

## **Reconciliation of NDM Supply Points on Connected Systems (CSEPs)**

### **The Development Workgroup Recommendations**

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## Reconciliation of NDM Supply Points on Connected Systems (CSEPs)

### The Development Workgroup Recommendations

#### Introduction

At present the Network Code, in conjunction with a Network Exit Agreement (NExA), requires supply points on Independent Public Gas Transporters (IPGTs) system, to be subject to individual meter point reconciliation. However, following the introduction of Modification 0194, Reconciliation by Difference (RbD) and the associated modification acceptance criteria, a Development Workgroup was formed to establish an appropriate reconciliation methodology, in line with RbD principles, for NDM CSEPs.

This report outlines the recommendations of the Workgroup in relation to 'domestic' supply points and 'industrial & commercial' supply points on CSEPs where no boundary meter exists.

The process for reconciling Daily Metered CSEPs is covered in Section E6.4 of the Network Code.

#### Workgroup Meetings

The Workgroup consists of representatives from IPGTs, Shippers and Transco. There have been five meetings of the Workgroup; these were held on 16th March, 1st April, 29th April and 2nd and 29th June.

#### Workgroup Members

- Transco:-** Peter Rayson, Andrew Stone, Nick Salter, Fiona Penhallurick,
- Shippers:-** Nick Wye - AGAS, Tony Clark, David James - British Gas Trading, Jackie Boyle - United, Rob Barnett - Eastern Natural Gas, Fred Attwater - Scottish Power.
- OFGAS:-** Sean O'Hara, Philippa Pickford.
- IPGTs:-** Maj Maher - AGAS Developments Ltd, Jean Mason - Gas Transportation Company, Graham Jack - British Gas Connections, Rob Wallace - Eastern Pipelines, Paul Clark - Southern Electric Pipelines Ltd, Greg Smyth - Scottish Power Gas.

*Note: United were unable to participate in the last three meetings.*

## Development Workgroup Recommendations

The Workgroup recommend the following reconciliation principles to the Network Code Panel;

1. NDM meter points at Smaller Supply Points on IPGT CSEPs should be included in the RbD mechanism as soon as reasonably practicable.
2. To adopt a consistent (industry) approach to establishing AQs. Therefore, standard 'initial design AQs', as set out in Appendix II, should be used by all PGTs and Shippers in relation to Smaller Supply Points on NDM CSEPs.
3. NDM Smaller Supply Point AQ updates should be made on a daily basis (rather than the current monthly process for updating CSAQ). The daily processing of CSAQ information is a prerequisite for their inclusion within RbD and the NDM NExA should be modified to include these provisions.
4. For the purposes of NDM CSEP reconciliation, the transportation charge adjustment (to the commodity rate) should be set at 25 % of the commodity rate for Smaller Supply Points which are connected directly to the Transco system.
5. The reconciliation value, for the period prior to the introduction of RbD, shall be deemed to be zero - see Appendix I.
6. An 'interim' reconciliation methodology be adopted for the period 1 February 1998 until CSEPs can be incorporated in RbD. The Workgroup anticipate that CSEPs are unlikely to enter the RbD mechanism until late 1999 ( Subject to the UK Link committee approval).
7. For meter points at Larger Supply Points on CSEPs, individual meter point reconciliation shall be undertaken from 1st February 1998. This shall be carried out in accordance with the principles set out in Appendix I, Section D.
8. Audit of IPGT (RbD) processes will need to be conducted in line with the criteria established for Transco RbD and Larger Supply Points on CSEPs generally. This will be captured within Transco's NExA and should be included within IPGT Network Codes (to facilitate the auditing of the relevant IPGT and Transco nomination process(s)).

Note: The appendices to this report provide further information relating to rationale for each of these recommendations.

***Draft Modification Proposal.***

**1. Analysis of whether and if so the extent to which the proposed recommendations would better facilitate the achievement of the relevant objectives:**

The Workgroup recommendations are intended to ensure that industry costs relating to the management of reconciliation data for Smaller Supply Points (SSPs) on IPGT CSEPs and the management/resolution of associated queries are not dramatically increased. Further, by reducing the volume of data held and processed within the competitive domestic regime the risks associated with a sustainable regime will be reduced.

These recommendations have the potential to reduce the complexity of IT systems for new entrants within the domestic market thus lowering entry costs. It enables IPGTs (and consequently Shippers) to simplify processes and reduce transaction costs on CSEPs.

The recommendations are also intended to ensure a "level playing field " between directly connected and IPGT connected supply points .

The methodology recommended would allow reconciliation values from Larger Supply Points (LSP) on CSEPs to be included in the RbD, Annual Individual Reconciliation Sector.

**2. The implication for Transco of Implementing the Modification Proposal.**

**2.1 Implication for the Operation of System and any BG plc Storage Facility**

Transco is not aware of any such implications.

**2.2 Development, capital cost and operating cost implications for Transco of implementing the proposal**

Development costs, as a result of changes to the UK Link system, will be incurred during the implementation of this proposal.

**2.3 Whether appropriate for Transco to recover costs and if so the most appropriate way**

Transco does not intend to recover any costs other than those provided for in the Transportation Statement.

**2.4 Consequence of Implementing the Modification Proposal on the level of contractual risk to Transco**

Transco is not aware of any consequences although if the right of audit on PGTs cannot be obtained then risk for Shippers may be increased.

**3. The Development Implications and other Implications for Computer Systems of Transco and related Computer Systems of Relevant Shippers**

The recommendations, if accepted, will be implemented via the Modification process (with a transitional process) to allow meter points at Smaller Supply Points on IPGT CSEPs to enter the mechanism. Consequently, changes will be required to Transco systems (both on and off-line). Change requirements to Relevant Shipper systems have not yet been identified.

It is anticipated that the full solution will require additional system functionality for Transco, IPGTs and domestic Shippers. The extent of these changes are to be scoped and will be developed via the UK-Link Committee (to include IPGTs representation where necessary).

**4. The Implications of Implementing the Modification for Relevant Shippers**

In the domestic market, meter point reconciliation is regarded as being a high cost, low transactional value process. This Modification proposal removes the requirement to reconcile each meter point for smaller supply points, on CSEPs and so potentially reduces costs.

**4.1 Administrative and operational implications.**

There are no additional administrative or operational implications for Shippers on CSEPs where meter point reconciliation is in force. Indeed, they will be reduced since, as a result of these proposals Smaller Supply Points will be reconciled in aggregate.

**4.2 Development, capital cost and operating cost implications for Relevant Shippers of implementing the proposal.**

Transco has not been made aware of any Relevant Shipper system implications.

**4.3 Consequence of Implementing the Modification Proposal on the level of contractual risk to Relevant Shippers**

Transco is aware that domestic Shippers may face an increased level of risk, if an audit provision is not agreed between Transco, the IPGT's and the relevant CSEP shippers.

**5. Implications of Implementation for Terminal Operators, Suppliers and Producers, and any Non-Network Code Party**

Transco is aware that other IPGTs may have development work to carry out in order to implement this modification.

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6. **Consequences on the Legislative and Regulatory Obligations and Contractual Relationships of Transco and each Relevant Shipper and NNCP's**

Transco has not been informed of any such consequences.

7. **Analysis of Advantages and Disadvantages of the Implementation of the recommendations contained in this Modification Proposal.**

*Advantages*

This modification will prevent Relevant Shippers and Transco having to commit resources to implement a programme that will require the individual reconciliation of meter points at Smaller Supply Points on individual CSEPs. This could help reduce costs and reduce the number of data transactions for all parties involved in shipping to CSEPs.

*Disadvantages*

The cost of the necessary development work.

8. **Summary of Representations Received**

No written representation have been received.

9. **Any other matters that need to be addressed for production of the Modification Report**

See attached Legal Text.

**Appendix 1**

**Detailed recommendations**

This Appendix has five sections and sets out the principles and processes for the reconciliation of CSEPs prior to their inclusion within RbD and the processes required for CSEPs to enter the RbD mechanism.

- Section A. Reconciliation of the Pre-RbD Period
- Section B. Calculation of 'Interim' reconciliation variances for Smaller Supply Points
- Section C. RbD process for Smaller Supply Points (<73,200 kWh)
- Section D. Recommended process for Larger Supply Points (>73,200 kWh)
- Section E. Audit Requirements.

**Section A**

**Reconciliation of the Pre-RbD Period**

The Pre-RbD Period is 1 March 1996 to 31 February 1998.

For this period the Workgroup recommend that, based on the deemed values and the time which will be required to calculate the pre NDM CSEP variances, the value should be stated as zero for the initial period - the "Pre-RbD period".

It is estimated that the reconciliation clearing value for this period is in the range of £24,000 to £57,000 (+ve or -ve). The table below sets out these assumptions in more detail, showing the (reconciliation) monetary values calculated for a range of reconciliation variances;

Period	Allocated Energy in period (kWh)	Ave SAP value in period (p)	3% Variance	5% Variance	7% Variance
Mar 96 - Sept. 96	9,201,562	0.4828	£1,332	£2,221	£3,109
Oct. 96 - Sept. 97	65,458,689	0.4228	£8,302	£13,837	£19,373
Oct. 96 - Jan 98	103,512,762	0	£14,874	£24,791	£34,707
			<b>£24510</b>	<b>£40850</b>	<b>£57,190</b>

Note:- The percentage variances are expressed as 3, 5, and 7% of the total energy for each period multiplied by the average SAP for each period to give an indication of the monetary values. To calculate a combined TRE and GRE value a further 25% should be added to the above values.

## Section B

### Calculation of 'Interim' reconciliation variances for SSPs

#### 1. Summary

The Workgroup recommend that Smaller Supply Points on CSEPs should be incorporated into the RbD mechanism as soon as reasonably practicable, but not until the necessary IPGT supply point administration daily processes are put in place and system modifications achieved.

The following section describes the necessary transitional arrangements for reconciling Smaller Supply Points on CSEPs in the interim. This process will apply from 1 February 1998 through to the full implementation of CSEP RbD, sometime in 1999. It recommends that this interim process is adopted to allow sufficient time for Transco, IPGTs and Shippers to develop robust systems and to conclude the relevant Network Exit Agreements and drafting amendments to network codes.

For this period, a simple reconciliation approach is appropriate since initial indications put the likely reconciliation clearing value for the interim period at (+/-) £50,000 to £70,000 in 1998 and (+/-) £80,000 to £140,000 in 1999.

Appendix III contains details and assumptions of how these figures were derived. The recommended detailed process for reconciling in the interim period is described below.

#### 2. Transitional arrangements

##### 2.1 Detailed process

The following section describes the recommended detailed processes for reconciling CSEP Smaller Supply Points in the interim period. This is based on the Bulk Meter Reading (BMR) method.

The Workgroup recommends this approach as representing the most cost effective solution for the industry. Smaller Supply Points on CSEP are of sufficient similarity that it is not necessary to calculate the reconciliation variance individually for each Supply Point. By processing reconciliation in bulk, for a sufficient number of CSEP SSPs, for each IPGT system, and by LDZ, it will be possible to calculate 'average' reconciliation values and apply these to all CSEP SSPs for each IPGT in that LDZ.

##### 2.1.1 Basic methodology for Bulk Meter Reading Reconciliation

The proposed method to be utilised is as follows;

Treat each IPGT(s) set of CSEPs in each LDZ as a separate "Group"

Obtain a pair of valid meter readings for at least 25% of the PGTs SSPs in each "Group" (note the % figures required are based on the numbers of PGT SSPs connected on the date of the initial meter reading)

Reconciliation calculations;

- a) For each "group" calculate the average reconciliation factor, based on the actual meter readings obtained.
- b) Apply (a) the reconciliation factor to each phase of the interim period for all of the CSEP SSPs in the Group (i.e. assume that the reconciliation factor across the whole phase of the interim period for the whole of the Group is the same as that of the meters where readings have been obtained.).

### 2.1.2 IPGT actions

The IPGT actions necessary to facilitate the process described are to provide for each Group/phase;

- a) The total metered volume for each set of meters read within each "Group".
- b) The number of SSPs in each set being read.
- c) The aggregate AQ of the set of meter points read for each day in the read period in each "Group".
- d) Provide the following data in an agreed format to Transco for the SSP meters that have been read the :-

**CSEP SSPs Meter AQ(s)** - if more than one in meter read period then start and end date(s) for each read period

**CSEP reference number(s)**

**All SSP meter reads are validated. (see criteria below)**

**SSP start read date**

**SSP end read date**

**Corrected volume** - (calculated in accordance with the Gas Thermal Energy Regulations 1996)

*(note; The IPGT should retain the source data for future reference.)*

### 2.1.3 Transco reconciliation calculations

Where start reads for the set of meter points in the Group were obtained on the same day and all end reads for the set were obtained on the same day the calculations in 1 and 2 will be calculated in one bulk process. In order to facilitate this a CSEP SSP meter read window will be all SSPs meter reads in the same set within  $D \pm 2$  days  $D$ , would be treated as Day  $D$  reads.

### 2.1.4 Actual calculations

- a) Calculate allocated volume for the meter read period by:-

$$AQ * \text{volume factor}$$

- b) Calculate Reconciliation Factor (RF) for the meter read period for the Group by:-  
actual volume for set of meter points read /allocated volume for the set

- c) Calculate Commodity reconciliation for the whole of the interim period for each shipper in each Group by:-

$$(RF-1) * \text{Commodity invoice}$$

- d) Calculate Gas Variable reconciliation (GRE) for the whole of the interim period for each Shipper in each Group by:-

$$(RF-1) * \text{allocated energy} * \text{Average SAP}$$

- e) TRE and GRE values would calculated be used using average SAP and CV values. The average SAP price for the whole of the interim period and then applied to the total energy variance for each Shipper.

- f) Calculate the Reconciliation Quantity for each Group by:

$$(RF - 1) \times \text{Allocated energy for the group}$$

### 2.1.5 Additional information

The factors used in the reconciliation calculations referred to are calculated as follows:-

$$\text{Volume factor} = \text{Energy factor} * 3.6 / CV$$

$$\text{Energy factor} = ALP * (1 + DAF * WCF) * SF / 365$$

Average SAP and CV will be calculated by adding up the individual daily values for CV

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and SAP and dividing them by the number days in the interim period.

Multiplying an CSEP SSPs AQ by the relevant energy factor for an EUC for a day provides the allocated energy for that day. Multiplying an AQ by the relevant volume factor for an EUC for a day provides the allocated volume for that day.

Transco calculates the above factors routinely as part of its invoicing application and stores the data on a cumulative basis, this facilitates simple calculations across time periods e.g. if the allocation for a period of days is required this can be obtained by:-  
 $AQ * (\text{end of period energy factor} - \text{start of period energy factor})$

#### **2.1.6 Definition of a Valid CSEP SSP Meter reading obtained for SSPs in each Group must meet the following criteria;**

- a) The meter readings are obtained 180 days apart and include at least 3 months of the period between October and March of any Gas Year.
- b) The actual reads obtained must be collected by a registered Meter Reading Agency.
- c) Customer and Estimated reads are not acceptable.
- d) The IPGT will use reasonable endeavours to remove any erroneous or spurious meter readings.
- e) At least 25% of IPGTs portfolio in each LDZ/ Group will be read at the initial read.

To reiterate the reasons for recommending the above process, confidence needs to be established that CSAQs are robust and processes for updating these, on a daily basis, are in place before moving CSEPs into the RbD methodology.

## **2.2 Transitional Issues**

2.2.1 For SSPs on CSEPs to be reconciled by the RbD mechanism, Transco will need to carry out a system impact analysis to derive the likely implementation timescales. Appendix 3 contains a process flow diagram indicating how this could be achieved. A programme for implementation will then be agreed.

IPGTs will also need to ensure that a robust daily CSEP AQ update process for SSPs is in place to ensure that Shipper nominations/portfolios for each CSEP are accurate on a daily basis.

2.2.2 Subject to the results of the impact analysis, the Workgroup accepted that the inclusion of CSEP SSPs into RbD is likely to occur late in 1999.

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2.2.3 The Commodity rates for CSEP SSPs are variable. Therefore, it is proposed to apply a standard Commodity rate to these for the purposes of reconciliation only. This standard rate is to be calculated by multiplying the Transco directly connected SSP Commodity rate by a fixed factor. The Workgroup recommend that this factor be set at 0.25 (25%). This figure is based on analysis of existing CSEP commodity rates presented in Appendix V.

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## Section C

### **RbD process for Smaller Supply Points (<73,200 kWh)**

Before SSPs on CSEPs are included within RbD, the Workgroup recommend that the following are achieved.

1. Revise IPGT SPA Processes
2. Adoption of a Universal AQ process (initial and revised)
3. Acceptance of general RbD Principles for SSPs on CSEPs

#### **1. Revise IPGT SPA Processes**

The following proposed timescales take account that IPGT (supply points) have their own processes, which take place in advance to Transco CSEP SPA process.

#### **New CSEP nominations (new CSEP or initial shipper set for each IPGT CSEP)**

- D - 8 Receive details at CPM of new CSEP and number of Shippers
- D - 7 Validate and advise Commercial Operations
- D - 6 Send information to UK - Link
- D - 4 Information returned from UK - Link
- D - 2 Confirm to PGT and Shipper (s)
- D - 1 Demand attribution run for UK - Link
- D Gas Flow noms as per Network code

Note:- PGTs could not update initial nominations for [8] days as logical meters numbers would not be available in the initial phase.

#### **CSEP CSAQ Update process for existing CSEPs with Logical meters and shipper to shipper transfers on each CSEP**

- D - 8 Receive details at CPM of new CSEP CSAQs by Shipper and validate
- D - 6 Send information to UK - Link
- D - 4 Information returned from UK - Link
- D - 2 Confirm to PGT and Shipper (s)
- D - 1 Demand attribution run for UK - Link
- D Gas Flow nominations as per Network code

Both of these processes are a more detailed explanation of the box headed "Update SSP CSAQ by Shipper by LDZ Daily" in the second line of the process flow diagram shown in appendix 3.

## **2. Adoption of a Universal AQ process (initial and revised)**

A consistent approach for initial AQs by house type will need to be adopted for all PGTs. These agreed AQ figures for each house type could then be used to take into account regional variances as outlined in IGE/GL1 to create the estimated demand for each house type / network.

The process for reviewing an existing NDM smaller supply point AQ is being developed by Review Group 0121. The agreed AQ update process resulting from this Review Group will be incorporated into the relevant Network Exit Agreement to ensure consistency for SSPs on all PGTs systems.

The initial house building data discussed by the Workgroup originated from a report compiled in the mid 1990s for determining fuel running costs, this report was updated by BG Technology for the Workgroup to reflect current new housing and Building Regulations specifications.

### **a) Recalculation of Current AQs using the Bulk Meter reading process.**

In conducting the interim Bulk Meter reading IPGTs may be able to recalculate their current AQs for each CSEP by the following AQ recalculation;

- i) for all SSPs in a Group that have valid reads calculate the AQ, this will then be used for that SSP for CSEP RbD purposes.
- ii) Recalculate each CSEP SSP using the Transco Supplied AQ calculator (which may be need to be adapted for this purpose.)
- iii) NDM SSP AQs are calculated from 2 basic pieces of data

The metered energy/sum of weather corrected Annual Load Profiles (ALPs) for period.

The weather corrected ALPs, which Transco routinely calculates.

### **b) Revised AQs using the industry agreed standard.**

Where meters in a Group have not been read the figures in Appendix II could be used as an alternative.

## **3. Acceptance of general RBD Principles for SSPs on CSEPs**

The proportion of smaller supply point AQ contained within CSEPs for each LDZ must be determined on a monthly basis in accordance with RbD principles. This must take account of daily portfolio (SSP) changes on each CSEP.

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Each month the relevant proportion of the Reconciliation Clearing Value and the Reconciliation Transportation Charge Adjustment in the RbD sectors in each LDZ should be apportioned to CSEP shippers as part of the RbD process.

The Reconciliation Transportation Charge Adjustment applicable to CSEPs shippers should be derived by multiplying the CSEPs proportion of the Aggregate Reconciliation Transportation Charge Adjustment by a fixed factor, reflecting the difference in commodity rates between directly connected domestic supply points and those on CSEPs. The resultant total should then be apportioned amongst CSEPs shippers in accordance with RbD principles.  
(See appendix 3 for a schematic diagram)

## Section D

### Recommended process for Larger Supply Points (>73,200 kWh)

The Workgroup recommends the following option for this portion of the market.

Following Transco's systems analysis Transco believes that it could support one to one mapping providing the number of Larger Supply Points (LSPs) on CSEPs do not exceed 60 ( this being the limit of the current off-line administration process).

Transco expressed concern during the Workgroup that the number of Logical meters on CSEPs was out of proportion to the total number of Logical meters on UK-Link; the off-line system will require major changes to cater for such a large number of logical meters. Before the system limitations are reached the proposed method will need to be reviewed to ensure that an acceptable long term approach can be achieved.

Currently the number of LSPs on CSEPs number less than 20. Based on IPGT predictions this is likely to rise to about 30 by the end of 1998 and to a total of 50 by the end of 1999. IPGTs have indicated that this is unlikely to be a growth area and the current 1:1000 ratio, of LSPs to SSPs, is unlikely to change.

The recommended process relies on IPGTs, in conjunction with Shippers on their systems, to provide the information detailed in items 1 to 4; Transco will be responsible for carrying out items 5 to 8.

#### Information to be provided by IPGTs

- 1 Start and End read date per Large Supply Point (LSP) by EUC
- 2 The corrected volume for each LSP calculated in accordance with the Thermal Energy Regulations 1996 in m<sup>3</sup>
- 3 The CSEP name and postcode in which the LSP is located, the shipper (by Shipper short code) and the logical meter numbers that the volume relates to.
- 4 The designated meter reading frequency for each LSP e.g. monthly or 6 monthly
- 5 Transco will compare the actual volume to the allocated volume and create a reconciliation factor (RF)
- 6 Transco would then calculate the daily energy variance for reconciliation purposes by the following calculation:-  $RF-1 \times \text{daily allocated energy} = \text{daily energy variance (DVE)}$

- 7 The daily rate for SAP and Commodity will then be applied to the daily energy variance created by the Reconciliation Factor (RF).
- 8 The energy variance calculated in 7 will flow through to the RbD mechanism via the Annual Individual Reconciliation Sector.

Notes

If one of the meter readings relates to a shipper transfer then the transfer date must be provided. A volume must be provided based on a meter reading obtained within +/- 2 working days of the transfer date each time a shipper transfer occurs.

If a shared supply point exists on a CSEP the PGT would be responsible for all of the allocations and any reconciliation variances that may occur.

For any Large Supply Point with multi Supply Point meters in a CSEP the PGT must provide the aggregated volume for each shipper for the purposes of reconciliation

Transco will in consultation with IPGTs produce a comma separated variables (CSV) disk with the necessary file formats to enable the process to work correctly.  
See appendix 5

## Section E

### Audit Requirements

The Workgroup is still considering the audit provisions that may be necessary to support CSEP reconciliation. Ultimately these may not be included in the Network Code Modification but may be included in an ancillary agreement i.e. (NExA or CSEP Ancillary Agreement)

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**Appendix II**

**Estimated average annual gas consumption for new build dwellings in the UK**

Dwelling Type	Heated floor Area m <sup>2</sup>	Cooking kWh	C/H kWh	Fire load* kWh	Total kWh	Total therms
Flat	45	1111	6528	194	7834	267
	55	1167	7584	222	8973	306
Mid terrace	45	1111	7028	194	8334	284
	55	1167	8001	250	9417	321
End terrace	45	1111	7751	250	9112	311
	55	1167	9001	306	10473	357
Semi-detached house	45	1111	8028	278	9417	321
	53	1167	9029	333	10529	359
	60	1167	10029	389	11584	395
	70	1222	11334	444	13001	444
	83	1278	12973	528	14779	504
Semi-detached bungalow	45	1111	8917	361	10390	355
	55	1167	10418	417	12001	410
	65	1222	11890	500	13612	465
	75	1278	13390	583	15251	521
	90	1333	15585	695	17613	601
	100	1389	17057	778	19224	656
	125	1500	20613	1000	23113	789
	150	1611	24196	1195	27002	922
200	1778	31197	1667	34642	1182	
Detached house	55	1167	9834	361	11362	388
	65	1222	11223	444	12890	440
	80	1278	13279	583	15140	517
	100	1389	16001	750	18140	619
	125	1500	19418	889	21807	744
	150	1611	23002	1139	25752	879
	175	1667	26391	1306	29363	1002
	200	1778	29752	1500	33030	1127
	225	1833	33086	1695	36614	1250

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Detached bungalow	55	1167	9779	389	11334	387
	65	1222	11168	444	12834	438
	80	1278	13196	583	15057	514
	100	1389	15918	722	18029	615
	125	1500	19252	889	21641	739
	150	1611	22557	1111	25280	863
	175	1667	25835	1278	28780	982

\* Equals the net extra load due to a gas fire being installed.

The consumption figures are calculated using the program Evaluator (version 3.3 released in November 1997 by the National Energy Services Limited) - an implementation of BREDEM-12. This is the most widely accepted method for calculating domestic fuel loads / running costs. BRE claim that BREDEM-12 predicts space heating within 10%.

The above figures are based on the following assumptions:

- ♦ the average UK climate data (East Pennines) over the past 20 years
- ♦ an average number of occupants which are related to the heated floor area of each dwelling
- ♦ a desired main living area temperatures of 21°C and the rest of house of 18°C
- ♦ 9 hours heating a day during week and 16 hours a day during the weekend
- ♦ a boiler seasonal efficiency of 72%
- ♦ a gas fire efficiency of 50%

The cooking load assumes an all gas cooker. For houses with a gas hob and an electric oven the cooking load should be reduced by half.

To ensure that all PGTs Network Codes and Shippers adopt the same design figure for new housing, Ofgas will need to agree to the necessary modifications on all PGT network codes.

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**Appendix III**

The following tables show the projected growth of SSPs on CSEPs, the growth in average AQ (monthly), estimated variances and (reconciliation) values, up to the date when CSEPs are assumed to enter the RbD mechanism

Year	No. of Houses	kWh
<b>1998</b>		
<i>Feb.</i>	23,000	32,583,333
<i>March</i>	25,000	35,416,667
<i>April</i>	28,000	39,666,667
<i>May</i>	30,000	42,500,000
<i>June</i>	33,000	46,750,000
<i>July</i>	36,000	51,000,000
<i>Aug.</i>	39,000	55,250,000
<i>Sept.</i>	42,000	59,500,000
<i>Oct.</i>	45,000	63,750,000
<i>Nov.</i>	48,000	68,000,000
<i>Dec.</i>	51,000	72,250,000
	<b>1998 total</b>	<b>566,666,667</b>
<b>1999</b>		
Jan	54,000	76,500,000
Feb.	57,000	80,750,000
March	60,000	85,000,000
April	63,000	89,250,000
May	67,000	94,916,667
June	70,000	99,166,667
July	73,000	103,416,667
Sept.	76,000	107,666,667
Sept.	79,000	111,916,667
	<b>1999 total</b>	<b>848,583,333</b>

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Estimated Reconciliation Values:

<b>1998</b>	Total (kWh)	566,666,667
	2% Variance (kWh)	11,333,333
	Value (£)	<b>£54,287</b>
	3% Variance (kWh)	17,000,000
	Value (£)	<b>£81,430</b>
<b>1999</b>	Total (kWh)	848,583,333
	2% Variance (kWh)	16,971,667
	Value (£)	<b>£81,294</b>
	3% Variance (kWh)	25,457,500
	Value (£)	<b>£121,941</b>

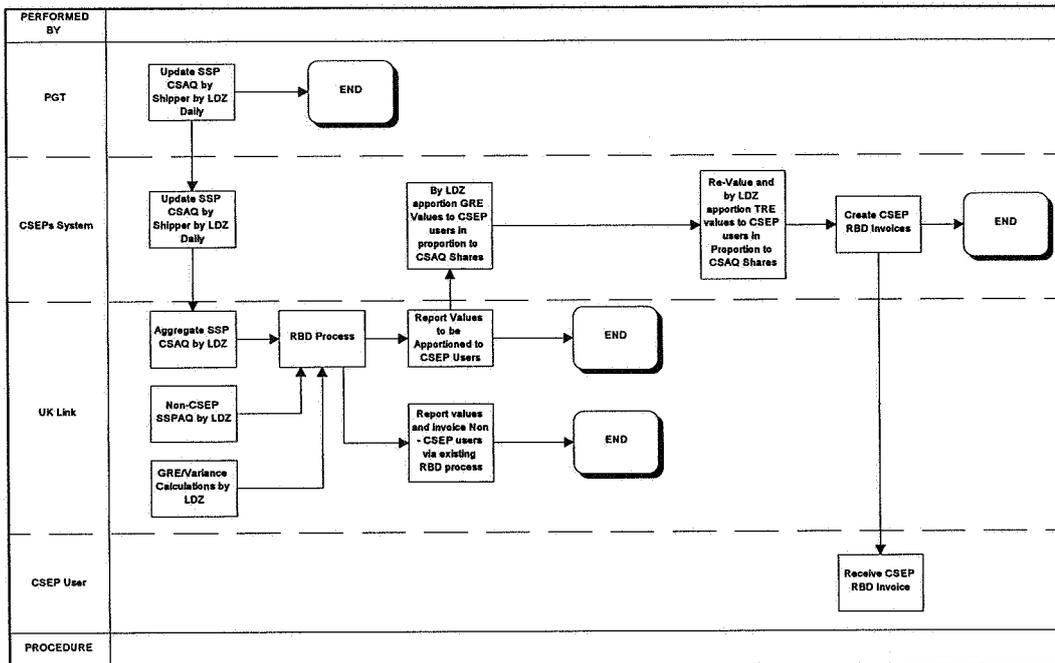
Notes:

Annual AQ for average SSP (kWh)	<b>17,000</b>
Average monthly deemed AQ (kWh)	<b>1,417</b>
Average SAP (£)	<b>.00479</b>

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**Appendix IV**

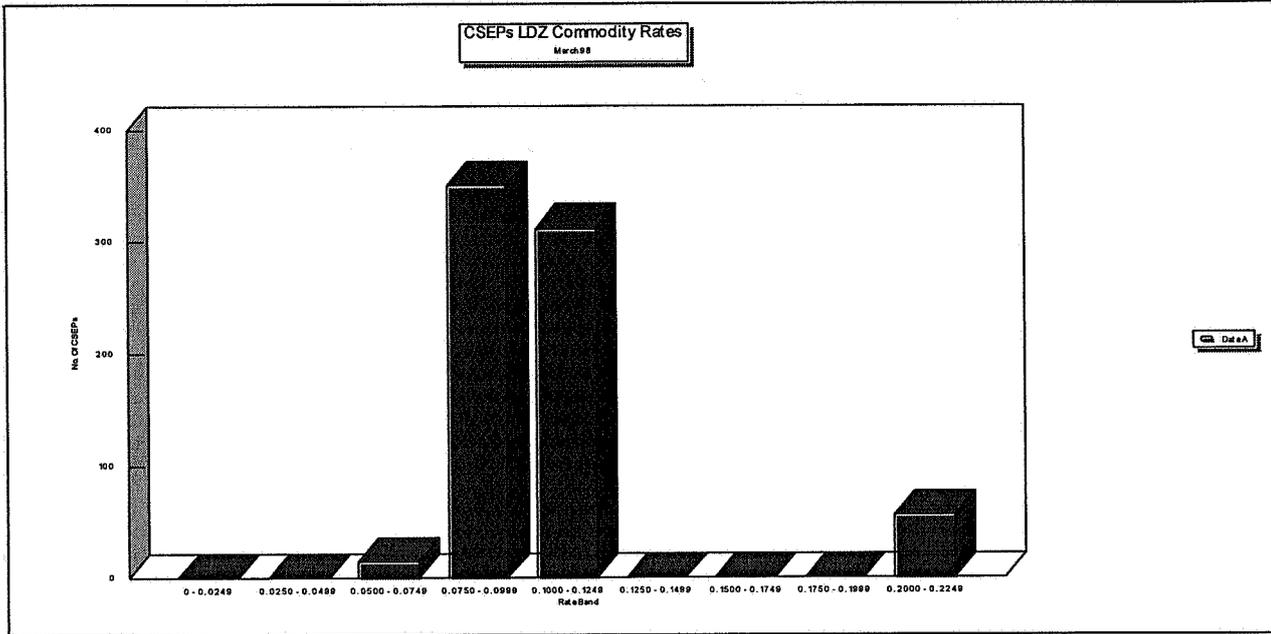
The following Process Flow Diagram illustrates the process for 'RbDing' CSEP Domestic Supply Points.



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**Appendix V**

The following bar chart illustrates the comparison between the current CSEP Commodity rates bands applicable to existing CSEPs.



**Appendix VI**

**Future Data Transmission proposals**

The current Transco SPA files contain 8 different type of record for the nomination process.

They follow the standard IX format with a 'A00' header and a 'Z99' trailer.

Each detailed record is identified by a unique Record ID. There are numerous record types e.g. 'Isolations, Referrals etc. Transco is proposing that the same format are adopted for the transmission of IPGT data, as detailed below and on page 24.

Example of a Transaction record;

N01	New meter/nomination	Would check for no Meter No
N02	Amend Nomination	Meter No would have to exist
N03	Cancel Nomination	AQ would be zero

Dxx - Transaction record

Dxx-TRANS-TYPE	X(03)	unique type
Dxx-START-DATE	X(08)	yyyymmdd
Dxx-CSEP-PROJECT-NO	X(20)	
Dxx-MTR-LOGMET	X(12)	
Dxx-NOM-EUC	X(12)	
Dxx-SHIPPERS-SHORT-CD	X(3)	
Dxx-NOM-AQ	9(13)	
Dxx-NOM-SUPPLY	9(6)	
Dxx-COMMENTS	X(255)	

These files also contain a confirmation number which is the shippers reference for the change.

Transco's UK-Link system sends it's errors on a file back across the IX network. It would therefore be appropriate for any errors to be returned swiftly by Transco to the transmitting PGT.

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**Proposed Reconciliation File Format for LSP's on CSEPs**

	Field Name	Description	Properties
1	IPGT_DATE	Creation date of file. Should be the same for all records within the file	DATE
2	IPGT_DISK_ID	IPGT Reference ID of the floppy disk. Should be the same for all records within the file (For use in queries).	TEXT (20)
3	IPGT_ID	Unique ID that will identify each data line in the file as unique.	TEXT (20)
4	IPGT_SHORT_CODE	IPGT Short Code	TEXT (3)
5	CSEP_NAME	CSEP Site Name	TEXT (50)
6	CSEP_POST_CODE	CSEP Post Code	TEXT (10)
7	LMN	Logical Meter Number	TEXT (20)
8	EUC	End User Category	TEXT (10)
9	SHIPPER_SHORT_CODE	Shipper Short Code	TEXT (3)
10	METER_SUPPLY	F or TNI or SNI	TEXT (3)
11	SUPPLY_POINT_CATEGORY	DM or NDM	TEXT (3)
12	CORRECTED_METRIC_VOLUME	Total Corrected Metric Volume	NUMBER
13	RECONCILIATION_START_DATE	Start of reconciliation period	DATE
14	RECONCILIATION_END_DATE	End of reconciliation period	DATE
15	UK_LINK_USERS	End users on UK-Link	NUMBER
16	READ_FREQUENCY	Read Frequency Field (monthly or 6 monthly)	TEXT (1)
17	PGT_COMMENTS	Comments field for user by PGT's	TEXT (255)

Note:- The reconciliation variances created will be put into the Annual Individual Reconciliation Sector.