WORKING GROUP REPORT

CUSC Amendment Proposal CAP127

Calculation and Securing Value at Risk

Prepared by the CAP127 Working Group
for submission to the Amendments Panel

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I DOCUMENT CONTROL

a National Grid Document Control

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0.1	29/11/06	B Thornton	Initial Draft for Comment
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1.0	14/12/06	CAP127 Working Group	Report submitted to CUSC Panel

b Distribution

Name	Organisation
The Gas and Electricity Markets Authority	Ofgem
CUSC Parties	Various
Panel Members	Various
National Grid Industry Information Website	

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1.0 SUMMARY AND RECOMMENDATIONS

Executive Summary

1.1 Ofgem published a conclusions document on best practice guidelines for gas and electricity network operator credit cover in February 2005. In order to address and codify these guidelines, CUSC Amendment Proposals 089, 090 and 091 were implemented. Following implementation, Ofgem considered that there were particular areas that still needed further work. One of these areas was the calculation and securing of Value at Risk (VAR).

1.2 In order to address this further work, CAP127 was raised by National Grid and was considered by the CUSC Amendments Panel on 29th September 2006 where it was agreed that a Working Group should consider the proposals. The Working Group are required to report back to the December 2006 Panel meeting but its terms of reference required that if the Group reached agreement before this then it should submit the report earlier.

Working Group Recommendation

1.3 The Working Group believes its Terms of Reference have been completed, CAP127 has been fully considered and recommends to the CUSC Panel that the proposal should proceed to wider Industry Consultation as soon as possible.

2.0 PURPOSE AND INTRODUCTION

2.1 This report summarises the deliberations of the Working Group and describes the CAP127 proposal.

2.2 CAP127 was proposed on and submitted to the Amendments Panel for their consideration on 29th September 2006. The Amendments Panel determined that the proposal should be considered by a Working Group and that the Group should report back to the Panel within 3 months.

2.3 The Working Group met on 18th October 2006, 1st November 2006, 15th November 2006 and 22nd November 2006 at National Grid's offices and the members accepted the Terms of Reference for CAP127. A copy of the Terms of Reference is provided in Annex 2. The Working Group considered the issues raised by the Amendment Proposal and considered whether the Proposal better facilitated the Applicable CUSC Objectives.

2.4 This Working Group Report has been prepared in accordance with the Terms of the CUSC. An electronic copy can be found on the National Grid Website, www.nationalgrid.com/uk/Electricity/Codes/, along with the Amendment Proposal Form.

3.0 PROPOSED AMENDMENT

3.2 It is recognised that the current arrangements in the CUSC for calculating the Value At Risk (VAR) associated with Demand TNUoS charges only address one of the many elements of actual VAR and are therefore provide an inappropriate basis for determining the amount of security required from users.

3.3 Although Ofgem's best practice guidelines provide a proxy across all Network Operators in relation to the calculation of VAR, it has proven difficult to apply this calculation to demand TNUoS charges, due to the unique way in which they are calculated and billed, with liabilities for each charge occurring at specific times during the financial year. The current arrangements introduced by CAPs 089, 090 and 091 do not fully implement the intention of the guidelines and do not present an appropriate balance between risk and securitisation.

3.4 The Proposed Amendment seeks to introduce a more accurate calculation that better reflects the actual VAR and all the elements that contribute to it. This will result in a more appropriate balance between risk and securitisation by calculating VAR closer to actual VAR and securing a percentage of VAR over different periods of the year to reflect the different liabilities at risk.

4.0 SUMMARY OF WORKING GROUP DISCUSSIONS

4.1 National Grid presented analysis that built a picture of the numerous elements that make up VAR for demand TNUoS charges for user's non-half-hourly (NHH) and half-hourly (HH) demands, how VAR varies as a year progresses, and how VAR can vary as a result of variance in each element.

4.2 Given the VAR profiles presented by National Grid it was clear that VAR has an element of seasonality. It was therefore, proposed that each year will be divided into a number of security periods in which a different level of VAR will be secured.

4.3 It is difficult to forecast VAR due to the large number of variables, such as adverse weather conditions, reconciliation, missed invoice payments, under/over forecasting and triad dates, each of which is discussed in more detail in this report. National Grid proposed that the level of VAR to be secured in each security period is split between Base VAR (BVAR), comprising of those elements generally outside a User's control, and Forecasting Performance Related VAR, in which a user does have control. Therefore, this proposal would determine a level of VAR for each individual User.

4.4 National Grid proposed that the Base Level of VAR to be secured in each security period is determined from a Base VAR profile defined by determining appropriate levels for each of its constituent elements. It was agreed that a pragmatic view of each element should be taken, considering the typical risk, and the likelihood of any extremities, whilst being minded to strike an appropriate balance of risk and securitisation.

4.5 The second part of the VAR calculation is based upon the User's forecasting performance. It was recognised that this area needed a considerable amount of attention as this is the main area of the current arrangements and is not

addressed fully. The group debated the relative merits of a number of methods of calculation, including looking at:

a) a Suppliers performance in the 2 month period at the end of the financial year;
b) a 5 month period between October and March; and
c) a 5 month period between October and March with a weighted average to reflect the User's ability to forecast.

The group considered all methods based on the risk of default, the users ability to forecast accurately during the periods being considered and applicability against the relative objectives..

4.6 In looking at the applicability, the group considered the most appropriate way to manage the VAR is to incentivise a User to forecast accurately. One member of the Group commented that a User, outside of the usual trading rounds, may pick up customers for whom he has no ability to forecast, and thus any performance related forecasting method would be distorted to the detriment of that User. This was agreed by the group and an appeals process was considered, by which the User has redress if it can be proven that they have picked up a significant amount of customers beyond their ability to forecast for them.

4.7 It was agreed that the resulting solution should be transparent, equitable for all Suppliers and sufficiently deal with the prospect of placing anyone at an unfair competitive disadvantage whilst also being reflective of the additional VAR posed by under forecasting. The results of the workgroups deliberations and majority consensus are presented below:

4.8 CALCULATION OF BASE VALUE AT RISK PROFILES

There are a number of elements that should be taken into account when determining BVAR. These are as follows:

Weather Conditions

National Grid presented an analysis of how weather conditions can affect a user's actual VAR. It is possible that due to different weather conditions, a user's actual VAR can be affected by up to ±3% of their annual NHH liability and up to ±6% of their annual HH liability. National Grid proposed that average weather conditions were to be assumed as this was the typical case, and using any alternative method may lead to over or under securitisation.

The working group agreed that the best approach was to assume average weather conditions, and that the risk associated with the socialisation of a user's additional liability due to adverse conditions was acceptable under this proposal.

Initial Reconciliation

The Initial Demand Reconciliation is undertaken to account for any difference between Users demand forecasts and demand observed in settlement data which has been received up to a point in time shortly after the financial year has ended.

It was agreed that as the initial reconciliation related to forecasting performance, it should be considered part of the Forecasting Performance Related VAR.

Final Reconciliation

The Final Demand Reconciliation is undertaken to account for any difference between the set of settlement data used for the Initial Demand Reconciliation and the Reconciliation Final (RF) run of settlement data. This is carried out approximately 14 months after the end of the year.

Generally a supplier's final reconciliation will range between ±2% of the annual liability in the year concerned, therefore National Grid proposed to use this value in the calculation of the Base VAR profile.

The working group agreed that due to the accuracy of HH metering, the likelihood of any liability outstanding would be low and therefore 0% of a user's HH annual liability was an appropriate level to be used in determining the HH Base VAR profile.

The group also agreed that although there is a real risk that 2% of NHH liability could be outstanding there is an equal probability that this could be a credit back to the User. Therefore the group agreed a level of 1% of a user's NHH annual liability was an appropriate level to be used in determining the NHH Base VAR profile.

Triad Dates

An analysis of historical triad dates was undertaken and presented to the working group.

Initially, National Grid proposed that the average date of each triad leg observed over the last 15 years should be used to determine the HH Base VAR profile. Further analysis was undertaken at the request of the working group, and it became apparent that recent triad dates have occurred later than those observed in the 1990s. Therefore, the group agreed that it was sensible to use average triad dates since NETA Go Live in determining the HH Base VAR profile.

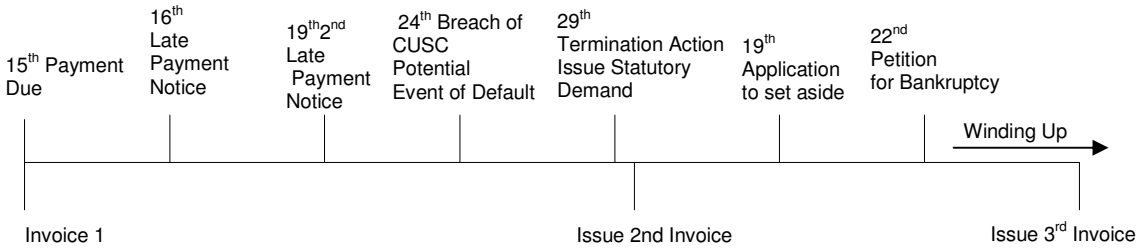
Missed Payments

National Grid proposed that two missed payments were used in determination of the Base VAR profiles. It believed that this was appropriate, given that a Supplier would miss at least two payments in the majority of cases in which a Supplier becomes insolvent and that it is in fact realistic to expect three payments to be missed prior to liabilities being taken on by an administrator or Supplier of Last Resort, or before a trade sale could occur.

The majority of the workgroup recognised that a realistic number of missed payments should be used, as the eventual solution should be reflective of the actual VAR. It was recognised that the eventual solution should strike a balance between the risk of socialisation of unpaid liabilities and competition. National Grid proposed the use of two missed payments in the determination of the base VAR profiles as this covered the amount which it deemed to be the minimum amount expected.

Two members agreed that in practice there would be a minimum of 2 months missed payments before a Statutory Demand was issued. One of the members gave the timescales for a statutory demand being issued against a shipper failing to pay gas balancing charges, which indicated at least two months worth of missed payments. Two members agreed that it can take up to 2 months for a Supplier of Last Report to be implemented.

The majority of the working group agreed that two missed payments was an appropriate level to use. One member requested that National Grid provide a timeline of actions that would be conducted following a payment being missed, all the way up to the issuing of a statutory demand, this was provided at a subsequent meeting and the majority of the group agreed that using two missed payments in the determination of the Base VAR profiles was the correct approach to take. This timeline is as follows:



1st Invoice Issued on 1st day of month 1

Day 1, 15th day of month 1: First missed payment, Use of System invoices are issued on the 1st of the month for payment on the 15th under the terms of CUSC.

Day 2, 16th day of month 1: Late Payment Notice issued to supplier in accordance with terms of the CUSC, three business days are given to allow the User to settle the invoice.

Day 5, 19th day of month 1: 2nd Late Payment Notice issued stating Late Interest will accrue each day invoice remains unpaid.

Day 10, 24th day of month 1: Seven business days after payment due date issue breach of CUSC & Potential Event of Default in accordance with terms of the CUSC, gather all evidence of Users failure to pay, inform Ofgem, instruct solicitor.

Day 15, 29th day of month 1: Issue Termination notice & Statutory Demand/Legal proceedings.

Day 18, 1st day of month 2: 2nd invoice issued.

Day 32, 15th day of month 2: Second missed payment.

Day 35, 19th day of month 2: User has 18 days receiving Statutory Demand to file an application to set aside.

Day 38, 22nd day of month 2: If no application to set aside then under the terms of a statutory demand the earliest a Petition for Bankruptcy can be filed is 21 days after the issuing of the demand.

Day 47, 1st day of month 3: 3rd Invoice issued.

Day 61, 15th day of month 3: 3rd missed payment.

Winding up of the User occurs over a period of time after the issuing of a Petition for Bankruptcy which is certainly more than 9 days, by which time the 3rd invoice has been issued and in reality will not be paid.

The timeline is based on actions that National Grid are able to take under the current terms of the CUSC and actions relating to the issuing of Statutory demands and in consideration of the Insolvency Act 1986. Considerations in the issuing of statutory demands include:

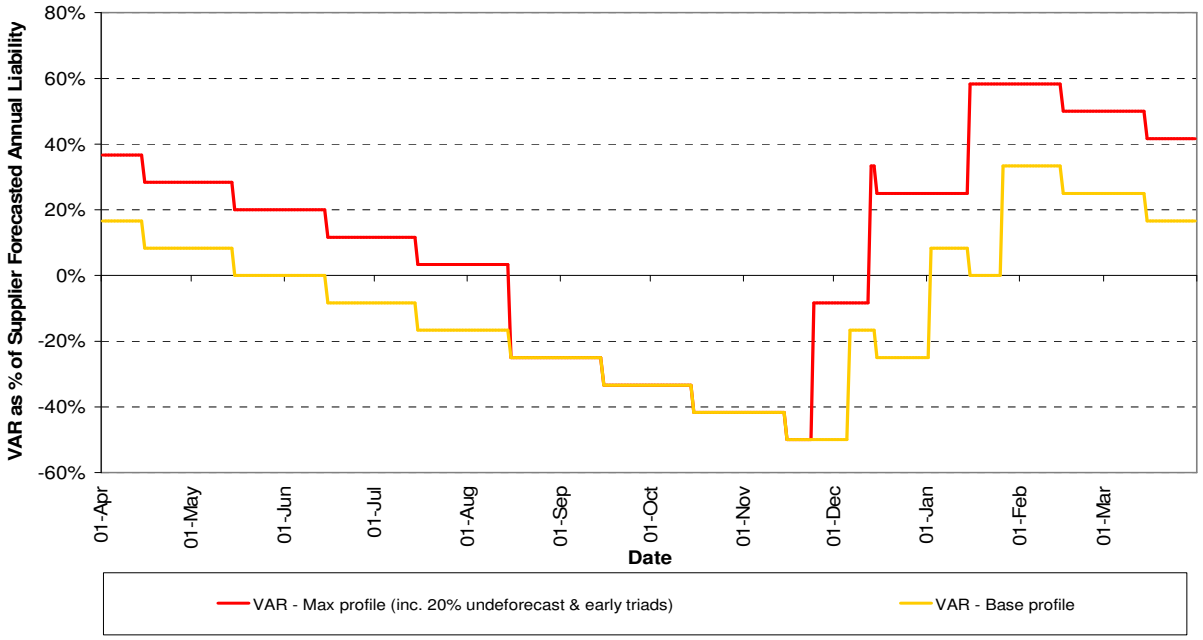
- Exhausted efforts to recover debt
- Comprehensive evidence that they are unable/won't pay
- Termination of contract prior to issue

One member though agreeing that there would be at least two missed payments when applying the rules of the CUSC and the Insolvency Act was concerned that two missed payments was too much to use in the calculation of base VAR and would cause Suppliers to post an inappropriate level of security. This working group member was concerned that this could have a negative impact on competition. This view was not shared by the remainder of the workgroup.

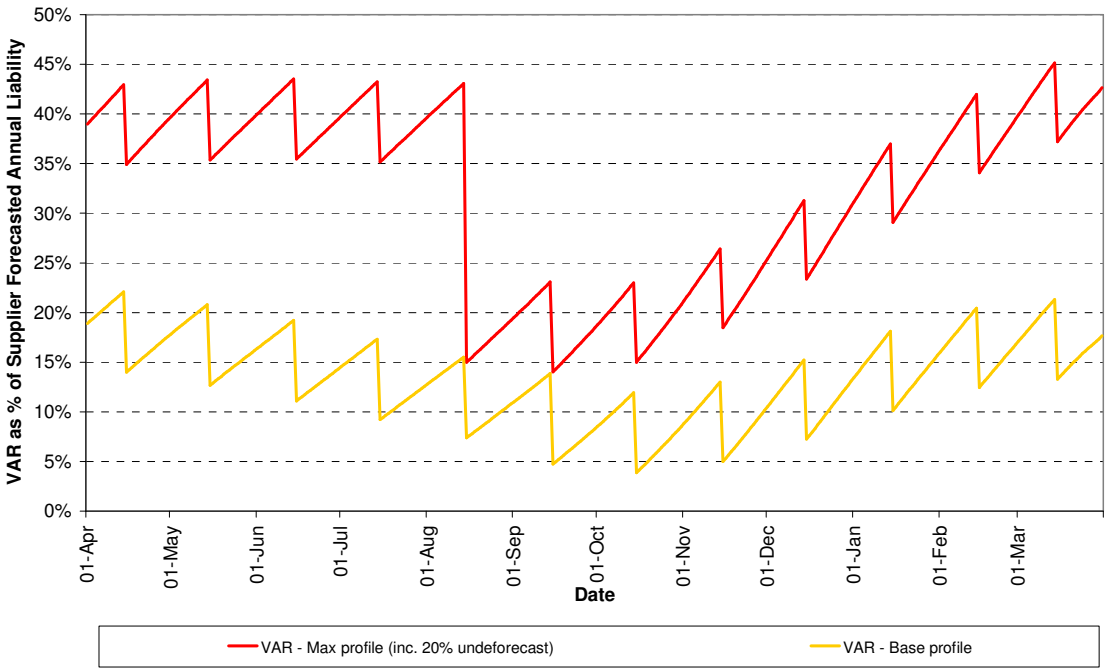
Resulting Base VAR Profiles

Taking each of the elements of Base VAR as agreed above, the resulting Base VAR and maximum expected VAR profiles are depicted in the following charts. The Base VAR profile indicates the amount that will be outstanding for each date if the supplier ceases to accrue any TNUoS liability on that date, taking into account the elements discussed above. Similarly, the maximum expected VAR profile indicates the amount that will be outstanding for each date if the supplier ceases to accrue any TNUoS liability on that date, when a user under forecasts by 20% and early triads have been experienced. A 20% under forecast has been used in determining the maximum expected profile as this is the allowed difference from National Grid's forecast of a supplier's demand, as stated in paragraph 3.12.2 of the CUSC.

HH Demand:



NHH Demand:



4.9 SECURITY PERIODS AND ASSOCIATED BVAR

National Grid proposed that the year should be divided up into multiple security periods and that in each security period; the Base VAR Profiles should be used to determine a base level of security (as a proportion of their current forecasted liability) for every supplier to provide in relation to their HH and NHH liabilities.

National Grid proposed that two security periods (commencing 15th August and 13th December) were used based upon when a significant level of risk was apparent when the expected maximum VAR profile (including 20% under forecast and early triad dates) was considered.

Members of the working group suggested a number of alternative sets of periods:

- quarterly periods; and
- two security periods, similar to National Grid's proposal, but with the second period commencing on 1st November;
- two security periods based upon when a level of risk was apparent in the Base VAR profiles.

National Grid also proposed that one of the following approaches was undertaken to calculate the Base level of VAR to be secured in each security period:

- using the maximum level of each of the Base VAR profiles in any given security period;
- using an average of each of the Base VAR profiles (collared at zero) in any given security period (effectively taking the average level of security that would be required if considered on a daily basis); or
- using the actual average of each of the Base VAR profiles in any given security period.

The working group agreed that using the maximum level of the Base VAR profile in any security period, would not be appropriate as it would lead to over securitisation during the majority of each security period. The group therefore went on to consider the two remaining options for calculating the Base VAR level in each of the proposed set of security periods.

The working group agreed that using 2 security periods, as originally proposed by National Grid did not result in an adequate level of security to cover the value at risk when the HH Base VAR profile was at its greatest, as the duration of the security periods resulted in dilution of any average taken, substantially reducing the amount of security required. This argument also discounted the set of two security periods, similar to National Grid's proposal, but with the second period commencing on 1st November from the discussions.

Further to this, the group agreed that using 2 periods based upon where the risk was most apparent in the Base VAR Profile was an inadequate solution. This was because it resulted in unacceptably lengthy periods of time for which a risk of a significant amount being outstanding was present upon a user becoming insolvent, when there was potential for no security being required.

The group agreed that using quarterly periods, with the first period commencing on 1st April, gave an appropriate balance between providing an adequate level of security over periods where the greatest risk occurs and potential over securitisation. Although this approach would result in short periods of time where an adequate level of security may not in place, the group agreed that this level of risk was an acceptable balance.

This then led the discussion as to which of the two averages to use in determining the Base level of VAR during each security period. The working group agreed with National Grid's proposal that as the HH Base VAR profile was negative during the summer security periods, whilst the NHH profile was positive, it would be appropriate for the two levels to be netted. The majority of the group agreed that taking this into consideration, an actual average of the Base VAR Profiles to determine the Base Level of VAR, would provide the most appropriate solution. An example of how the netting of HH and NHH Base Levels of VAR is intended to be undertaken can be found in the examples given in Annex 5.

The Base levels of VAR agreed by the group are as follows:

Security Period Start Date (inclusive)	**Security Period End Date (inclusive)**	**HH Base Level VAR (as % of Supplier forecasted HH TNUoS Annual Liability)**	**NHH Base Level VAR (as % of Supplier forecasted NHH TNUoS Annual Liability)**
1st April	30th June	3.8%	16.6%
1st July	30th September	-21.1%	11.3%
1st October	31st December	-36.8%	9.5%
1st January	31st March	19.3%	15.9%

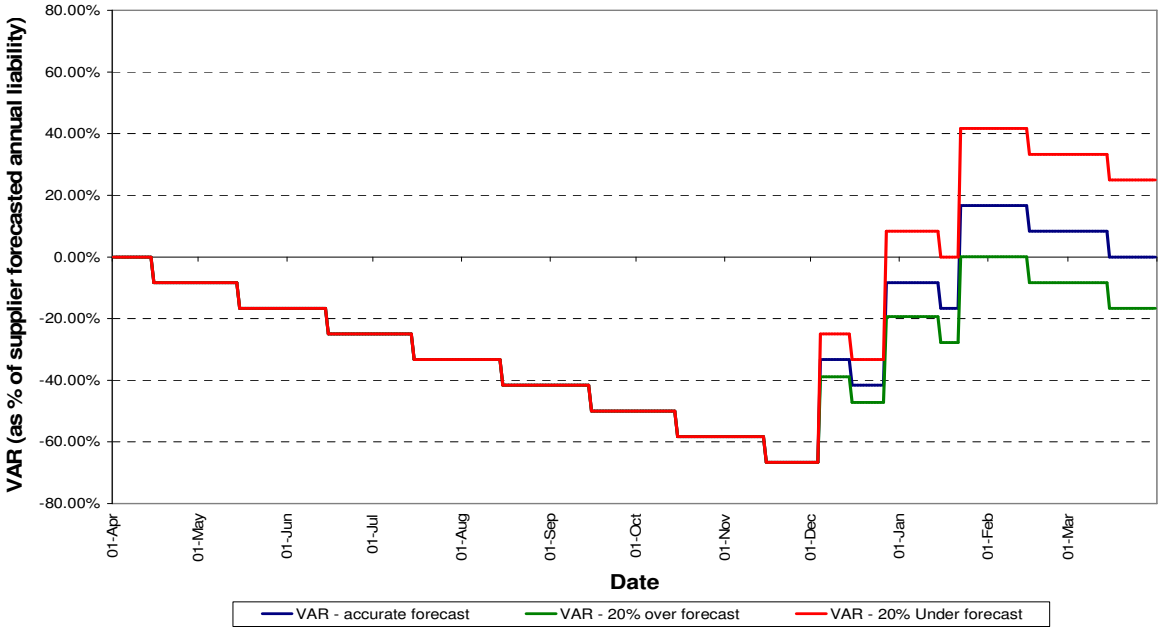
One group member expressed concern that he believed that the actual average may lead to over-collateralisation, creating a potential barrier to new entrants into the market. However, the remainder of the group disagreed.

They believed that taking the actual average was appropriate, given the manner in which the elements of the Base VAR profiles had been agreed. Taking the average, by definition would provide an adequate balance between the amounts of under-securitisation and over-securitisation during each security period.

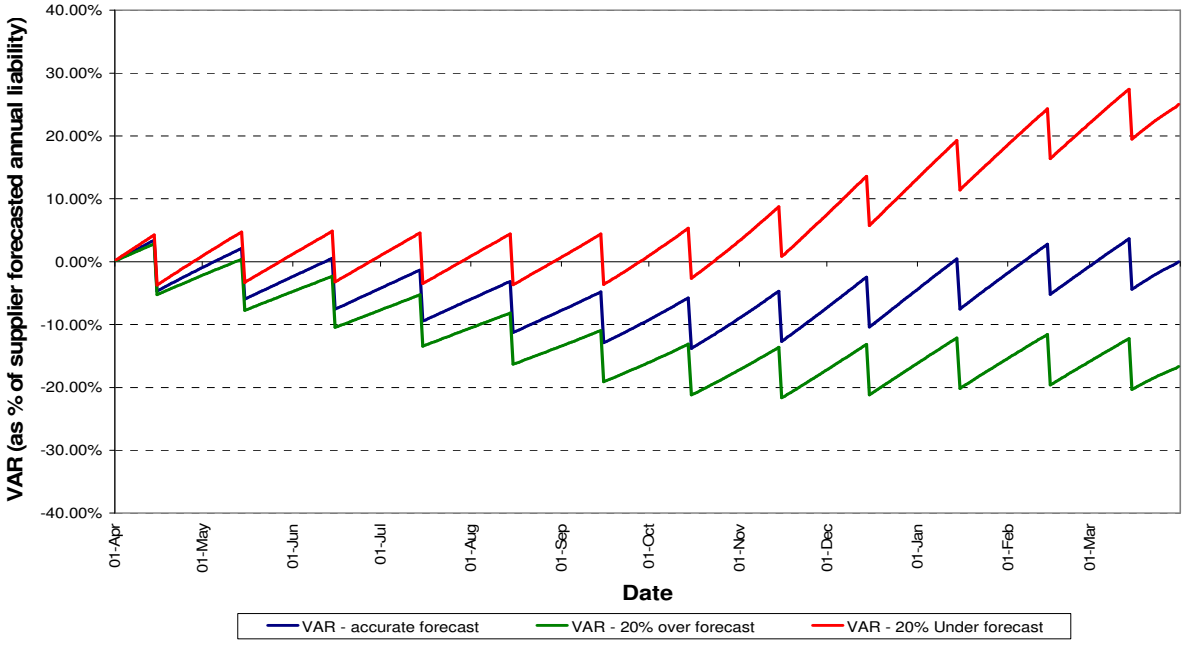
4.10 FORECASTING PERFORMANCE

National Grid presented evidence that a Supplier's forecasting performance has a significant impact on the level of actual VAR. This impact is depicted in the following charts:

HH Demand:



NHH Demand:



As this is something within a Supplier's control, National Grid believes that it is worthwhile for any final solution to provide suppliers with an incentive to

forecast accurately during those periods in which the effect of under forecasting is greatest. It was agreed that the current calculation of VAR was open to gaming as it is based on only 1 month's level of under forecasting.

A methodology of taking an average forecasting performance over the last six months of a previous year, using the actual annual liability (from the last calculated initial reconciliation) was presented by National Grid as an initial proposal. Some of the working group members raised the concern that the first month being considered was submitted prior to a large contract round undertaken in October, and it was therefore probably more prudent to base the forecasting performance on forecasts used in calculating the last five TNUoS bill of the year.

Concern was also raised that the proposed methodology could discriminate against a supplier if they unexpectedly picked up extra customers (e.g. following another supplier becoming insolvent). One working group member suggested that either an appeals process was put into place, or the number of forecasts considered was reduced further.

In a subsequent meeting National Grid presented an appeals process that would adjust the forecasting performance of those penalised using the initially proposed methodology level calculated.

Concerns were raised by one member of the group that the appeals process may not necessarily cover all issues presented. They believed that some suppliers may still be disadvantaged as they may need some experience of a particular customers' behaviour before they can submit an accurate forecast and may be subject to slight forecasting error as a result of misleading information provided by the customer. One member of the group questioned whether or not suppliers have an element of control over this issue, as they could provide an incentive to their customers to provide accurate information. Some members of the group did not believe that this was a practical solution.

Although any slight under forecast relating to misleading information provided by a supplier's customers does contribute to the value at risk, the group agreed that in the interests of competition any resulting effect on the security requirement should be minimised. In order to do this, one working group member suggested using a "weighted" average of demand forecasts over the five months, giving increased weight to the later months for which demand forecasting is easier.

National Grid stated that any weighted average must be based upon some logic and therefore proposed the solution of using the following amounts reflective of the relating liability profiles:

Invoice Month	HH Forecast weighting	NHH Forecast weighting
November	33.3	41
December	33.3	49
January	33.3	59
February	66.7	70
March	100	81

After some deliberation the workgroup agreed to use a weighted average of forecasts used to calculate the last five monthly invoices in a previous

financial year (using the weightings proposed by National Grid) to calculate the forecasting performance part of VAR, and that an extreme weather allowance of 3% of NHH annual liability, 6% HH annual liability will be subtracted from the resulting forecasting performance related VAR.

Forecasting Performance Appeals Process

As previously mentioned, one of the workgroup members proposed that an appeals process was created, in which it is intended to account for a User unexpectedly taking on Customers during the year that they have been unable to forecast for. The proposer of this mechanism explained that a Supplier, outside of the usual trading rounds, may pick up customers for whom he has no ability to forecast, and thus any performance related forecasting method would be distorted to the detriment of the Supplier. The proposal therefore addresses this issue by using a methodology by which the User has redress if they can prove that they have picked up a significant amount of customers beyond their ability to forecast for them.

The working group agreed that an appeals process based on the following criteria be made available:

- A User can request, within one month after National Grid notifies them of their forecasting performance related VAR, to recalculate the value, due to an unforeseen increase in their demand.

- The User will need to provide to National Grid the amount of increase in demand (which must equate to at least 1% of their annual HH or NHH liability) and the time period in which such an increase occurred (which must be less than 20 business days in length).

- National Grid has one month from the date of such a request to recalculate the forecasting performance related VAR.

- The recalculation will be based on the amount of growth observed, by Suppliers customers, in 20 business days following a period of growth when compared with the 20 days observed prior to the period of growth over and above a similar amount observed over demands observed from other chargeable sites over the entire system.

- This growth will be multiplied by the typical amount of chargeable demand remaining in the financial year to work out the resulting adjustment in TNUoS liability (A).

- The Users forecasting performance will then be recalculated adjusting the forecasts submitted prior to the period of growth by the adjustment in TNUoS liability (A), capped at the level of the forecast used to calculate the TNUoS Bill issued immediately following the reported period of growth.

The workgroup also agreed that multiple appeals were acceptable as long as periods of growth did not overlap.

National Grid proposed that the decision made following the appeals process would be final. One working group member believed that the process should be subject to CUSC disputes process or an appeal to Ofgem. However, the remainder of the group believed as the timescales and mechanics of the appeals process would be set out in the CUSC, this would not be required, as the process would be transparent and replicable by the user.

Examples of how the Forecasting Performance calculation and relating Appeals Process are provided in Annex 6.

4.11 TRANSITIONAL ARRANGEMENTS

The working group agreed that following implementation, the amount of security required will be determined using the base VAR levels in the relating security periods in addition to any existing forecasting performance level.

Following the next complete year the proposed forecasting performance element will replace that currently used.

In addition, during the first twelve months from implementation any additional security requirement shall be stepped up equally until the full security amount is provided.

Summary and Legal Text

The Working Group reviewed and approved the legal text to give effect to CAP127, which is attached as Annex 1 of this document.

5.0 WORKING GROUP ALTERNATIVE AMENDMENTS

5.1 No Alternative Amendments were raised.

6.0 ASSESSMENT AGAINST APPLICABLE CUSC OBJECTIVES

6.1 The Working Group believed that CAP127 would better meet the Applicable CUSC Objectives. These can be summarised as follows:

A more accurate calculation of value at risk and the securitisation of this in quarterly periods would result in a more appropriate level of security being held, which would:

- Be more efficient, thereby better facilitating the achievement of Applicable Objective (a); and would
- Better facilitate effective competition (Objective (b)) by ensuring that an appropriate level of security was held for all parties, and thus reducing the chances of bad debt being passed through to the industry, and ensuring that the market is not unduly over securitised thus reducing barriers to entry.

7.0 PROPOSED IMPLEMENTATION

7.1 It is proposed that should the Authority approve the CAP127 proposal, implementation should be 10 Business Days after the Authority decision.

8.0 IMPACT ON CUSC

8.1 The CAP127 proposal will require a number of changes to Section 3 of the CUSC Part III Credit Requirements.

8.2 The text to give effect to the CAP127 Proposal is contained In Annex 1 to this document.

9.0 IMPACT ON INDUSTRY DOCUMENTS

Impact on Core Industry Documents

9.1 CAP127 has no impact no impact on other Core Industry Documents.

Impact on other Industry Documents

9.2 CAP127 has no impact on other Industry Documents.

Annex 1 – Legal Text

The proposed Legal text to modify the CUSC Section 3 is detailed below deleting the coloured struck through text and inserting the coloured underlined text.

PART III - CREDIT REQUIREMENTS

3.22 CREDIT MONITORING

3.22.1 Determination of Security Cover

The amount of **Security Cover** which the **User** shall be required to maintain shall be determined from time to time by **The Company** as the **User's Security Requirement** less the **User's Allowed Credit**.

3.22.2 Determination of Security Requirement

The **Security Requirement** for each **User** shall be determined as:-

(a) the **Balancing Services Use of System Charges** provided for in the **CUSC**, where the **User** is a **Supplier**, over a 32 day period or such period as **The Company** acting reasonably shall specify to the **User** in writing from time to time taking into account the requirements for **Security Cover** contained in the **Balancing and Settlement Code** and where **The Company** proposes to change such period **The Company** shall consult with **Users**; and

(b) the **Balancing Services Use of System Charges** provided for in the **CUSC**, where the **User** is a **Generator**, over a 29 day period or such period as **The Company** acting reasonably shall specify to the **User** in writing from time to time taking into account the requirements for **Security Cover** contained in the **Balancing and Settlement Code** and where **The Company** proposes to change such period **The Company** shall consult with **Users**; and

(c) in relation to **Transmission Network Use of System Demand Charges** calculated in the following manner for each **Security Period**:

(aa) in the **Financial Year** in which such charges first become due; the greater of zero and the **User's Base Value at Risk** ; and

(bb) in the case of subsequent **Financial Years**, the greater of zero and the sum of (i) the **User's Base Value at Risk** and (ii) the **User's Forecasting Performance Related VAR** .

(d) interest on the amounts referred to in (a), (b) and (c) above calculated in accordance with the provisions of this **CUSC**.

3.22.3 Calculation of **HH Base Value at Risk**

For each **Security Period**, the sum equal to the **HH Base Percentage** of the **User's Indicative Annual HH TNUoS Charge** calculated on the basis of the latest **Demand Forecast** recieved by **The Company**..

3.22.4 Calculation of **NHH Base Value at Risk**

For each **Security Period**, the sum equal to the **NHH Base Percentage** of the **User's Indicative Annual NHH TNUoS Charge** calculated on the basis of the latest **Demand Forecast** recieved by **The Company**.

3.22.5 Notification of **Deemed HH Forecasting Performance**

Following the issue of the **Initial Demand Reconciliation Statement** in respect of the previous **Financial Year, The Company** shall notify the **User**, of the **Deemed HH Forecasting Performance** to be used in the calculation of the User's **HH Performance Related Var**. Such notice shall be given at least two months prior to the first of the **Security Periods** to which it relates.

3.22.6 Notification of **Deemed NHH Forecasting Performance**

Following the issue of the **Initial Demand Reconciliation Statement** in respect of the previous **Financial Year, The Company** shall notify the **User**, of the **Deemed NHH Forecasting Performance** to be used in the calculation of the **User's NHH Performance Related Var**. Such notice shall be given at least two months prior to the first of the **Security Periods** to which it relates..

Deleted: 10% of **User's Transmission Network Use of System Demand Charges** for

Deleted: such percentage

Deleted: User's Transmission Network Use of System Demand Charges as reflects the percentage difference between the **Actual Amount** and the **Notional Amount** of

Deleted: Transmission Network Use of System Demand Charges for the previous **Financial Year**, provided that where

Deleted: Notional Amount exceeds the **Actual Amount**, the percentage shall be zero; and

3.22.7 **Revision of Deemed HH Forecasting Performance**

If the **User** has experienced a significant increase in the amount of **Demand** taken by its **Customers** during the last five months of the previous **Financial Year** and believes that this has had a significant effect on their **Deemed HH Forecasting Performance**, then no later than one month from the date of the notification given to the **User** under paragraph 3.22.5, the **User** may request that **The Company** revises the **Deemed HH Forecasting Performance**. Upon raising such a request, the **User** must provide information to **The Company** relating to the size of the reported **Demand** increase and the **Reported Period(s) of Increase**. Where for any **Reported Period of Increase** the resulting increase in **Demand** equates to a level that is in excess of one percent of the **Actual Amount** of **HH Charges** in respect of the previous **Financial Year**, **The Company** shall, within one month of receiving such a request, recalculate the **Deemed HH Forecasting Performance** on the basis set out in Appendix 2 Paragraph 4. A **User** shall not be entitled to raise more than one request by reference to any period or part period covered in another **Reported Period of Increase** in respect of which a request has been raised under this Paragraph.

3.22.8 **Revision of Deemed NHH Forecasting Performance**

If the **User** has experienced a significant increase in the amount of **Demand** taken by its **Customers** during the last five months of the previous **Financial Year** and believes that this has had a significant effect on their **Deemed NHH Forecasting Performance**, then no later than one month from the date of the notification given to the **User** under paragraph 3.22.6, the **User** may request that **The Company** revises the **Deemed NHH Forecasting Performance**. Upon raising such a request, the **User** must provide information to **The Company** relating to the size of the reported **Demand** increase and the **Reported Period(s) of Increase**. Where for any **Reported Period of Increase** the resulting increase in **Demand** equates to a level that is in excess of one percent of the **Actual Amount** of **NHH Charges** in respect of the previous **Financial Year**, **The Company** shall within one month of receiving such a request, recalculate the **Deemed NHH Forecasting Performance** on the basis set out in Appendix 2 Paragraph 7. A **User** shall not be entitled to raise more than one request by reference to any period or part period covered in another **Reported Period of Increase** in respect of which a request has been raised under this Paragraph..

3.22.9 Review of Security Cover

The Company shall keep under review the **Security Cover** relating to the **User** and shall promptly advise the **User** whenever the **Security Amount** maintained by the **User** is more or less than the amount required to be maintained pursuant to this Paragraph 3.22.

3.22.10 Decrease of Security Cover

If **The Company** reasonably determines that the **User's** required **Security Cover** has decreased, it shall so notify the **User**. **The Company** shall consent to an appropriate reduction in the available amount of any outstanding **Qualifying Guarantee** or **Letter of Credit** or **Bilateral Insurance Policy** or **Insurance Performance Bond** or **Independent Security Arrangement** and/or shall repay to the **User** such part of the deposit held in the **Escrow Account** for the account of the **User** (together with all accrued interest on the part to be repaid) sufficient to reduce the **User's Security Amount** to the level of **Security Cover** applicable to it within 5 **Business Days** of the **User's** consent.

3.22.11 Notification in respect of Security Cover

The Company shall notify each **User** promptly if:-

(a) that **User** fails to provide, maintain, extend or renew a **Qualifying Guarantee** or a **Letter of Credit** or a **Bilateral Insurance Policy** or an **Insurance Performance Bond** or an **Independent Security Arrangement** which it is required to provide, maintain, extend or renew pursuant to Paragraphs 3.21 or 3.22 inclusive;

(b) **The Company** shall make a demand under any such **Qualifying Guarantee** or a call under a **Letter of Credit** or a **Bilateral Insurance Policy** or an **Insurance Performance Bond** or an **Independent Security Arrangement**; or

(c) **The Company** becomes aware that the **User**:

(i) shall cease to have an **Approved Credit Rating** or shall cease to have an **Approved Credit Rating** for

an amount at least equal to the **User's Security Requirement**, or

(ii) shall be placed on a credit watch by the relevant credit rating agency (or becomes subject to an equivalent procedure) which in any case casts doubt on the **User** retaining an **Approved Credit Rating** or an **Approved Credit Rating** for an amount at least equal to the **User's Security Requirement** or maintaining the **Credit Assessment Score** given by the **User's Independent Credit Assessment**, or

(iii) shall be in default under the additional or alternative security required to be provided pursuant to this Part III; or

(b) **The Company** becomes aware that any bank that has issued a **Letter of Credit** in relation to that **User** which has not expired shall cease to have the credit rating required by this Section*;* or

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(c) **The Company** becomes aware that any entity providing a **Qualifying Guarantee** or a **Bilateral Insurance Policy** or an **Insurance Performance Bond** or an **Independent Security Arrangement** in relation to that **User** which has not expired shall cease to meet the **Requirements** in the case of a **Bilateral Insurance Policy** or an **Insurance Performance Bond** or an **Independent Security Arrangement** or in the case of a **Qualifying Guarantee** cease to have an **Approved Credit Rating** for an amount at least equal to the required **Security Amount** (less its balance on the **Escrow Account**)**;** or

(d) **NGC** becomes aware that the **User's Security Requirement** exceeds 85% of the **User's Allowed Credit**.

Provided always that the failure by **The Company** to notify the **User** pursuant to Paragraphs 3.22.9, 3.22.10 or 3.22.11 shall not relieve the **User** of its obligations under and in accordance with the terms of this Section 3 and the **Charging Statements.**

3.22.12 Release from Security Cover Obligations

Upon a **User** becoming a **Dormant CUSC Party** or ceasing to be a **CUSC Party** and provided that all amounts owed by the **User** in respect of **Balancing Services Use of System Charges** and **Transmission Network Use of System Demand**

Charges have been duly and finally paid and that it is not otherwise in default in any respect of any **Balancing Services Use of System Charges** or **Transmission Network Use of System Demand Charges** (including in each case interest) payable under the **CUSC**, the **User** shall be released from the obligation to maintain **Security Cover** and **The Company** shall consent to the revocation of any outstanding **Qualifying Guarantee** or **Letter of Credit** or a **Bilateral Insurance Policy** or an **Insurance Performance Bond** or an **Independent Security Arrangement** and shall repay to the **User** the balance (including interest credited thereto) standing to the credit of the **User** on the **Escrow Account** at that date.

3.23 PAYMENT DEFAULT

If, by 12.30 hours on any **Use of System Payment Date**, **The Company** has been notified by a **User** or it otherwise has reason to believe that that **User** will not have remitted to it by close of banking business on the **Use of System Payment Date** all or any part ("the amount in default") of any amount which has been notified by **The Company** to the **User** as being payable by the **User** by way of either the **Balancing Services Use of System Charges** and/or **Transmission Network Use of System Demand Charges** on the relevant **Use of System Payment Date**, then **The Company** shall be entitled to act in accordance with the following provisions (or whichever of them shall apply) in the order in which they appear until **The Company** is satisfied that the **User** has discharged its obligations in respect of the **Balancing Services Use of System Charges** and/or **Transmission Network Use of System Demand Charges** (as appropriate) under the **CUSC** which are payable in respect of the relevant **Settlement Day** (in the case of **Balancing Services Use of System Charges**) or **Financial Year** (in the case of **Transmission Network Use of System Demand Charges**):-

(a) **The Company** may to the extent that the **User** is entitled to receive payment from **The Company** pursuant to the **CUSC** (unless it reasonably believes that such set-off shall be unlawful) set off the amount of such entitlement against the amount in default;

(b) **The Company** shall be entitled to set off the amount of funds then standing to the credit of the **Escrow Account** against **Balancing Services Use of System Charges** and/or **Transmission Network Use of System Demand Charges** (as appropriate) unpaid by the **User** and for that purpose **The Company** shall be entitled to transfer any such amount from

the **Escrow Account** to any other account of **The Company** at its absolute discretion and shall notify the **User** accordingly;

(c) **The Company** may demand payment under any outstanding **Letter of Credit** supplied by the **User** in a sum not exceeding the available amount of all such **Letters of Credit**;

(b) **The Company** may demand payment under any outstanding **Qualifying Guarantee** provided for the benefit of the **User** pursuant to Paragraph 3.21.3(b);

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(c) **The Company** may demand payment under any outstanding **Bilateral Insurance Policy** provided for the benefit of the **User**;

(d) **The Company** may demand payment under any outstanding **Insurance Performance Bond** provided for the benefit of the **User**;

(e) **The Company** may demand payment under any outstanding **Independent Security Arrangement** provided for the benefit of the **User**.

3.24 UTILISATION OF FUNDS

In addition to the provisions of Paragraph 3.23 above if **The Company** serves a notice of default under the terms of Paragraph 5.5 or a notice of termination under Paragraph 5.7 then **The Company** shall be entitled to demand payment of any of the **Balancing Services Use of System Charges** and/or **Transmission Network Use of System Demand Charges** which are outstanding from the relevant **User** whether or not the **Use of System Payment Date** in respect of them shall have passed and:-

(a) make demand under any outstanding **Qualifying Guarantee** or a call under any outstanding **Letter of Credit**, **Bilateral Insurance Policy**, **Insurance Performance Bond** or **Independent Security Arrangement** supplied by the **User**; and

(b) to set off the funds in the **Escrow Account** against **Balancing Services Use of System Charges** and/or **Transmission Network Use of System Demand Charges** unpaid by the **User** and for that purpose **The Company** shall be entitled to transfer any such amount from the **Escrow Account** to any other account of **The Company** as it shall in its sole discretion think fit.

3.25 USER'S RIGHT TO WITHDRAW FUNDS

If a **User** is not in default in respect of any amount owed to **The Company** in respect of the **Balancing Services Use of System Charges** or **Transmission Network Use of System Charges** under the terms of the **CUSC** and any **Bilateral Agreement** to which the **User** is a party:-

(a) **The Company** shall transfer to the **User** quarterly interest credited to the **Escrow Account**; and

(b) **The Company** shall transfer to such **User** within a reasonable time after such **User's** written request therefor any amount of cash provided by the **User** by way of **Security Cover** which exceeds the amount which such **User** is required to provide by way of security in accordance with this Part III.

3.26 USER'S ALLOWED CREDIT

3.26.1 Each **User** shall notify **NGC** promptly if:-

(a) it gains an **Approved Credit Rating**; or

(b) it ceases to have an **Approved Credit Rating**; or

(c) where the **User** holds an **Approved Credit Rating**, its specific investment grading changes; or

(d) it has reason to believe that its **Credit Assessment Score** is likely to have changed since the last **Independent Credit Assessment**.

3.26.2 The **User's Allowed Credit** extended by **NGC** at any time to each **User** with an **Approved Credit Rating** shall be calculated in accordance with Paragraph 1 of Appendix 1 of this Section 3 subject to a maximum value of the **Unsecured Credit Cover**.

3.26.3 The **User's Allowed Credit** extended by **NGC** at any time to each **User** without an **Approved Credit Rating** shall be at the choice of the **User** the **Payment Record Sum** or the **Credit Assessment Sum**.

3.26.4 Unless the **User** has notified **NGC** that it wishes its **User's Allowed Credit** to be to be based on the **Credit Assessment Sum** then, subject to Paragraph 3.26.5, for each successive month in which the **User** pays its **Use of System Charges** by the **Use of System Payment Date** then the **User's Allowed Credit** extended to such **User** at any time shall be calculated in accordance with Paragraph 2 of Appendix 1 of this Section 3.

3.26.5 Where a **User** fails to pay its **Use of System Charges** within 2 **Business Days** of the **Use of System Payment Date** its **Payment Record Sum** shall be reduced by 50% on the first such occasion within a twelve month period and shall be reduced to zero on the second occasion in such twelve month period. Upon any such failure to pay, the **User's Allowed Credit** (as adjusted following such failure in accordance with this clause) shall be calculated for successive months in accordance with Paragraph 3.26.4.

3.26.6 Where a **User** has notified **NGC** that it wishes its **User's Allowed Credit** to be based on its **Credit Assessment Sum**, the **Credit Assessment Sum** extended to a **User** at any time shall be calculated be reference to the **Credit Assessment Score** given by the **Independent Credit Assessment** in accordance with Paragraph 3 of Appendix 1 of this Section 3.

3.26.7 Where a **User** has notified **NGC** that its wishes its **User's Allowed Credit** to be based on the **Credit Assessment Sum** then the **User** will obtain an **Independent Credit Assessment** of that **User**. The first such **Independent Credit Assessment** will be at **NGC's** cost.

3.26.8 Where a **User's Allowed Credit** is based on the **Credit Assessment Sum** then where **NGC** has reason to believe that the **Independent Credit Assessment** last obtained is likely to have changed then **NGC** shall be entitled to request the **User** to obtain a further **independent Credit Assessment**. Such **Independent Credit Assessment** shall be at **NGC's** cost.

3.26.9 The **User** may obtain an **Independent Credit Assessment** at **NGC's** cost provided that **NGC** has not paid for an earlier **Independent Credit Assessment** for that **User** within the previous 12 months. The **User** may obtain further **Independent Credit Assessments** within such a 12 month period at the **User's** cost.

3.27 TRANSITIONAL ARRANGEMENTS

Recognising the changes to the **Security Cover** and **Security Requirements** introduced by the **Security Amendment** and the consequences for **The Company** and **Users** then notwithstanding the provisions of **CUSC** Section 3 Part III the following transitional provisions shall apply:

(a) the obligation for **Users** whose **Security Requirement** will as a result of the **Security Amendment** increase at the **Security Amendment Implementation Date** shall be to provide the difference between the **Existing Security**

Cover and the **Security Cover** in full by no later than the **End Date** and by increasing the **Existing Security Cover** each month by equal monthly amounts of the difference between the **existing Security Cover** and the **Security Cover**; and

(b) where a **User's Security Requirement** at the **Security Amendment Implementation Date** is less than the **Existing Security Cover** held for that **User** then **NHC** shall release the **existing Security Cover** by the appropriate amount as soon as practicable and in any event within one calendar month of the **Security Amendment Implementation Date**.

3.27.2 Recognising the changes to the **Security Cover** and **Security Requirements** introduced by the **Value At Risk Amendment** and the consequences for **The Company** and **Users** then notwithstanding the provisions of **CUSC** Section 3 Part III the following transitional provisions shall apply:

(a) Until the **Initial Demand Reconciliation Statement** has been issued for the **Financial Year** ending at least six months following the **Value At Risk Amendment Implementation Date,** and **The Company** has calculated the **Forecasting Performance Related VAR** by reference to this, each **User's Forecasting Performance Related VAR** shall be substituted by such percentage of **User's Transmission Network Use of System Demand Charges** as reflects the percentage difference between the **Actual Amount** and the **Notional Amount** of the **User's Transmission Network Use of System Demand Charges** for the previous **Financial Year**, provided that where the **Notional Amount** exceeds the **Actual Amount**, the percentage shall be zero;

(b) the obligation for **Users** whose **Security Requirement** will increase at the **Value At Risk Amendment Implementation Date** as a result of the **Value At Risk Amendment** shall be to provide the difference between the **Pre-Value At Risk Amendment Security Cover** and the **Security Cover** in full by no later than the **Value At Risk Amendment Implementation End Date** and by increasing the **Pre-Value At Risk Amendment Security Cover** each month by equal monthly amounts of the difference between the **Pre-Value At Risk Amendment Security Cover** and the **Security Cover**; and

(c) where a **User's Security Requirement** at the **Value At Risk Amendment Implementation Date** is less than the **Pre-Value At Risk Amendment Security Cover** held for that **User** then **The Company** shall release the **Pre-Value At Risk Amendment Security Cover** by the appropriate amount as soon as practicable and in any event within one calendar month of the **Value At Risk Amendment Implementation Date**.

APPENDIX 1 CREDIT ARRANGEMENTS

1 Where the **User** meets the **Approved Credit Rating** that **User's Allowed Credit** at any given time shall be calculated as a percentage of **Unsecured Credit Cover** by reference to the specific investment grade within the **User's Approved Credit Rating** as follows:

Approved Long Term Credit Rating			**User's Allowed Credit as % of Unsecured Credit Cover**
Standard & Poor's	**Moody's**	**Fitch**	
AAA AA+ AA AA-	Aaa Aa1 Aa2 Aa3	AAA AA+ AA AA-	100
A+ A A-	A1 A2 A3	A+ A A-	40
BBB+	Baa1	BBB+	20
BBB	Baa2	BBB	19
BBB-	Baa3	BBB-	18
BB+	Ba1	BB+	17
BB	Ba2	BB	16
BB-	Ba3	BB-	15

2 Where based on the **Payment Record Sum**, a **User's Allowed Credit** at any time shall be calculated on the basis of 0.4% per 12 month period (escalating on an evenly graduated basis each month) of the **Unsecured Credit Cover**, subject to a maximum of 2% after 60 months of successive payment by the **Use of System Payment Date**.

3 Where based on the **Credit Assessment Sum**, a **User's Allowed Credit** at any given time shall be calculated as a percentage of the **Unsecured Credit Cover** by reference to the **Credit Assessment Score** as follows:

Credit Assessment Score	**User's Allowed Credit as % of Unsecured Credit Cover**
10	20
9	19
8	18
7	17
6	16
5	15
4	13.33
3	10

2	6.67
1	3.33
0	0

APPENDIX 2

Base Value At Risk

1. For each **Security Period**, the **HH Base Percentage** used in determining the **User's HH Base Value at Risk** shall be determined by reference to the following:

Security Period Start Date (inclusive)	**Security Period End Date (inclusive)**	**HH Base Percentage**
1st April	30th June	3.8%
1st July	30th September	-21.1%
1st October	31st December	-36.8%
1st January	31st March	19.3%

2. For each **Security Period**, the **NHH Base Percentage** used in determining the **User's NHH Base Value at Risk** shall be determined by reference to the following:

Security Period Start Date (inclusive)	**Security Period End Date (inclusive)**	**NHH Base Percentage**
1st April	30th June	16.6%
1st July	30th September	11.3%
1st October	31st December	9.5%
1st January	31st March	15.9%

Deemed HH Forecasting Performance and Revision

3. **Deemed HH Forecasting Performance**, FPP_{HH}, shall be calculated as set out in the following formula:

$$FPP_{HH} = \max\left(0, \frac{5}{1333}\sum_{m=8}^{12}\left(\frac{AA_{HH} - IA_{HH,m}}{AA_{HH}} * W_{HH,m}\right) - CA_{HH}\right)$$

Where:

AA_{HH} is the **Actual Amount** of **User's HH Charges** for the previous **Financial Year**

$IA_{HH,m}$ is the **Indicative Annual HH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during month m of the previous **Financial Year**.

$W_{HH,m}$ The forecast weighting to be applied for each month, m by reference to the following:

m	**Invoice Month**	**Forecast weighting, $W_{HH,m}$**
8	November	33.3
9	December	33.3
10	January	33.3
11	February	66.7
12	March	100

CA_{HH} is an allowance for extreme conditions equal to 0.06.

4. The revised **Deemed HH Forecasting Performance,** shall be calculated on the basis of Paragraph 3 above, substituting the **Indicative Annual HH TNUoS Charge** for each month, m prior to the end of the **Reported Period of Increase** with the **Revised Indicative Annual HH TNUoS charge**, $RIA_{HH,m}$

5. The **Revised Indicative Annual HH TNUoS charge,** $RIA_{HH,m}$ shall be derived as follows:

$$RIA_{HH,m} = \min\left(\max\left(\frac{DUA_{HH,p}}{DUB_{HH,p}} - \frac{DSA_{HH,p}}{DSB_{HH,p}}, 0\right) * RD_{HH,p} + IA_{HH,m}, IA_{HH,p}\right)$$

Where:

$DUA_{HH,p}$ is the average half-hourly metered demand taken by the **User's Customers** during the period 17:00 to 17:30 on the twenty **Business Days** prior to the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DUB_{HH,p}$ is the average half-hourly metered demand taken by the **User's Customers** during the period 17:00 to 17:30 on the twenty **Business Days** following the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DSA_{HH,p}$ is the average demand taken by **Total System Chargeable HH Demand** during the period 17:00 to 17:30 on the twenty **Business Days** prior to the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DSB_{HH,p}$ is the average demand taken by **Total System Chargeable HH Demand** during the period 17:00 to 17:30 on the twenty **Business Days** following the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$RD_{HH,p}$ is the forecast proportion of **HH Charges** remaining for the previous **Financial Year** from the first day of the month in which the **Reported Period of Increase**, p commences by reference to the following:

Month in which **Reported Period of Increase commences**	Remaining proportion of **HH Charges**
October	100%
November	100%
December	100%
January	66.7%

February	33.3%

$IA_{HH,m}$ is the **Indicative Annual HH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during month m of the previous **Financial Year**.

$IA_{HH,p}$ in the case that the the **Reported Period of Increase**, p ends prior to the 10th February of the previous **Financial Year**, is set equal to the **Indicative Annual HH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during the month immediately following **Reported Period of Increase** of the previous **Financial Year,** otherwise is set to infinity.

Deemed NHH Forecasting Performance and Revision

6. **Deemed NHH Forecasting Performance**, FPP_{NHH}, shall be calculated as set out in the following formula:

$$FPP_{NHH} = \max\left(0, \frac{1}{300}\sum_{m=8}^{12}\left(\frac{AA_{NHH} - IA_{NHH,m}}{AA_{NHH}} * W_{NHH,m}\right) - CA_{NHH}\right)$$

Where:

AA_{NHH} is the **Actual Amount** of **User's NHH Charges** for the previous **Financial Year**

$IA_{NHH,m}$ is the **Indicative Annual NHH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during month m of the previous **Financial Year**.

$W_{NHH,m}$ The forecast weighting to be applied for each month, m by reference to the following:

m	**Invoice Month**	**Forecast weighting, $W_{NHH,m}$**

8	November	41
9	December	49
10	January	59
11	February	70
12	March	81

$CA_{NHH,}$ is an allowance for extreme conditions equal to 0.03

7. The revised **Deemed NHH Forecasting Performance** shall be calculated on the basis of Paragraph 6 above, substituting the **Indicative Annual NHH TNUoS Charge** for each month, m prior to the end of the **Reported Period of Increase** with the **Revised Indicative Annual NHH TNUoS charge, $RIA_{NHH,m}$.**

8. The **Revised Indicative Annual NHH TNUoS charge,** $RIA_{NHH,m,}$ shall be derived as follows:

$$RIA_{NHH,m} = \min\left(\max\left(\frac{DUA_{NHH,p}}{DUB_{NHH,p}} - \frac{DSA_{NHH,p}}{DSB_{NHH,p}}, 0 \right) * RD_{NHH,p} + IA_{NHH,m}, IA_{NHH,p} \right)$$

Where:

$DUA_{NHH,p}$ is the average non-half-hourly metered demand taken by the **User's Customers** during the period 16:00 to 19:00 on the twenty **Business Days** prior to the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DUB_{NHH,p}$ is the average non-half-hourly metered demand taken by the **User's Customers** during the period 16:00 to 19:00 on the twenty **Business Days** following the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DSA_{NHH,p}$ is the average demand taken by **Total System Chargeable NHH Demand** during the period 16:00

to 19:00 on the twenty **Business Days** prior to the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$DSB_{NHH,p}$ is the average demand taken by **Total System Chargeable NHH Demand** during the period 16:00 to 19:00 on the twenty **Business Days** following the **Reported Period of Increase,** p, that do not fall between the two week period commencing 22nd December.

$RD_{NHH,p}$ is the forecast proportion of **NHH Charges** remaining for the previous **Financial Year** from the first day of the month in which the **Reported Period of Increase**, p commences by reference to the following:

Month in which **Reported Period of Increase commences**	Remaining proportion of **NHH Charges**
October	59%
November	51%
December	41%
January	30%
February	19%

$IA_{NHH,m}$ is the **Indicative Annual NHH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during month m of the previous **Financial Year**.

$IA_{NHH,p}$ in the case that the the **Reported Period of Increase**, p ends prior to the 10th February of the previous **Financial Year**, is set equal to the **Indicative Annual NHH TNUoS charge** calculated using the **Demand Forecast** used to determine **Transmission Network Use of System Demand Charges** made during the month immediately

following **Reported Period of Increase** of the previous **Financial Year,** otherwise is set to infinity.

END OF SECTION 3

"Base Value at Risk"	the sum of **HH Base Value at Risk** and the **NHH Base Value at Risk**
"Deemed HH Forecasting Performance"	the sum calculated in accordance with Appendix 2 Paragraph 3 as it may be revised in accordance with paragraph 3.22.7
"Deemed NHH Forecasting Performance"	the sum calculated in accordance with Appendix 2 Paragraph 6 as it may be revised pursuant to Paragraph 3.22.8
"Forecasting Performance Related VAR "	the sum of **HH . Forecasting Performance Related VAR** and **NHH Forecasting Performance Related VAR**
"HH Base Percentage"	the % value for the relevant **Security Period** as specified in the table in paragraph 1 of Appendix 2
"HH Base Value at Risk"	the sum as calculated in accordance with Paragraph 3.22.3.
"HH Charges"	that element of **Transmission Network Use of System Demand Charges** relating to half-hourly metered **Demand**;
"HH Forecasting Performance Related VAR "	the amount resulting from multiplying the **Deemed HH Forecasting Performance** and the **Indicative Annual HH TNUoS Charge** calculated on the basis of the latest **Demand Forecast** received by **The Company**..
"Indicative Annual HH TNUoS charge"	**The Company's** forecast of the **User's** total **HH Charges** relating to a **Financial Year**,
"Indicative Annual NHH TNUoS charge"	**The Company's** forecast of the **User's** total **NHH Charges** relating to a **Financial Year**,
"NHH Base Percentage"	the % value for the relevant **Security Period** as specified in the table in

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	paragraph 2 of Appendix 2.
"NHH Charges"	that element of **Transmission Network Use of System Demand Charges** relating to non-half-hourly metered **Demand**;
"NHH Base Value at Risk"	the sum as calculated in accordance with Paragraph 3.22.4.
"NHH Forecasting Performance Related VAR "	the amount resulting from multiplying the **Deemed NHH Forecasting Performance** and the **Indicative Annual HH TNUoS Charge** calculated on the basis of the latest **Demand Forecast** received by **The Company**..
"Reported Period(s) of Increase"	the period of time during which a **User's Demand** increased not being more than 20 **Business Days**, as notified to **The Company** under paragraph 3.22.7 or paragraph 3.22.8.
"Revised Indicative Annual HH TNUoS charge"	the value calculated in accordance with Appendix 2 paragraph 5.
"Revised Indicative Annual NHH TNUoS charge"	the value calculated in accordance with Appendix 2 paragraph 8.
"Security Period"	the period from 1 April to 30 June (inclusive), 1 July to 30 September (inclusive), 1 October to 31 December (inclusive), or 1 January to 31 March (inclusive) as appropriate.
"Total System Chargeable HH Demand"	the total of all half-hourly metered **Demands** for which **HH Charges** are paid, taken over a period of time which may or may not be that to which **HH Charges** relate.
"Total System Chargeable NHH Demand"	the total of all half-hourly metered **Demands** for which **NHH Charges** are paid, taken over a period of time which may or may not be that to which **NHH Charges** relate.
"Value At Risk Amendment"	the **Proposed Amendment** in respect of

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	Amendment Proposal 127
"Value At Risk Amendment Implementation Date"	the **Implementation Date** of the **Value At Risk Amendment**
"Value At Risk Amendment Implementation End Date"	the date one year following the **Value At Risk Amendment Implementation Date**.

Annex 2 – Working Group Terms of Reference and Membership

TERMS OF REFERENCE FOR CAP127 WORKING GROUP

RESPONSIBILITIES

1. The Working Group is responsible for assisting the CUSC Amendments Panel in the evaluation of CUSC Amendment Proposal CAP127 tabled by National Grid at the Amendments Panel meeting on 29 September 2006.

2. The proposal must be evaluated to consider whether it better facilitates achievement of the applicable CUSC objectives. These can be summarised as follows:

   (a) the efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence; and

   (b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity.

3. It should be noted that additional provisions apply where it is proposed to modify the CUSC amendment provisions, and generally reference should be made to the Transmission Licence for the full definition of the term.

SCOPE OF WORK

4. The Working Group must consider the issues raised by the Amendment Proposal and consider if the proposal identified better facilitates achievement of the Applicable CUSC Objectives.

5. In addition to the overriding requirement of paragraph 4, the Working Group shall consider and report on the following specific issues:

   - ***Methodology for calculation of forecast VAR***
     Profiling of base VAR
     Examination of appropriate scenarios and adjustments
   - ***Number and duration of "Security Periods"***
   - ***Percentage of VAR to secure***

6. The Working Group is responsible for the formulation and evaluation of any Working Group Alternative Amendments (WGAAs) arising from Group discussions which would, as compared with the Amendment Proposal, better facilitate achieving the applicable CUSC objectives in relation to the issue or defect identified.

7. The Working Group should become conversant with the definition of Working Group Alterantive Amendments which appears in Section 11 (Interpretation and Definitions) of the CUSC. The definition entitles the Group and/or an individual Member of the Working Group to put forward a Working Group Alternative Amendment if the Member(s) genuinely believes the Alternative would better facilitate the achievement of the Applicable CUSC Objectives. The extent of the support for the Amendment Proposal or any Working Group Alternative Amendment arising from the Working Group's discussions should be clearly described in the final Working Group Report to the CUSC Amendments Panel.

8. The Working Group is to submit their final report to the CUSC Panel Secretary on 7 December 2006 for circulation to Panel Members. The conclusions will be presented to the CUSC Panel meeting on 15 December 2006.

MEMBERSHIP

9. It is recommended that the Working Group has the following members:

Chair	Hedd Roberts
National Grid	Paul Murphy
	Wayne Mullins
	Bec Thornton
Industry Representatives	Andrew Colley
	Mark De Souza
	Paul Mott
	Keith Munday
	Lee Selway
	Ben Sheehy
	Dave Wilkerson
	Carl Wilkes
Authority Representative	Jenny Boothe
	Dipen Gadhia
Technical Secretary	Beverley Viney

[NB: Working Group must comprise at least 5 Members (who may be Panel Members) and will be selected by the Panel with regard to WG List held by the Secretary]

10. The membership can be amended from time to time by the CUSC Amendments Panel.

RELATIONSHIP WITH AMENDMENTS PANEL

11. The Working Group shall seek the views of the Amendments Panel before taking on any significant amount of work. In this event the Working Group Chairman should contact the CUSC Panel Secretary.

12. Where the Working Group requires instruction, clarification or guidance from the Amendments Panel, particularly in relation to their Scope of Work, the Working Group Chairman should contact the CUSC Panel Secretary.

MEETINGS

13. The Working Group shall, unless determined otherwise by the Amendments Panel, develop and adopt its own internal working procedures and provide a copy to the Panel Secretary for each of its Amendment Proposals.

REPORTING

14. The Working Group Chairman shall prepare a final report to the December 2006 Amendments Panel responding to the matter set out in the Terms of Reference.

15. A draft Working Group Report must be circulated to Working Group members with not less than five business days given for comments.

16. Any unresolved comments within the Working Group must be reflected in the final Working Group Report.

17. The Chairman (or another member nominated by him) will present the Working Group report to the Amendments Panel as required.

Annex 3 – Internal Working Group Procedure

CAP127 Working Group

INTERNAL WORKING PROCEDURES

1. Notes and actions from each meeting will be produced by the Technical Secretary (provided by National Grid) and circulated to the Chairman and Working Group members for review.

2. The Meeting notes and actions will be published on the National Grid CUSC Website after they have been agreed at the next meeting or sooner on agreement by Working Group members.

2. The Chairman of the Working Group will provide an update of progress and issues to the Amendments Panel each month as appropriate.

4. Working Group meetings will be arranged for a date acceptable to the majority of members and will be held as often as required as agreed by the Working Group in order to respond to the requirements of the Terms of Reference set by the Amendments Panel.

5. If within half an hour after the time for which the Working Group meeting has been convened the Chairman of the group is not in attendance, the meeting will take place with those present.

6. A meeting of the Working Group shall not be invalidated by any member(s) of the group not being present at the meeting.

Annex 4 – Original Amendment Proposal Form

CUSC Amendment Proposal Form	**CAP:127**

Title of Amendment Proposal:
Calculation and Securing of Value at Risk

Description of the Proposed Amendment *(mandatory by proposer)*:

Section 3 - Credit Requirements (calculation of security for Demand TNUoS)

Value at Risk (VAR) is the maximum amount of Use of System liability that any User is required to secure ("Security Requirement").

Post implementation of Ofgem's Best Practice Guidelines on Network Operator Credit Cover it has become evident that it is possible to develop the current calculation of VAR and to refine the amount of VAR that parties need to secure such that the CUSC more fully meets the intentions of the Best Practice Guidelines. Moreover that by ensuring that VAR is more accurate, appropriate and effective, National Grid believes that this proposal will better facilitate the applicable objectives.

It is the intention of this proposal to ensure that the CUSC more clearly reflects both the value and variability of the true value at risk throughout the year. Hence, National Grid propose an amendment to the CUSC that seeks to implement a calculation of VAR for Demand TNUoS charges that is more closely aligned to the monetary value at risk and actual risk of exposure to non payment, and to more appropriately define the way in which VAR has to be secured.

There are two elements to the proposal :

1) Calculation of VAR;
2) Securing VAR.

1) <u>Calculation of VAR</u>

National Grid believes that the most effective way to treat VAR would be to ensure that a range of factors are taken into account in the relevant formula, such that the calculation is both sensitive and accurate. Instead of simply relying on a users forecast (as now) it is proposed that the calculation should factor in the cumulative daily risk adjusted liability, reconciliation demand and the amount invoiced to date.

In more detail:

VAR = Cumulative *Daily Risk Adjusted Liability + Reconciliation Determination + Allowance for Unpaid Invoices - Amount Invoiced to Date*

Where:

a) ***Cumulative Daily Risk Adjusted Liability*** is determined by using *daily liability profiles* from previous settlement data and a *risk adjusted forecast liability* factor calculated by assuming some variation in forecasting performance and weather effects.

b) ***Reconciliation Determination*** - Allowances for Initial and Final reconciliation amounts that have potentially been accrued are then added to the daily liability profile to result in the "final adjusted liability determination":

c) ***Amount Invoiced to Date*** / ***Allowance for Unpaid Invoices*** - A provision will be held in order to provide sufficient security for amounts invoiced, but remain unpaid upon a supplier failing to pay invoices. The value invoiced during the past 45 days will be held, which equates to the previous two invoices.

2) <u>Securing VAR</u>

In addition to refining the treatment of VAR, it is proposed that the amount to be secured should also be amended such that the financial year's liability would be split into two ''security periods'' and parties would secure a percentage of the maximum VAR observed in the relevant security period.

National Grid believe that the securing of VAR in two security periods will more accurately reflect the fact that security levels will vary throughout the year (and are likely in some instances to be zero for a significant part of the year.)

Description of Issue or Defect that Proposed Amendment seeks to Address *(mandatory by proposer)*:

Current CUSC VAR calculation

It had become evident that the methodology for calculating VAR under the terms of the CUSC for TNUoS does not reflect Ofgem's Best Practice Guidelines intention of securing the actual VAR at any given point in time, it is open to 'gaming' and can result in insufficient levels of security being provided and potential exposures to bad debt.

Best Practice Guidelines VAR Calculation

Billed and unpaid charges cover only one element of VAR and due to the unique manner in which TNUoS charges are calculated and charged, the methodology for use of system charges proposed by Ofgem's Best Practice Guidelines document would also provide insufficient levels of security and potential exposures to bad debt, if applied as interpreted.

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

Section 3 Part III (Credit Requirements),
Section 6 (General Provisions) and Section 11 (Interpretation and Definitions)

Impact on Core Industry Documentation:

None anticipated

Impact on Computer Systems and Processes used by CUSC Parties

None anticipated

Details of any Related Modifications to Other Industry Codes:

N/A

Justification for Proposed Amendment with Reference to Applicable CUSC Objectives** *(mandatory by proposer)*:
National Grid believes that this proposal will better facilitates CUSC Applicable Objectives;

(a) the efficient discharge by the Licensee of the obligations imposed on it by the Act and the Transmission Licence; and

(b) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the sale, distribution and purchase of electricity;

by introducing a more accurate calculation of value at risk and the re-definition of two within year periods for which VAR applies, will enable VAR to be treated more effectively, accurately and appropriately going forward.

Details of Proposer: Organisation's Name:	National Grid
Capacity in which the Amendment is being proposed: (i.e. CUSC Party, BSC Party or "energywatch")	CUSC Party
Details of Proposer's Representative: Name: Organisation: Telephone Number: Email Address:	 Paul Murphy National Grid Electricity Transmission 01926 656330 Paul.Murphy@uk.ngrid.com
Details of Representative's Alternate: Name: Organisation: Telephone Number: Email Address:	 Bec Thornton National Grid Electricity 01926 656386 Bec.Thornton@uk.ngrid.com
Attachments (Yes/No): **If Yes, Title and No. of pages of each Attachment:** No	

Notes:

1. Those wishing to propose an Amendment to the CUSC should do so by filling in this "Amendment Proposal Form" that is based on the provisions contained in Section 8.15 of the CUSC. The form seeks to ascertain details about the Amendment Proposal so that the Amendments Panel can determine more clearly whether the proposal should be considered by a Working Group or go straight to wider National Grid Consultation.

2. The Panel Secretary will check that the form has been completed, in accordance with the requirements of the CUSC, prior to submitting it to the Panel. If the Panel Secretary accepts the Amendment Proposal form as complete, then he will write back to the Proposer informing him of the reference number for the Amendment Proposal and the date on which the Proposal will be considered by the Panel. If, in the opinion of the Panel Secretary, the form fails to provide the information required in the CUSC, then he may reject the Proposal. The Panel Secretary will inform the Proposer of the rejection and report the matter to the Panel at their next meeting. The Panel can reverse the Panel Secretary's decision and if this happens the Panel Secretary will inform the Proposer.

   The completed form should be returned to:

   Beverley Viney
   Panel Secretary
   Commercial Frameworks
   National Grid Company plc
   NGT House
   Warwick Technology Park
   Gallows Hill
   Warwick, CV34 6DA
   Or via e-mail to: Beverley.viney@uk.ngrid.com

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

3. Applicable CUSC Objectives** - These are defined within the National Grid Company Transmission Licence under Section C10, paragraph 1. Reference should be made to this section when considering a proposed amendment.

Annex 5 - Example VAR Calculation

Supplier A has a TNUoS liability of £10m, derived from their latest demand submission. £6m of this liability relates to NHH demand and £4m HH demand.

Base Level VAR

Using an actual average of the agreed base VAR profile during each quarter of the year, results in the following base security requirements:

Security Period	Start Date	End Date	HH Base VAR (% of Forecasted Annual)	NHH Base VAR (% of Forecasted Annual)	HH Base VAR (A)	NHH Base VAR (B)	Base VAR (A+B, uncollared)
1	01/04/2006	30/06/2006	3.8%	16.6%	£ 152,000.00	£996,000.00	£1,148,000.00
2	01/07/2006	30/09/2006	-21.1%	11.3%	-£ 844,000.00	£678,000.00	-£ 166,000.00
3	01/10/2006	31/12/2006	-36.8%	9.5%	-£1,472,000.00	£570,000.00	-£ 902,000.00
4	01/01/2007	31/03/2007	19.3%	15.9%	£ 772,000.00	£954,000.00	£1,726,000.00

Forecasting Performance related & calculation of Final VAR

The methodology for calculating the forecasting performance element is covered in Annex 6. This example covers only how the resulting percentages will be used.

There will be three typical scenarios:

1. Supplier A under forecasts during a previous financial year

If a supplier is deemed to have under forecast by 20% in both HH and NHH submissions during each month of the forecasting performance assessment period, then following the subtraction of any extreme weather allowances (proposed as 3% of annual NHH demand and 6% of annual HH demand in the five month model), the resulting additional VAR would be 17% of the NHH supplier forecast annual liability and 14% of the HH supplier forecast annual liability)

The following table gives the final VAR calculation

Security Period	Start Date	End Date	Base VAR (A+B, uncapped)	HH Forecasting performance factor	NHH Forecasting performance factor	HH Forecast Performance Related VAR (C)	NHH Forecast Performance Related VAR (D)	Final VAR (prior to collaring, A+B+C+D)	Final VAR
1	01/04/2006	30/06/2006	£1,148,000.00	14.0%	17.0%	£560,000	£1,020,000	£ 2,728,000.00	£2,728,000.00
2	01/07/2006	30/09/2006	-£ 166,000.00	14.0%	17.0%	£560,000	£1,020,000	£ 1,414,000.00	£1,414,000.00
3	01/10/2006	31/12/2006	-£ 902,000.00	14.0%	17.0%	£560,000	£1,020,000	£ 678,000.00	£ 678,000.00
4	01/01/2007	31/03/2007	£1,726,000.00	14.0%	17.0%	£560,000	£1,020,000	£ 3,306,000.00	£3,306,000.00

2. Supplier A accurately forecasts during a previous financial year

In the case that a supplier is deemed to have accurately forecast during the each month of the forecasting performance assessment period, then the final VAR will be calculated as follows:

Security Period	Start Date	End Date	Base VAR (A+B, uncapped)	HH Forecasting performance factor	NHH Forecasting performance factor	HH Forecast Performance Related VAR (C)	NHH Forecast Performance Related VAR (D)	Final VAR (prior to collaring, A+B+C+D)	Final VAR
1	01/04/2006	30/06/2006	£1,148,000.00	0.0%	0.0%	£ -	£ -	£ 1,148,000.00	£1,148,000.00
2	01/07/2006	30/09/2006	-£ 166,000.00	0.0%	0.0%	£ -	£ -	-£ 166,000.00	£ -
3	01/10/2006	31/12/2006	-£ 902,000.00	0.0%	0.0%	£ -	£ -	-£ 902,000.00	£ -
4	01/01/2007	31/03/2007	£1,726,000.00	0.0%	0.0%	£ -	£ -	£ 1,726,000.00	£1,726,000.00

3. Supplier A over forecasts during a previous financial year

A a supplier who is deemed to have been over forecasting will not be given any reduction in VAR beyond the baseline (i.e. the Base VAR in each security period collared at zero (after netting) will be the minimum VAR amount for any supplier). Therefore, the Final VAR shall be equal to that of a supplier that is deemed to have been accurately forecasting.

Final Security Requirement

If the resulting level of VAR (plus any equivalent amount for BSUoS charges) in a given security period exceeds any credit allowance (through credit rating, independent assessment, payment history, etc.) then the supplier will be required to provide security against any such difference.

Annex 6- Forecasting Performance & Appeals Process

The calculation of each supplier's forecast performance will be undertaken on an annual basis, following the initial reconciliation of Demand TNUoS charges. The relating VAR adjustment will be applied during each quarter of the year following the calculation and the subsequent appeals period (2 months). Subject to the result of any appeals, this will be applicable until it is recalculated following the subsequent initial reconciliation. (The intention is for each adjustment to apply from quarter 3 in year y through to quarter 2 in year y+1, inclusive, where y is the current financial year).

As part of the initial reconciliation, the annual HH and NHH demand TNUoS liabilities will be calculated for each supplier in relation to the previous financial year (y-1). These amounts will then be compared to forecasted annual liabilities derived from the HH and NHH supplier forecasts used to calculate the amounts on the last five months worth of TNUoS invoices, to give five percentage over/under forecasts.

A weighted-average percentage over/under forecasts will then be calculated for each demand type using the following weightings, to give the HH and NHH deemed forecasting performance:

Invoice Month	Forecast weighting, $W_{HH,m}$	Forecast weighting, $W_{NHH,m}$
November	33.3	41
December	33.3	49
January	33.3	59
February	66.7	70
March	100	81

3% of the annual NHH liability and 6% of HH liability will then be subtracted from the deemed forecasting performance levels to allow for the chance of extreme weather having a detrimental impact upon each supplier's forecasting performance.

If the result indicates an under forecast, then subject to any appeals, this percentage of the current year supplier forecasted annual liability will be the additional VAR required to be secured. If the result indicates an average over forecast, then there will be no additional VAR to be secured.

The following examples should clarify.

Example 1.1:

Suppose supplier A has the following annual liabilities during year y-1 (as calculated at initial reconciliation):

HH: £4,000,000
NHH: £6,000,000

However, during the financial year y-1, supplier A submitted forecasts suggesting the following annual liabilities:

Invoice Issue Date	Invoice Payment Date	Forecast Deadline	HH Forecast Liability	NHH Forecast Liability
01-Nov	15-Nov	10-Oct	£ 3,200,000.00	£ 4,800,000.00
01-Dec	15-Dec	10-Nov	£ 3,200,000.00	£ 4,800,000.00
01-Jan	15-Jan	10-Dec	£ 3,200,000.00	£ 4,800,000.00
01-Feb	15-Feb	10-Jan	£ 3,600,000.00	£ 5,400,000.00
01-Mar	15-Mar	10-Feb	£ 3,800,000.00	£ 5,700,000.00

Monthly forecast performance is calculated as the percentage difference between the monthly forecasted liabilities and the annual liabilities calculated at initial reconciliation:

Invoice Payment Date	HH Forecast Liability	HH Annual Liability	HH Forecast Performance	NHH Forecast Liability	NHH Annual Liability	NHH Forecast Performance
15-Nov	£ 3,200,000.00	£4,000,000	-20%	£4,800,000	£6,000,000	-20%
15-Dec	£ 3,200,000.00	£4,000,000	-20%	£4,800,000	£6,000,000	-20%
15-Jan	£ 3,200,000.00	£4,000,000	-20%	£5,400,000	£6,000,000	-10%
15-Feb	£ 3,600,000.00	£4,000,000	-10%	£5,400,000	£6,000,000	-10%
15-Mar	£ 3,800,000.00	£4,000,000	-5%	£5,700,000	£6,000,000	-5%

The weighted average of the forecasting performance can then be calculated:

HH deemed under forecast: 11.87%
((20*33.3 + 20*33.3 + 20*33.3 + 10*66.7 + 5*100)/(33.3*3 + 66.7 + 100) = 11.87)

NHH deemed under forecast: 11.65%%
((20*41 + 20*49 + 10*59 + 10*70 + 5*81)/(41 + 49 + 59 + 70 + 81) = 11.65)

The allowances for potentially extreme weather (3% NHH and 6% HH) are then subtracted to give the additional percentage of supplier forecasted liability for year y to be added to the baseline VAR. In this case:

HH forecast performance related VAR: 5.87% (max(11.87-6,0))

NHH forecast performance related VAR: 8.65% (max(11.65-3,0))

Example 1.2:

At initial reconciliation, Supplier B has identical HH and NHH liabilities to Supplier A in the previous example. However, during the financial year y-1, supplier B submitted forecasts suggesting the following annual liabilities:

Invoice Issue Date	Invoice Payment Date	Forecast Deadline	HH Forecast Liability	NHH Forecast Liability
01-Nov	15-Nov	10-Oct	£3,600,000	£4,800,000
01-Dec	15-Dec	10-Nov	£3,600,000	£5,400,000
01-Jan	15-Jan	10-Dec	£4,400,000	£6,600,000
01-Feb	15-Feb	10-Jan	£4,400,000	£6,600,000
01-Mar	15-Mar	10-Feb	£4,200,000	£6,300,000

The monthly forecast performance percentages are calculated as follows:

Invoice Payment Date	HH Forecast Liability	HH Annual Liability	HH Forecast Performance	NHH Forecast Liability	NHH Annual Liability	NHH Forecast Performance
15-Nov	£3,600,000	£4,000,000	-10%	£4,800,000	£6,000,000	-20%
15-Dec	£3,600,000	£4,000,000	-10%	£5,400,000	£6,000,000	-10%
15-Jan	£4,400,000	£4,000,000	10%	£6,600,000	£6,000,000	10%
15-Feb	£4,400,000	£4,000,000	10%	£6,600,000	£6,000,000	10%
15-Mar	£4,200,000	£4,000,000	5%	£6,300,000	£6,000,000	5%

The average forecasting performance is then calculated for each case:

HH deemed under forecast: 11.87%
((10*33.3 + 10*33.3 - 10*33.3 - 10*66.7 - 5*100)/(33.3*3 + 66.7 + 100) = -3.13%)

NHH deemed under forecast: 11.65%%
((20*41 + 10*49 - 10*59 - 10*70 - 5*81)/(41 + 49 + 59 + 70 + 81) = -1.28%)

The allowances for potentially extreme weather (3% NHH and 6% HH) are subtracted to give the additional percentage of supplier forecasted liability for year y to be added to the baseline VAR. In this case:

HH forecast performance related VAR: 0% (max(-3.13-6,0))
NHH forecast performance related VAR: 0% (max(-1.28-3,0))

Forecasting Performance Appeals Process

If they believe that a significant increase in their customer base has had a detrimental effect upon their forecasting performance, a supplier may raise an appeal to National Grid during the month after National Grid's notification of the deemed forecasting performance level.

Upon raising an appeal, a supplier would notify National Grid of how much demand was taken on and over which period of time. In addition, the following conditions must apply:

- Appeals will be divided into HH and NHH demands, and the period of growth cannot exceed 20 business days (~1 month) as an opportunity for a supplier to resubmit their forecast should have occurred during this time.

- Multiple appeals may be raised for each demand type (HH/NHH), but appeals with overlapping periods of growth will not be permitted. Appeals with consecutive periods of growth are allowed.

- Appeals cannot be raised if the amount of growth in TNUoS liability for the demand type concerned does not exceed 1% of relating annual liability.

- There will be no process for subsequent appeals, as the calculations involved will be detailed in the CUSC, they will be transparent and replicable by the supplier.

Following the launch of an appeal, the average of a supplier's demand in the following periods for the demand type concerned over the 20 business days prior to and following the period of growth will be and a ratio of average growth calculated:

HH – demand taken during the half-hour commencing 17:00
NHH – demand taken between the hours of 16:00 and 19:00

A similar calculation will be undertaken for all relevant chargeable demands over the entire system, and the two growth ratios compared. The proportion of growth experienced by the supplier's demand over and above the national level (if any) will determine the *effective growth* in the suppliers demand.

Any increase in demand will only affect chargeable demand over the remaining months of the year. To calculate the *deemed increase in chargeable demand*, the *effective growth* in demand shall be calculated by the typical amount of remaining chargeable demand from the beginning of the month in which the period of growth commences, as determined by the following table. The result is likely to be an over-estimate, but is simpler and more transparent than daily profiling:

Month	Remaining proportion of NHH Liability	Remaining proportion of HH Liability
October	59%	100%
November	51%	100%
December	41%	100%
January	30%	66.7%
February	19%	33.3%

The supplier's forecast performance shall then be recalculated with any forecast submitted prior to the end of the period of growth being increased by the deemed increase in chargeable demand multiplied – capped at the level of any subsequent forecast used for calculation of the monthly TNUoS charge.

The following example may clarify.

Example 2.1

Consider the scenario for supplier A given in example 1.1:

Invoice Payment Date	HH Forecast Liability	HH Annual Liability	HH Forecast Performance	NHH Forecast Liability	NHH Annual Liability	NHH Forecast Performance
15-Nov	£ 3,200,000.00	£4,000,000	-20%	£4,800,000	£6,000,000	-20%
15-Dec	£ 3,200,000.00	£4,000,000	-20%	£4,800,000	£6,000,000	-20%
15-Jan	£ 3,200,000.00	£4,000,000	-20%	£5,400,000	£6,000,000	-10%
15-Feb	£ 3,600,000.00	£4,000,000	-10%	£5,400,000	£6,000,000	-10%
15-Mar	£ 3,800,000.00	£4,000,000	-5%	£5,700,000	£6,000,000	-5%

Supplier A submits three appeals:

1. An appeal claiming that an increase in their customer base between 15th and 20th November caused their chargeable HH demand to increase by 10%;
2. An appeal claiming that an increase in their customer base between 15th and 20th November caused their chargeable NHH demand to increase by 10%;
3. An appeal claiming that an increase in their customer base on 8th February caused their chargeable HH demand to increase by 10%;

Appeal 1:

Given that supplier A did not alter their HH forecast prior following the reported period of growth (by the 10th December in time for January's invoice). The supplier's appeal will fail as the forecast HH annual liability will be capped at £3.2m – the level of the forecast used to calculate the January Invoice.

Appeal 2:

In this case the supplier has submitted a revised forecast.

Average daily NHH TNUoS liability taken by supplier A during the period 16:00-19:00 of the 20 business days prior to 15th November = £12,000.

Average daily NHH TNUoS liability taken by supplier A during the period 16:00-19:00 of the 20 business days following 20th November = £15,600

Effective Growth (Supplier) = 15600/12000 - 1 = 30%

Average Proportion of total system NHH TNUoS liability taken by suppliers during the period 16:00-19:00 of the 20 business days prior to 15th November = 0.30%

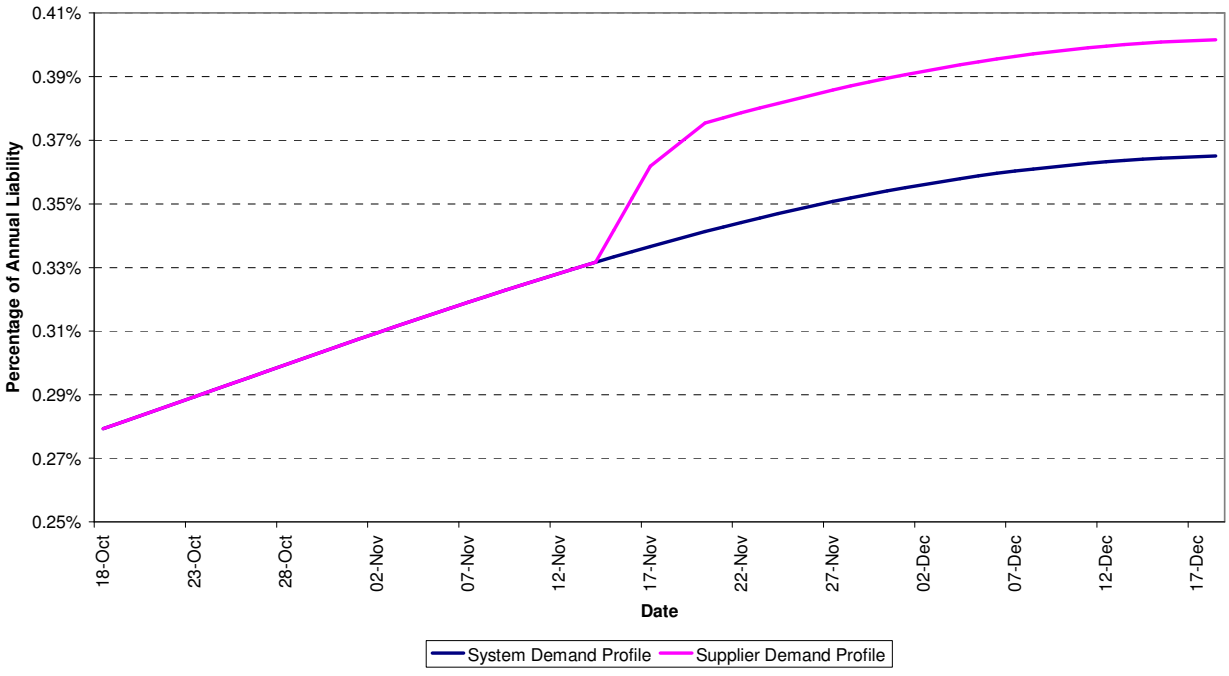
Average Proportion of total system NHH TNUoS liability taken by suppliers during the period 16:00-19:00 of the 20 business days following 20th November = 0.36%

Effective Growth (System) = 0.36/0.30 - 1 = 20%

Amount of growth in supplier NHH chargeable demand over and above that observed over the system = 30%-20% = 10%.

Therefore there is evidence that supplier A's demand increased by 10% between 15th & 20th November. The change in demand is indicated in the following chart (figure 1):

Figure 1: Supplier NHH Demand vs. System NHH Demand (16:00-19:00 Business Days)



Typically from 1st November, 51% of the annual NHH liability is accrued. As the supplier has experienced a 10% increase in daily TNUoS liability, the maximum amount of additional TNUoS liability expected due to this particular increase in demand would be is 5.1% (10% of 51%). This is likely to be an over-estimate, but is simpler and more transparent than daily profiling.

As a result, when recalculating the forecasting performance, each of supplier A's demand submissions received prior to 20th November is increased by 5.1% of the annual liability calculated at the initial reconciliation, capped at the level of any subsequent demand forecasts:

Revised forecasting performance related VAR
= max((max((20-5.1),10)*41 + max((20-5.1),10)*49 + 10*59 + 10*70 + 5*81)/300 - 3, 0)
= max(0, 7.12)
= 7.12% of supplier forecasted NHH liability for year y

Appeal 3:

The calculation in this case would work similar to appeal 2 only would look at indicative HH liabilities by considering demands observed during settlement period 35 of the 20 business days prior to and following the reported period of growth.

Once calculated, the resulting effective increase in demand will be applied to the deemed remaining HH liability, which in this particular example is 33.3% of the annual HH liability as at initial reconciliation (£4m).

Note that when recalculating the forecasting performance in this scenario, any resulting increase to forecasts prior to the reported period of growth will be capped at a level 5% below the annual HH liability as at initial reconciliation. This is due to the amount of under forecast observed following the reported period of growth. Therefore assuming the increase in supplier A's annual liability was 10% (resulting from a ~30% increase in demand (33.3% of 30% = 9.99%)), the revised forecasting performance would be:

Revised forecasting performance related VAR
= max(max(20-10,5)*33.3*3 + max(10-10,5) *66.7 + 5*100)/266.6 – 6, 0)
= max(0.87,0)
= 0.87% of supplier forecasted NHH liability for year y