Dear Alex,

Thank you for the opportunity to respond and comment upon your consultation documents detailing the proposed modifications to the Connection and Use of System Charging Methodologies for implementation from April 2004. Magnox Electric's views on the issues raised within the consultation documents are set out below. Summarising our key conclusions;

- **We support the proposed changes in CCM-M-07 to the connection boundary and agree this would remove some of the significant barriers to market entry and exit and will better facilitate effective competition.**
- **We support the proposal in UoSCM-M-10 to employ a DC Loadflow Model as a basis for deriving TNUoS Charges and the proposal to employ forward looking estimate of the value of assets required for system enhancement as a more accurate estimate of Long Run Marginal Costs (LRMC).**
- **We agree with the methodology you have proposed for the inclusion of the costs of security on a locational basis.**
- **The use of a model based on the inclusion of a Security Factor in UoSCM-M-10 as a surrogate for a more accurate approach on the basis of being able to supply a simple model to users over better achievement of the relevant objectives we feel cannot be justified. The Secure DC Loadflow model clearly better meets your relevant licence objectives than does your proposed approach.**
- **We agree with the principle of including an element of TNUoS charges based upon non-peak investment related costs. But we have serious concerns that the proposed modification is over simplistic in its application and has not been tested against a methodology more firmly rooted in economic principles. Therefore we do not support the proposal in UoSCM-M-11.**

Our detailed responses follow.

### **a. Modification Proposal - Connection Charging Methodology**

The current connection charging methodology attempts to directly allocate those elements of costs associated with connecting customers to the transmission system. This approach can be justified on the grounds that it directly reflects the costs users

impose by connecting to the system. However, experience has illustrated that designing a methodology that accurately and fairly allocated these costs results in a complex, inflexible and relatively impenetrable approach for calculating connection charges that includes elements that limit its ability to achieve significant gains in economic efficiency.

- The methodology includes very strong incentives to minimise the costs to the individual of connection/entry to and disconnection/exit from the network potentially at the expense of system-wide efficiency ie. connection at a point on the system which includes significant spare capacity can be ignored in favour of connection at a point at which connection assets and hence costs can be shared.
- The inclusion of Generation Only Spurs produces the opposite effect to that outlined above. Significant spare capacity at a point on the system which is classified as a generator only spur could be ignored because of the significant charges associated with connecting at that point.
- The methodology introduces a large element of uncertainty to connection charges for current users, potential new entrants and those exiting the market. Significant changes to users' charges can occur prompted by the actions of both other users and/or NGC. It is clear that users cannot act in an economically efficient manner with respect to connection to or disconnection from the system when a large element of the costs they face are exogenous to their own actions and consequently carry a significant amount of uncertainty.

All of the issues highlighted above are inherent within any 'Deep Connection' charging methodology and become more pronounced with deeper connections. We would therefore concur with NGC's view that a move towards a more shallow connection charging methodology would overcome the serious shortcomings of the current methodology in delivering system wide economic efficiency. In doing so the changes would remove the significant barriers to efficient market entry and exit that currently exist and clearly better meet NGC's relevant licence objectives, particularly with reference to the development of competition.

#### **b. Modification Proposal – Calculation of Locational TNUoS Tariffs**

We agree with your conclusions and the consensus of user opinions that a DC Load Flow model is the most suitable incremental development of TNUoS charges and does provide improvements to the cost reflectivity of charging by providing a more realistic simulation of the transmission network when compared to the current approach.

The proposed changes to the derivation of the expansion constant are also clearly improvements on the current approach. Marginal Costs are by definition forward looking and deriving the expansion constant on a forward looking estimate of the value of assets required for system enhancement is clearly consistent with a more accurate estimate of Long Run Marginal Costs (LRMC). Furthermore, accounting for cost differences between these classes of assets will again improve the accuracy of the estimates of LRMC derived from the model and the overall cost reflectivity of the methodology. We would therefore agree that these proposed changes would improve the charging methodology and better meet NGC's licence objectives.

The treatment of substation assets within TNUoS charges is a key issue given their potential impact upon the size of differentials between zones. There is little argument that substation costs are locational at the 'micro' level i.e. the configuration and size

of substations will differ slightly at each specific connection point. However, it is less clear that at any level above this that there is any identifiable locational bias to substation costs. Your analysis seems to support this reasonable conclusion. Both on the basis of these results and the charging methodology operating on a zonal rather than a nodal basis, we would agree that it would be appropriate not to include substation assets in the calculation of the expansion constant, but instead include them in the flat element of the charge.

To the extent that the costs of security are locational and it is appropriate to charge on this basis, then we would advocate the use of a Secure DC Loadflow model as the basis for deriving tariffs. Your proposal to use of a derived 'security factor' to approximate the locational bias of security would not in our opinion better achieve NGC's licence objectives. The Secure DC Loadflow model approach clearly better meets your licence objective of reflecting the costs incurred in operating the transmission system and its adoption is reasonably practicable.

One of the key drawbacks of employing a security factor in deriving locational tariffs was illustrated in the diagram included in your previous consultation document on this issue. The use of the security factor as applied in your approach seemingly both over and underestimates estimate the nodal costs of MWkm for large ranges of nodes when compared to the secure DC Loadflow Model. Deviations from the true costs of security of the magnitude suggested by your analysis would provide incorrect tariffs and potentially distortionary incentives on users at those nodes and within zones.

You have via your charging review workshops and previous consultations illustrated that the use of a Secure DC Loadflow model to derive locational tariffs provides an accurate estimate of incremental costs of transmission, is practicable can be implemented within practical cost parameters and time-scales. All of these are clear licence condition objectives which are clearly better met via the use of the Secure DC Loadflow Model when compared to the proposed approach. Your preference for simplicity over better achievement of your licence objectives cannot be justified.

Although the value of the ability for your customers to have the tools to analyse the basis of their TNUoS charges should not be underestimated or dismissed, it cannot take precedence over licence conditions in deciding on the charging methodology. A model employing a security factor of 1.9 as a reasonable, but less accurate, approximation of incremental investment could clearly form the basis of a model available to users for analysing and estimating charges derived by NGC from a full Secure DC Loadflow Model and we would encourage NGC to do so.

### **c. Modification Proposal – Introduction of Year Round TNUoS Charges**

The analysis you have carried out on the drivers of transmission investment has indicated that, as might be expected, a proportion of total costs was required to meet non-peak related conditions. On the results of such analysis we would agree that it would be wholly appropriate to investigate further the appropriateness of charging users on a separate basis for these elements of cost.

However, we would argue that the analysis carried out to date, although necessary is not sufficient to provide a robust basis for your proposed mechanism for charging for these elements of costs. Your proposals result in a relatively large transfer of costs from low to high load factor generators. As such it is vitally important to ensure that those costs are correctly allocated to those users imposing the costs on the system to avoid any distortionary effects on their use of the system and actions in the market.

The basis of your analysis and in particular the detail of the calculation used to derive your 10% cost figure is not easy to follow or understand and consequently not transparent – a principle on which NGC places large importance in other areas of its charging methodology. Without the detail necessary to review your proposal comment is unfortunately restricted to your general approach and principles.

Your Charging Principles Statement correctly sets out one of your objectives to 'charge on the basis of services provided and on the basis of incremental rather than average costs, and so promote the optimal use of and investment in the transmission system.' You will obviously recognise that the existence of separate drivers of costs means that costs can be marginal with respect to marginal changes in those individual drivers (not simply peak demand) and hence give rise to separate marginal cost and prices. An analysis of the marginal costs of increments/decrements to non-peak investment drivers would identify any disparities between costs based on average rather than marginal costs, the extent of the existence of economies of scale, the accuracy of the 10% of total investment costs your analysis has estimated and indeed if daytime MWh is the marginal driver of these costs.

NGC has identified in other arenas that setting prices on anything other than marginal costs can produce perverse incentives on market participants and hence encourage them to act less than efficiently. This is equally true of charging under an average cost approach where the charging base does not accurately represent the driver(s) of those costs which is aiming to recover – MWh may be obvious the obvious charging base but it has not been proven that it is necessarily the correct method for allocating large elements of fixed costs between users.

Without a true understanding of the nature of these costs there is a serious danger that the charge will introduce uncertain incentives both on customers' use of the transmission system and their participation in the wider electricity market. Without this level of understanding, a relative increase in cost reflectivity could lead to an adverse deterioration in the achievement of your objective to promote competition in the wider electricity market. It is therefore not clear without further work that this proposal overall better meets your relevant objectives.

We are not opposed to the principle of charging for non-peak investment related costs within the TNUoS framework. Rather we are concerned that the charge be introduced which is based firmly upon the economic principles of efficient pricing, properly reflects the underlying cost base and does not introduce any perverse incentives and distortionary effects to the market.

Again, thank you for the opportunity to comment on your proposals. If you require any further information or clarification on any of the issues raised above than please do not hesitate in contacting me.

Yours sincerely

Nigel Burrows  
Regulation & Market Access Manager

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**Powergen UK plc**

**UoS-CM-M-11 Introduction of Year Round TNUoS charges**

Powergen does not support the above proposed form of year round tariff as it does not appear to bring any particular benefit to transmission users, whilst it increases complexity and risk for suppliers and generators.

The main benefit for users of a within-year charge is to avoid charges during periods when they are not generating or supplying electricity. At present, for example, a power station which only generated for half the year would be charged the same as one which generated year round. Whilst views differ as to whether this is appropriate or not, the above proposal will be of little benefit to users, as only 10 percent of costs will be recovered through the within year charge. Users will still be exposed to 90 percent of charges on the existing charging basis, so the proposal would prove to be largely cosmetic in nature.

Whilst the benefits of the proposal are not clear, it will certainly present problems for suppliers and generators alike. Currently, when suppliers set their prices they have to forecast the demand of their half hourly customers during the triad and the demand of their non half hourly customers during the period 1600 hours to 1900 hours. Likewise generators in costing their plant have to ascertain the likely load factor they will achieve. If the proposal is implemented, then suppliers will additionally have to forecast their demand, and generators will have to predict their output, for the period 0700 hours to 1900 hours. This will increase the complexity of users' processes and systems, and will introduce an additional potential source of forecasting error. This in turn will increase participants' costs and risks to the detriment of competition.

Interestingly, NGC does not accept this argument stating that no evidence has been forthcoming. No evidence has been provided as to the benefits of the proposal either, but NGC believes that this is sufficient for it to proceed. We are therefore concerned as to the asymmetric burden of proof which NGC has adopted in this process, to force through a change which is not supported by the majority of respondents to the charging methodologies consultation.

In light of the above problems with the proposal and lack of any clear benefit we strongly believe that it should not be pursued further.

Yours sincerely,

Paul Jones  
Trading Arrangements

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## **RWE Innogy plc**

The following comments are made on behalf of RWE Innogy plc, Innogy Cogen Ltd., Innogy Cogen Trading Ltd., npower Ltd., npower Northern Supply Ltd., npower Yorkshire Supply Ltd, npower Northern Ltd, npower Yorkshire Ltd.

1. RWE Innogy supports the introduction of Year-Round TNUoS charges as proposed in UoSCM-M-11 subject to the provision of a satisfactory revised draft to the Statement of Use of System Charging Methodology that separately identifies the changes relating specifically to UoSCM-M-11. The modification would better target the infrastructure costs related to non-peak conditions on users of the system at the time these costs are incurred. It would therefore better

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facilitate the objective of charges that reflect, as far as reasonably practicable, the costs incurred by National Grid in its Transmission Business.

2. If the vast majority of year-round costs are incurred between 0700hrs and 1900hrs then a charge applied between these hours would be a cost reflective application of a year round charge. However, if a significant proportion of the year-round costs are also incurred between 1900hrs and 0700hrs then it may be more appropriate to apply the commodity charge to all metered volume, particularly since this would carry the additional benefit of simplifying billing processes. Greater transparency in the year-round costs is therefore required to support National Grid's assertion that the vast majority of year-round costs are incurred between 0700hrs and 1900hrs.
3. The recovery of 10% of TNUoS revenue from a year-round charge is appropriate based on National Grid's analysis over a ten year period of the proportion of infrastructure costs related to non-peak conditions. The intention to review this level for each Price Control Period would seem reasonable if the level is believed to be fairly stable.
4. A rolling monthly billing and reconciliation process based on outturn settlement data is appropriate with respect to administration, predictability, credit risk management and consistency with the peak-related tariff process.
5. It is appropriate to levy the year-round charge in the same proportion as peak/capacity based TNUoS charges. To do otherwise would alter the 27:73 ratio for generation and demand respectively. Whilst it may be appropriate to review this ratio in the context of European developments, any such fundamental change would have to be subject to a separate consultation.
6. It is important to recognise that year-round costs are locational in nature, although the locational nature of these costs may be different to those associated with the peak. A model to derive the locational nature of year-round costs must be developed to improve further the cost-reflectivity of the year-round charge. We do not agree that the avoidance of additional complexity is adequate grounds on which to dismiss this development. A locational commodity charge would achieve consistency with the peak-related tariff in reflecting the marginal costs of investment. It would also increase the transparency of the year-round costs, thereby facilitating the review of the 10% level. Until a model is developed to reflect accurately the locational nature of year-round costs, a flat commodity charge as proposed in UoSCM-M-11 is an appropriate interim solution. Nevertheless, it was National Grid's conclusion to the Within-Year Tariff consultation that a locational commodity charge (Strawman 3) would provide the most appropriate incentives. We therefore expect a commitment from National Grid to develop a locational commodity charge.
7. We agree with National Grid and OFGEM that an appropriate mixture of TO and SO incentives is essential to ensure the most efficient combined planning and operation of the system. We also agree that the introduction of the year-round tariff does not affect this situation. However, there remains reasonable doubt over whether the inclusion of all capital expenditure relating to voltage support in the TO rather than the SO incentive is appropriate. Inclusion of this capital expenditure in the SO incentive would ensure that the cost of providing voltage support from competing sources is subject to the same incentives in their procurement. As OFGEM recognised in its Dec 2002 NGC incentive schemes consultation, interchangeable expenditure should be subject to the consistent

incentives to facilitate economic trade-off of such costs and avoid perverse interactions between incentive schemes.

8. The cost of incorporating the change in charging basis into customer billing systems will be considerable. A re-billing procedure will almost certainly be necessary as there will not be sufficient time to implement the required system changes before the new charging structure takes effect on 1 April 2004. The associated costs must be given due consideration in an overall cost benefit analysis of UoSCM-M-11.

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## **ScottishPower Energy Management Ltd**

Dear Alex

### **MODIFICATION PROPOSAL UoSCM-M-11, YEAR ROUND TNUoS CHARGES**

ScottishPower welcomes the opportunity to provide comment on NGC's Modification Proposal UoSCM-M-11 for the introduction of year round TNUoS charges. This response is submitted on behalf of ScottishPower UK Division which includes the UK energy businesses of ScottishPower, namely ScottishPower Generation Ltd, ScottishPower Energy Management Ltd and ScottishPower Energy Retail Ltd. We have, as you will be aware, been following the progress of the charging review with interest and have submitted our views on several occasions. For completeness, I will re-state some of our previous comments in this response.

#### **General comments**

ScottishPower continues to be concerned that such a fundamental review of charging methodologies has been undertaken in England and Wales such a short time ahead of the introduction of BETTA. Our concerns are twofold; either that the work will be set aside and wasted when the charging methodologies for BETTA are established or, alternatively, that inappropriate England and Wales methodologies will be extended to GB in order to avoid repeating the review process. The recent consultation paper on transmission charging under BETTA makes clear that NGC, as GBSO designate, are soon to be given the responsibility of developing the GB charging methodologies. In the light of this development in NGC's transmission business we believe that grounds now exist for the current England and Wales review to be abandoned, the charging modification proposals to be withdrawn, and efforts to be concentrated on developing appropriate charging methodologies for GB.

However, should you decide to proceed with the modifications, we are submitting comments which should be read entirely in the context of England and Wales charging. Given our previously stated opposition to zonal transmission charging, both in England and Wales and for BETTA, these comments should not be taken to imply any acceptance of the underlying methodology.

#### **Process issues**

ScottishPower still has major concerns about the process which is being followed in respect of the three charging modification proposals which have been put forward. We do not believe that the modifications have been given sufficient consideration by NGC, either individually or in combination, such that the proposals contain elements which have not been discussed within the review. The overall effects on users have

not been fully explored, nor has sufficient information been made available to users to make their own assessment of the impact of the changes. No impact assessment has been offered in support of the changes. The impression given is one of excessive haste to meet a spurious deadline of implementation in 2004 when some of the changes are clearly so fundamental that they would be better implemented at the time of the price control. This is not conducive to competition.

#### **UoSCM-M-11**

ScottishPower welcomes the proposal to introduce year-round non-locational commodity charges as the first step away from the currently rigid, yet unwritten, concept of TNUoS charges as an annual product based on peak capacity. However, we believe that the proposed capacity-commodity structure raises different issues for demand and generation charges. We welcome the introduction of commodity charges on generation but we are unsure whether commodity charges on demand will provide sufficient benefits to outweigh the increased complexity and cost of the administrative and settlement arrangements. We believe that NGC should offer more evidence to justify the application of commodity charges to demand.

We believe that the commodity element for the generation charges should be applied over all settlement periods, and see no robust justification for restricting it to the proposed window of 7am-7pm, given that it relates to non-peak costs. We also note that while the target 10% of TNUoS revenue is based on a proportional share of asset investment costs, the TNUoS revenue also includes year-round operational costs. The proportion of revenue which should be recovered through the commodity charge is therefore greater than 10% and we would suggest that NGC reconsider this figure.

Yours sincerely

#### **Mike Harrison**

Commercial Manager, Trading Arrangements  
ScottishPower Energy Management Limited

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### **South Coast Power Ltd**

#### **Transmission Charging Methodologies Consultation**

Thank you for your letter of 12 September 2003 inviting comments on the above Consultation.

South Coast Power Limited does not support the proposed modifications as currently formulated.

#### **UoSCM-M-10: Proposal to amend the methodology for calculation of locational TNUoS tariffs**

SCPL have recently commissioned a 400MW CCGT power station at Shoreham based upon the pricing and investment signals provided by NGC in its published Use of System Charges and Seven Year Statements. Users have relied on such signals as an important part of their investment methodologies. At the time generators made the decision to invest it was reasonable for them to rely on the Seven Year Statement

and associated information published by NGC as part of its activities as a licensed transmission operator.

However, the current proposals dramatically impact the locational tariffs for Shoreham and some other generators – indeed in some scenarios switching the charges from a credit position (negative zone) to a positive charge.

These proposals therefore potentially compromise generator's investment decisions, and create an area of future risk which could seriously impact present and future investment patterns.

Therefore SCPL believe the proposals to be in contravention of NGC's licence condition C7A, in that it fails to facilitate effective competition in the generation of electricity, particularly between existing and new participants.

### **UoSCM-M-11: Introduction of Year Round TNUoS charges**

SCPL understand the rationale for within year tariffs, but do not agree that it should be a positive charge even in negative charging zones. In some scenarios this has the perverse effect of a generator receiving a credit for siting generation in an area where additional generation is required, yet paying a within year charge which more than offsets the credit.

Owing to this perverse effect, SCPL believe the proposals to be in contravention of NGC's licence condition C7A, in that it fails to facilitate effective competition in the generation of electricity.

### **CCM-M-07: Implementation of "Plugs"**

The proposed 'plug' methodology for definition of boundaries is a simplistic and transparent approach. However, SCPL do not believe it reflects the true cost of system development.

Hence, existing users will subsidise participants who are a significant distance from existing transmission assets and this will lead to increased Use of System charges.

Further, due to the fact that Shoreham is embedded, there will be no off-setting benefit of NGC connection charges.

Therefore, SCPL believe the proposals to be in contravention of NGC's licence condition C7A, in that it fails to facilitate effective competition in the generation of electricity between existing and new participants, and between embedded and directly connected generators.

Yours sincerely

Nick Skinner  
Energy Business Manager

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### **SP Transmission and Distribution**

Dear Alex,

**Response by SP Transmission and Distribution to the September 2003 Consultations on Proposed Changes to National Grid Company's Charging Methodologies**

I am responding on behalf of SP Transmission and Distribution to National Grid Company plc's consultations on proposed changes to their charging methodologies to apply from April 2004. SP Transmission and Distribution represents the three regulated asset owner companies that hold the transmission and distribution licences for SP Transmission Ltd, SP Distribution Ltd and SP Manweb plc.

I would like to highlight our concern over the timing of these proposals. The proposals apply to England and Wales only and take no account of the impact when applied GB-wide under BETTA. If implemented for England and Wales there is a danger that the proposals could be inappropriate when applied to GB. With BETTA due to implement in April 2005, we believe that it would be more appropriate to fully consult on these proposals as part of the forthcoming BETTA charging consultations.

If you have any queries associated with this response please do not hesitate to contact me to discuss further.

Yours sincerely,

**Alan Michie**

Commercial Workstream Manager, BETTA Programme  
SP Transmission and Distribution

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**Teesside Power Ltd**

Dear Alex

Please find below a response on behalf of Teesside Power Limited "TPL" to the consultation document "Modification Proposal to the Use of System Charging Methodology – UoSCM-M-11 : 12 September 2003".

**Proposed Methodology Change**

TPL supports the introduction of year round non locational TNUoS charges in principle.

For the reasons given in our response to UoSCM-M-10 and CCM-M-07, however, we believe that a higher proportion of NGC costs should be recovered through such a charge.

Finally, as with the other proposed changes to connection and use of system charges, we reserve our position on the proposals until such time as the treatment of users which have adopted less standard charging options for connection has been clarified.

Kind Regards

Keith Miller  
on behalf of Teesside Power Limited

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## **Terra Nitrogen (UK) Ltd**

Terra Nitrogen (U.K.) Limited is a large consumer of electricity (approx. 600,000 MWh) at sites in the North of England and the South West of England. We wish to respond to your consultations CCM-M-07, UoSCM-M-10, UoSCM-M-11. We are opposed to all three of the proposed changes on the following grounds.

1) We see absolutely no benefit from the proposed changes in facilitating effective competition in the generation and supply of electricity or in the sale, distribution or purchase of electricity. 2) The case is not at all clear that the proposed changes reflect costs incurred by the National Grid's Transmission business. 3) There appears to be no need whatsoever for these changes.

We also comment that the presentation of the proposed changes by National Grid has made clear the enormous unnecessary complexity which has and continues to be introduced to a relatively straightforward activity i.e. transmission of electricity. The proposals are so complex that it has become impossible for even moderately large consumers of electricity to understand the detail and to unravel the implications and effects of change.

In CCM-M-07 it is not at all clear that the increase in TNUoS costs will be balanced by the same reduction in Connection Charges. The consumer is likely to be faced with an increase in cost. As a manufacturing company we see no reason for a 33% increase in charges. This will simply serve to make our UK operations less competitive when judged on a global setting. The sales prices of our products are determined by world markets and we cannot pass through these cost increase. We have estimated the cost to our company as £110,000 per annum.

On CCM-M-10 the proposed 502% cost increase in the Northern Zone is completely unacceptable for a region which is a significant exporter of electricity to other regions.

J.A.Robertson  
Energy Director

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## **Total Gas and Power Ltd**

Dear Alex,

### **National Grid Charging Methodologies Consultation**

Total Gas & Power Ltd (Total) welcome the opportunity to respond to the Charging Methodology Modification Proposals CCM-M-07, UoSCM-M-10 and UoSCM-M-11.

### **Connection Charging Methodology Proposal: CCM-M-07**

Total welcomes NGC's commitment to review the present charging arrangements and consult upon proposals that improve cost reflectivity and encourage competition in the provision of connection. We recognise that better defining the present connection and infrastructure boundary will assist the move to shallow connection charging and addresses the inconsistent treatment that presently occurs within the 'hybrid' shallow-deep connection-charging regime. Hence the movement of those

shared connection assets into infrastructure is a logical step towards the objectives of further developing cost reflective charges and promoting competition in the provision of connections.

Total considers, however, the subsequent recovery of these new infrastructure costs should be on a non-locational basis. Overall we believe this would better assist the achievement of cost-reflective charges, remove inconsistencies within the present arrangements and would not unduly affect charging stability. We are therefore disappointed that National Grid has chosen to allocate the costs associated with generation only spurs within infrastructure on a locational basis. Total consider the resulting volatility in Transmission Charges will impact Users' expectations such that charging methodology changes have the ability to create substantial risks that are difficult if not impossible to mitigate. Clearly we believe this does not facilitate National Grid's other licence objective of facilitating effective competition in the generation and supply of electricity. Total therefore recommends that Ofgem reject charging methodology proposal CCM-M-07.

#### **Use of System Charging Methodology Proposal: UoSCM-M-10**

Total considers the introduction of a DC loadflow algorithm and the derivation of a forward-looking expansion constant that removes the sub-station element from its calculation and treats such costs on a non-locational basis will lead to more cost reflective and stable charges. Further, we support retention of the present flat treatment of security costs and consider that compelling reasons do not exist to justify the application of a security factor against the basic intact DC loadflow model. We believe the consequence of the proposed treatment of security costs will be to artificially increase charges at the peripheries of the grid in a manner that is not consistent with the level of security required for voltage support at these points. Total therefore supports the implementation of UoSCM-M-10 without the locational security factor.

#### **Use of System Charging Methodology Proposal: UoSCM-M-11**

Total is concerned that a move to this form of a charging mechanism is premature, has been insufficiently developed and the subsequent impacts upon generation and supply have not been evaluated. In addition we believe that insufficient lead-time currently exists to ensure suppliers billing systems are not adversely affected and that minimal impact is experienced by end-users. Total recommend that a minimum of one year lead time prior to implementation is provided, to enable supplier systems and end-user contracts to respond appropriately and the impact upon competition to be evaluated before implementation. Total strongly recommends that Ofgem reject the implementation of this proposal to ensure that competition within the generation and supply markets is not adversely affected.

#### **Interconnector charges**

Total believes the current Triad methodology for determining TNUoS demand charges for interconnector users creates artificial distortions and a high level of uncertainty that leads to reduced export flows in the winter.

We remain of the view that the Interconnector warrants special treatment due to the security of supply advantages provided from an interconnection to the European grid. Also we continue to believe the market price driven by the fundamentals should determine the level and direction of cross border flows and not the application of a sterilising TNUoS charge.

We note that National Grid have not proposed to address this anomaly. Total therefore consider that an ideal opportunity has been missed for National Grid to rectify the inappropriate treatment applied to Interconnector Users and for it move in a positive direction towards aligning the treatment of these flows in a manner consistent with other European Transmission System Operators.

We hope you regard these comments as being constructive. Please contact me on 020 7318 6880 if you would like to discuss our response.

Yours sincerely,

Sharif Islam  
Energy Regulation Manager

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**APPENDIX 2 – ADDITIONAL INFORMATION****Year Round Cost Breakdown by Scheme**

October TCMF

| <b>Scheme Title</b>   | <b>Classification</b> |
|---|-----------------------|
| North East Voltage Control Intertrip Scheme                         | Intertrip             |
| Mersey Voltage Control Intertrip Scheme                             | Intertrip             |
| Eaton Socon Negative Phase Sequencing Scheme                        | Over Head Line        |
| Keadby Over Head Line Replacement Scheme                            | Over Head Line        |
| North East Overhead Line Replacement Scheme                         | Over Head Line        |
| Midlands Overhead Line Replacement Scheme                           | Over Head Line        |
| South West Overhead Line Replacement Scheme                         | Over Head Line        |
| North West Over Head Line Replacement Scheme                        | Over Head Line        |
| Lackenby - Tod Point - Hartlepool Over Head Line Replacement Scheme | Over Head Line        |
| Spennymoor - Norton Overhead Line Replacement Scheme                | Over Head Line        |
| South Wales Reactive Compensation Scheme                            | Reactive Compensation |
| Kirkby Reactive Compensation Scheme                                 | Reactive Compensation |
| Creyke Beck Reactive Compensation Scheme                            | Reactive Compensation |
| Capenhurst/Kirkby Reactive Compensation Scheme                      | Reactive Compensation |
| Mersey Infrastructure Scheme  | Substation            |
| High Marnham Quad Booster (Civil Works)                             | Substation            |
| Stocksbridge Ferroresonance   | Substation            |
| Harker SGT Reconfiguration  | Switch Gear           |
| Kirkby Switchgear Replacement Scheme                                | Switch Gear           |
| Keadby Switchgear Installation Scheme                               | Switch Gear           |
| Chickerell Switchgear Scheme  | Switch Gear           |
| Spennymoor Switchgear Replacement Scheme                            | Switch Gear           |
| Stella West Switchgear Installation Scheme                          | Switch Gear           |

**Classification**

Reactive Compensation

Switchgear

Overhead Line

Substation Works

Intertrip

**Total****Cost (%)**

21.00%

35.00%

40.00%

4.00%

0.30%

**100%**

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