Statement of LDZ Transportation Charges for North of England Distribution Network

To Apply from 1 April 2012

Contents

1. LDZ TRANSPORTATION CHARGES EFFECTIVE FROM 1 April 2012

1.1 Introduction

This publication sets out the LDZ transportation charges which apply from 1 April 2012 for the use of the Northern Gas Networks Limited Distribution Network, as required by Standard Special Condition A4 of the Gas Transporter Licence. These are published separately from the NTS transportation charges, which can be found on the National Grid website. The charges are set to comply with the price control arrangements from 1 April 2008. This document does not override or vary any of the statutory, Licence or Uniform Network Code obligations.

For more information on the charges set out below, contact Will Guest, Northern Gas Networks, 1100 Century Way, Thorpe Park Business Park, Colton, Leeds LS15 8TU.

1.1.1 Uniform Network Code
The Uniform Network Code (UNC) is supported by an integrated set of computer systems called UK Link. The charges and formulae in this booklet will be used in the calculation of charges within UK Link, which are definitive for billing purposes.

There are a number of areas of the UNC that impact upon the cost to shippers of using the transportation network, such as imbalance charges, scheduling charges, capacity over-runs and ratchets, top-up neutrality charges and contractual liability. Reference should be made to the UNC – as modified from time to time – for details of such charges and liabilities.

The methodologies underlying the charges are stated in the UNC Transportation Principle Document (TPD) Section Y Part B and may be subject to alteration under the governance of UNC Modification Rules.

All UNC documents and Modifications can be found at www.gasgovernance.co.uk.

1.1.2 Units
Commodity charges are expressed and billed in pence per kilowatt hour (kWh).

Capacity charges are expressed and billed in pence per peak day kilowatt hour (kWh) per day.

Fixed charges are expressed and billed in pence per day.

1.1.3 Invoicing
Xoserve Limited produce and issue the invoices that are derived from the transportation charges shown within this publication. To clarify this link between charging and invoicing, charge codes and invoice names are included in the tables. For more information on invoicing, please contact Xoserve, the Invoicing Service Provider, via email at: **Css.Billing@Xoserve.com**

1.1.4 The distribution transportation price control formula
Transportation charges are derived in relation to a price control formula which is set by Ofgem, the gas and electricity market regulator for the transportation of gas. This formula dictates the maximum revenue that can be earned from the transportation of gas. Should more or less than the maximum permitted revenue be earned in any formula year, then a compensating adjustment is made in the following year.

Distribution revenue recovery is split between Local Distribution Zone (LDZ) system charges and customer charges. The relative level of these charges is based on the relative level of costs allocated to these areas of activity.

1.1.5   Firm transportation

Firm distribution transportation charges comprise LDZ capacity and commodity charges plus customer charges.

1.1.6   Interruptible transportation

From 1 October 2011, interruptible transportation ceased and is no longer available. All shippers now pay firm charges.

1.1.7   Theft of gas

The licensing regime places incentives on transporters, shippers and suppliers to take action in respect of suspected theft of gas. Certain costs associated with individual cases of theft are recovered through transportation charges with the transporter remaining cash neutral in the process.

1.1.8   Isolations and Disconnections

Where a shipper has left a Supply Meter physically connected to the transporter's network following a UNC Isolation and Withdrawal, 12 months after the effective Withdrawal, the Transporter must take action to disable the flow of gas where the shipper has not undertaken a physical disconnection of the meter. The Transporter is permitted to pass the costs incurred in undertaking the work to the last Registered User. The Transporter will calculate the charge to the shipper on a fully absorbed time and materials basis, consistent with the charging principles set out in the Transporter's 4B Connections Charging Methodology Statement.

1.1.9   Relationship of charges to price control Allowed Revenue (AR)

It is estimated that the Allowed Revenue for the NGN network for the coming formula year (1 April 2012 – 31 March 2013) is £385.7m. If NTS Exit Charges, which will become Pass Through Cost items from 1 October 2012 and will be charged separately, are excluded the estimated Allowed Revenue is £379.8m. This is 9% higher than the Allowed Revenue for the previous year.

The transportation charges in place prior to 1 April 2012 are estimated to recover £349.9m over the 2011/12 formula year. Therefore unit charges must be set at a level to generate an additional £29.9m over the course of the year so that forecast recovered revenue for 2012/13 formula year excluding NTS Exit Capacity costs is £379.8m. Forecast under or over recovery (K) against Allowed Revenue at 31 March 2013 is zero.

From 1 April 2012, assuming no change in load factors, the annual distribution transportation charge in respect of a domestic load consuming 20,000kWh/annum is estimated to be £157.97 in the North East LDZ and £164.38 in the Northern LDZ. The difference between LDZs is a result of differing End User Category (EUC) Load Factors in each region.

The calculations used to determine these values also use information about the number of supply points in the network and the load bands into which they fall. This is combined with total forecast demand information for the period, which reflects expected weather conditions and any other short term factors which may influence demand.

1.2 LDZ System Charges

The standard LDZ system charges comprise capacity and commodity charges and reflect the revised rates and functions following the implementation of the recent Distribution Network Pricing Consultation, DNPC08. Following the implementation of DNPC08 there are now no longer separate charging functions for directly connected supply points and connected system exit points (CSEPs).

Where LDZ charges are based on functions, these functions use Supply Point Offtake Quantity (SOQ) in the determination of the charges. At Daily Metered (DM) firm supply points the SOQ is the registered supply point capacity. For Non-Daily Metered (NDM) supply points, the SOQ is calculated using the supply point EUC and the appropriate load factor.

1.2.1 Directly Connected Supply Points

The unit charges and charging functions used to calculate charges to directly connected supply points are set out in Table 1.2.1 below.

Table 1.2.1 Directly Connected Supply Points

Invoice	Charge Code
LDZ Capacity	ZCA
LDZ Commodity	ZCO

	Firm Capacity	Commodity
	pence per peak day kWh per day	pence per kWh
Up to 73,200 kWh per annum	0.1682	0.0264
73,200 to 732,000 kWh per annum	0.1446	0.0227
732,000 kWh per annum and above	$1.6958 \times SOQ^{-0.2834}$	$0.2916 \times SOQ^{-0.294}$
Subject to a minimum rate of	0.0045	0.0009
Minimum reached at SOQ of	1,230,847,917	346,306,108

1.2.2 Connected System Exit Points

The unit charges and charging functions used to calculate charges to CSEPs are set out in Table 1.2.2 below.

In the calculation of LDZ charges payable, the unit commodity and capacity charges are based on the supply point capacity equal to the CSEP peak day load for the completed development irrespective of the actual stage of development. The SOQ used is therefore the estimated SOQ for the completed development as provided in the appropriate Network Exit Agreement (NExA). For any particular CSEP, each shipper will pay identical LDZ unit charges regardless of the proportion of gas shipped. Reference needs to be made to the relevant NExA or CSEP ancillary agreement to determine the completed supply point capacity.

Table 1.2.2 Connected Systems

Invoice	Charge Code
LDZ Capacity	891
LDZ Commodity	893

	Firm Capacity	Commodity
	pence per peak day kWh per day	pence per kWh
Up to 73,200 kWh per annum	0.1682	0.0264
73,200 to 732,000 kWh per annum	0.1446	0.0227
732,000 kWh per annum and above	$1.6958 \times SOQ^{-0.2834}$	$0.2916 \times SOQ^{-0.294}$
Subject to a minimum rate of	0.0045	0.0009
Minimum reached at SOQ of	1,230,847,917	346,306,108

1.2.3 Optional LDZ Charge

The optional LDZ tariff is available, as a single charge, as an alternative to the standard LDZ system charges. This tariff may be attractive to large loads located close to the National Transmission System (NTS). The rationale for the optional tariff is that, for large LDZ loads located close to the NTS or for potential new LDZ loads in a similar situation, the standard tariff can appear to give perverse economic incentives for the construction of new pipelines when LDZ connections are already available. This could result in an inefficient outcome for all system users.

The charge is calculated using the function below:

Invoice	Charge Code
ADU	881

Pence per peak day kWh per day
$902 \times [(SOQ)^{-0.834}] \times D + 772 \times (SOQ)^{-0.717}$

Where: (SOQ) is the Registered Supply Point Capacity, or other appropriate measure, in kWh per day and D is the direct distance, in km, from the site boundary to the nearest point on the NTS.

1.3 LDZ Customer Charges

For supply points with an Annual Quantity (AQ) of less than 73,200 kWh per annum, the customer charge is a capacity charge.

For supply points with an AQ between 73,200 and 732,000 kWh per annum, the customer charge is made up of a fixed charge which depends on the frequency of meter reading, plus a capacity charge based on the registered supply point capacity (SOQ).

For supply points with an AQ of over 732,000 kWh per annum, the customer charge is based on a function related to the registered supply point capacity (SOQ).

Table 1.3 LDZ Customer Charges

Up to 73,200 kWh per annum

Invoice	Charge Code
LDZ Capacity	CCA

Pence per peak day kWh per day	
Capacity charge	0.0897

73,200 kWh up to 732,000 kWh per annum

Invoice	Charge Code
LDZ capacity	CFI

Fixed charge	pence per day
Non-monthly read supply points	28.2120
Monthly read supply points	30.0393

Invoice	Charge Code
LDZ Capacity	CCA

Pence per peak day kWh per day	
Capacity charge	0.0032

732,000 kWh per annum and above

Invoice	Charge Code
LDZ Capacity	CCA

Charging function	$0.0684 \times SOQ \wedge -0.2100$

1.4 Other Charges

Other Charges include administration charges at CSEPs and Shared Supply Meter Points.

1.4.1 Connected System Exit Points

A CSEP is a system point comprising one or more individual exit points which are not supply meter points. This includes connections to a pipeline system operated by another transporter.

The calculation of LDZ charges payable for shipping to CSEPs is explained in section 1.2.2.

There is no customer charge payable for connected systems, however separate administration processes are required to manage the daily operations and invoicing associated with CSEPs, including interconnectors, for which an administration charge is made.

The administration charge which applies to CSEPs containing NDM and DM sites is:

CSEP administration charge

Charge per supply point	0.1012 pence per day (£0.37 per annum)

The invoice and charge codes are:

Invoice	Charge Code	
DM CSEP	ADU	883
NDM CSEP	ADC	894

1.4.2   Shared Supply Meter Point Allocation Arrangements

An allocation service is offered for daily metered supply points with AQs of more than 58,600 MWh per annum. This allows up to four (six for Very Large Daily Metered Customers) shippers / suppliers to supply gas through a Shared Supply Meter Point.

The allocation of daily gas flows between the shippers / suppliers can be done either by an appointed agent or by the transporter.

The administration charges which relate to these arrangements are shown below. Individual charges depend on the type of allocation service nominated and whether the site is telemetered or non-telemetered.

The charges are (expressed as £ per shipper per supply point):

Invoice	Charge Code
ADU	883

Agent Service

	Telemetered	Non-telemetered
Set-up charge	£107.00	£183.00
Shipper-shipper transfer charge	£126.00	£210.00
Daily charge	£2.55	£2.96

Transporter Service

	Telemetered	Non-telemetered
Set-up charge	£107.00	£202.00
Shipper-shipper transfer charge	£126.00	£210.00
Daily charge	£2.55	£3.05

1.5 Examples

Notes

1. Charges produced by UK Link are definitive for charging purposes. Calculations below are subject to rounding and should be regarded as purely illustrative.

2. The examples provided refer to a customer in North East (NE) LDZ. The calculations described are applicable to loads in either Network.

Example 1

A shipper has a daily metered customer with an annual consumption (AQ) of 20,000,000 kWh and a registered supply point capacity (SOQ), booked directly by the shipper of 100,000 kWh per day.

Unit Charge: Dividing the annual charge of £27,902 by the annual load of 20,000,000 kWh gives a unit charge of 0.1395 pence per kWh.
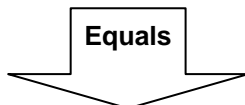
Process	**Calculations Used**
LDZ Capacity Invoice: LDZ Capacity (ZCA) See: Table 1.2.1 Basis: p / peak day kWh / day	Volume: 365 days × 100,000 (SOQ) = 36,500,000 Unit Rate: $1.6958 \times 100{,}000 \text{ (SOQ)}^{-0.2834}$ = 0.0649 p / pdkWh / day Annual Charge: £23,696

Plus

LDZ Commodity Invoice: Commodity (ZCO) See: Table 1.2.1 Basis: p / kWh	Volume: 20,000,000 (AQ) Unit Rate: $0.2916 \times 100{,}000 \text{ (SOQ)}^{-0.2940}$ = 0.0099 p / kWh Annual Charge: £1,980

Plus

Customer (Capacity) Invoice: LDZ Capacity (CCA) See: Table 1.3 Basis: p / peak day kWh / day	Volume: 365 days × 100,000 (SOQ) = 36,500,000 Unit Rate: $0.0684 \times 100{,}000 \text{(SOQ)}^{-0.2100}$ = 0.0061 p / pdkWh / day Annual Charge: £2,226

Equals

Total Annual Charge	Total annual charge = £27,902

Example 2

A shipper has a domestic customer in the NE LDZ. Suppose the load has an AQ of 20,000 kWh per annum. Using the definition of end user categories table in the Appendix, this annual load places the end user in category E1101B. Using the appropriate small NDM supply points table of load factors, it can be seen that the load factor for such a site in the NE LDZ is 34.4%. The peak daily load (SOQ) is therefore $20,000 \div (365 \times 0.344) = 159$ kWh.

Unit Charge: Dividing the total annual charge of £154.95 by the annual load of 20,000 kWh gives a unit charge of 0.7748 pence per kWh.
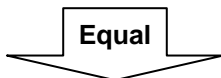
Process

| LDZ Capacity |
| Invoice: LDZ Capacity (ZCA) |
| See: Table 1.2.1 |
| Basis: p / peak day kWh / day |

Plus

| LDZ Commodity |
| Invoice: Commodity (ZCO) |
| See: Table 1.2.1 |
| Basis: p / kWh |

Plus

| Customer (Capacity) |
| Invoice: Capacity (CCA) |
| See: Table 1.3 |
| Basis: p / peak day kWh / day |

Equal

| Total Annual Charge |

Calculations Used

| Volume: 365 days × 159 (SOQ) = 58,035 |
| Unit Rate: 0.1682 p / pdkWh / day |
| Charge: £97.61 |

| Volume: 20,000 (AQ) |
| Unit Rate: 0.0264 p / kWh |
| Charge: £5.28 |

| Volume: 365 days × 159 (SOQ) = 58,035 |
| Unit Rate: 0.0897 p / pdkWh / day |
| Charge: £52.06 |

| Total annual charge = £154.95 |

Example 3

Suppose that instead of supplying just one domestic customer (as in Example 2) the shipper actually supplies a connected system presently comprising 100 domestic customers and the completed connected system will comprise 150 domestic premises. Suppose that each of these premises has the same (AQ) of 20,000 kWh per annum.

	AQ (no of premises x AQ per premises)	SOQ (AQ ÷ (365 x load factor)
Prevailing	100 houses × 20,000 (AQ) = 2,000,000 kWh	2,000,000 ÷ (365 × 0.344) = 15,929 kWh
Maximum	150 houses × 20,000 (AQ) = 3,000,000 kWh	3,000,000 ÷ (365 × 0.344) = 23,893 kWh

Note that the prevailing annual and peak day loads of the connected system in effect would change over the year however, for simplicity, these have been assumed as constant in this example.

Unit Charge: Dividing by the annual load of 2,000,000 kWh gives a unit charge of 0.2690 pence per kWh.

Process   ## Calculations Used

LDZ Capacity

Invoice: ADC (891)

See: Table 1.2.2

Basis: p / peak day kWh / day

Volume: 365 days × 15,929 (pre SOQ) = 5,814,085

Unit Rate: 1.6958 × 23,893 (max SOQ) ^ - 0.2834

= 0.0974 p / pdkWh / day

Charge: £5,662.92

Plus

LDZ Commodity

Invoice: ADC (893)

See: Table 1.2.2

Basis: p / kWh

Volume: 2,000,000 (pre AQ)

Unit Rate: 0.2916 × 23,893 (max SOQ) ^ -0.2940

= 0.0151p / kWh

Charge: £302

Plus

CSEP Administration

Invoice: ADC (894)

See: Section 1.4.1

Basis: p / supply point / day

Volume: 100 houses × 365 days = 36,500

Unit Rate: Standard tariff = 0.1012 p /supply point /day

Charge: £36.94

Equal

Total Annual Charge

Total annual charge = £6001.86

APPENDIX A – End User Categories

Estimation of peak daily load for NDM supply points

For NDM supply points, the peak daily load is estimated using a set of EUCs. Each NDM supply point is allocated to an EUC. In each LDZ each EUC has an associated load factor, as listed in Tables 2.2 and 2.3. The data in these tables applies for the gas year 1 October 2011 to 30 September 2012.

In the tables 'XX' refers to the LDZ Code (e.g. NO).

These EUCs depend upon the annual quantity (AQ) of the supply point and, in the case of monthly read sites, the ratio of winter to annual consumption where available.

Monthly read sites

It is mandatory for supply points with an annual consumption greater than 293 MWh to be monthly read, however, at the shipper's request, sites below this consumption may also be classified as monthly read.

For monthly read sites where the relevant meter reading history is available, the winter: annual ratio is the consumption from December to March divided by the annual quantity. If the required meter reading information is not available, the supply point is allocated to an EUC simply on the basis of its annual quantity.

The peak load for an NDM supply point may then be calculated as:

$$\frac{AQ \times 100}{LoadFactor \times 365}$$

Example

For a supply point in North (NO) LDZ with an annual consumption of 1,000 MWh per annum.

Assume consumption December to March inclusive is 500 MWh.

Winter: annual ratio = 500 ÷ 1000 = 0.5

For a site with an annual consumption of 1,000 MWh, a ratio of 0.5 falls within winter: annual ratio band W02 and the site is thus within End User Category NO:E1104W02.

For a site in this category, the load factor is 36.2% and the peak daily load is therefore

$$\frac{1000 \times 100}{365 \times 36.2} = 7.57 \text{ MWh}$$

If the required meter reading information is not available to calculate the winter: annual ratio, the supply point is allocated to an EUC simply on the basis of its annual quantity, in this case NO:E1104B.

For a site in this category, the load factor is 32.1% and the peak daily load is therefore

$$\frac{1000 \times 100}{365 \times 32.1} = 8.53 \text{ MWh}$$

Six monthly read sites

In the case of six monthly read sites, the supply point is allocated to an EUC simply on the basis of its annual quantity.

Example

For a supply point in NE LDZ with an annual consumption of 200 MWh per annum, the EUC will be NE:E1102B.

For a site in this category, the load factor is 30.0% and the peak daily load is therefore

$$\frac{200 \times 100}{365 \times 30.0} = 1.83 \text{ MWh}$$

Notes

The term LDZ is applied in the context of its usage with reference to the UNC daily balancing regime.

For supply points whose consumption is over 73,200 kWh and which include one or more NDM supply meter points, an end user category code can be found in the supply point offer generated by UK Link. This code may be correlated with the end user category code shown below by means of a lookup table issued separately to shippers. Copies are available from the Xoserve Supply Point Administration Management team by emailing externalrequests.spa@xoserve.com

Daily metered supply points

The SOQ of DM sites is known and hence no load factor is required.

Supply points with annual consumptions greater than 58,600 MWh should be daily metered. However, a handful of sites remain as non-daily metered as a result of difficulties installing the daily read equipment. In such cases the end user category code XX:E1109B is used.

Firm supply points with an AQ above 73.2 MWh per annum may, at the shipper's request, be classified as daily metered. All interruptible supply points are daily metered.

Consultation on end user categories

Section H of the UNC requires the transporter to publish, by the end of June each year, its demand estimation proposals for the forthcoming supply year. These proposals comprise end user category definitions, NDM profiling parameters (ALPs and DAFs), and capacity estimation parameters (EUC load factors). Analysis is presented to users and consults with the Demand Estimation Sub-Committee (a sub-committee of the UNC) before publication of its proposals

Table 2.1 Definition of end user categories

The following tables define the end user category for the NGN LDZs by reference to annual consumption and winter: annual ratio, applicable from 1 October 2011 to 30 September 2012.

EUC Code	Annual Load (MWh)	Winter Annual Ratios (WAR)			
		W01	W02	W03	W04
xx:E1101W0y	0 to 73.2	-	-	-	-
xx:E1102W0y	73.2 to 293	-	-	-	-
xx:E1103W0y	293 to 732	0.00 - 0.48	0.48 - 0.57	0.57 - 0.67	0.67 - 1.00
xx:E1104W0y	732 to 2,196	0.00 - 0.48	0.48 - 0.57	0.57 - 0.67	0.67 - 1.00
xx:E1105W0y	2,196 to 5,860	0.00 - 0.44	0.44 - 0.52	0.52 - 0.61	0.61 - 1.00
xx:E1106W0y	5,860 to 14,650	0.00 - 0.38	0.38 - 0.47	0.47 - 0.57	0.57 - 1.00
xx:E1107W0y	14,650 to 29,300	0.00 - 0.36	0.36 - 0.40	0.40 - 0.53	0.53 - 1.00
xx:E1108W0y	29,300 to 58,600	0.00 - 0.36	0.36 - 0.39	0.39 - 0.48	0.48 - 1.00
xx:E1109W0y	> 58,600	-	-	-	-

Table 2.2 Small NDM Supply Points (Up to 2,196 MWh per annum)

xx: = LDZ =	NE	NO
xx:E1101B	34.4%	32.4%
xx:E1102B	30.0%	30.3%
xx:E1103B	30.9%	31.2%
xx:E1103W01	51.1%	54.3%
xx:E1103W02	40.7%	36.2%
xx:E1103W03	29.1%	25.8%
xx:E1103W04	21.8%	20.3%
xx:E1104B	34.6%	32.1%
xx:E1104W01	51.1%	54.3%
xx:E1104W02	40.7%	36.2%
xx:E1104W03	29.1%	25.8%
xx:E1104W04	21.8%	20.3%

Table 2.3 Large NDM Supply Points (2,196 and above MWh per annum)

xx: = LDZ =	NE	NO
xx:E1105B	37.1%	35.5%
xx:E1105W01	61.4%	60.7%
xx:E1105W02	45.1%	43.4%
xx:E1105W03	33.1%	30.5%
xx:E1105W04	23.4%	20.4%
xx:E1106B	45.9%	42.4%
xx:E1106W01	73.9%	75.8%
xx:E1106W02	54.5%	52.8%
xx:E1106W03	38.7%	37.8%
xx:E1106W04	25.5%	24.1%
xx:E1107B	52.9%	49.0%
xx:E1107W01	85.6%	85.6%
xx:E1107W02	65.9%	63.8%
xx:E1107W03	47.3%	44.2%
xx:E1107W04	30.0%	27.0%
xx:E1108B	64.6%	57.9%
xx:E1108W01	89.5%	89.4%
xx:E1108W02	73.1%	71.4%
xx:E1108W03	58.2%	55.0%
xx:E1108W04	34.7%	31.5%
xx:E1109B	62.1%	59.2%

Appendix B – Application of the LDZ charges methodology

1. Introduction

Standard Special Condition A4 of the Gas Transporter (GT) Licence requires the Licensee to establish a methodology showing the methods and principles on which transportation charges are based. The present charging methodology was introduced in 1994 and it has been modified from time to time in accordance with the GT Licence.

1.1 Price Control Formulae

With effect from 1 June 2005 NGN has had its own Licence for the North of England DN which set out the price controls and incentives which determine the maximum revenue that the licensee may derive from gas transportation activities in a formula year; that is 1 April to 31 March.

The Maximum Allowed Revenue under the transportation controls is determined by a number of factors including:

• the Core Allowed Revenue for 2012/13 was determined through the Price Control Review and remains fixed for the period;

• the indexation factor - under the distribution formula, allowed revenue is adjusted each year by a factor equal to the rate of inflation, measured on a prescribed historical basis by reference to the Retail Prices Index;

• the Gas Transporter is subject to a range of incentives as described by Special Condition E of its Licence;

• any under- or over-recovery brought forward under the control from the previous formula year (expressed by means of a separate "K" factor within each control).

The "K" correction factor is necessary because the level of charges set under the control depends on forecasts of some of the above elements. Outturn will inevitably differ from forecast, thus giving rise to variances between the amount of revenue generated (on an accruals basis) and that allowed under the control. The K factor enables correction for these variances by adjusting either upwards or downwards the maximum level of revenue allowed in the following formula year (taking interest into account).

1.2 Objectives of the Charging Methodology

The transportation charging methodology has to comply with objectives set out in the Licence under Standard Special Condition A5 paragraph 5. These are:

• Compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business, and, so far as is consistent with this,

• That compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers; and

• That the charging methodology properly takes account of developments in the transportation business;

In addition to these Licence objectives NGN has its own objectives for the charging regime. These are that the distribution charging methodology should:

• Promote efficient use of the distribution system;

• Generate stable charges;

• Be easy to understand and implement.

Before the transporter makes any changes to the methodology it consults with the industry in accordance with Standard Special Condition A5 of the Licence. Ofgem has the right to veto any proposed changes to the methodology.

1.3   Structure of Charges

The structure of the Transporter's transportation charges reflects the revised price control arrangements that came into effect on 1 April 2008. The LDZ charges are split between system related activities and customer related activities.

While the total LDZ revenue is determined by the current price control, the share of this revenue to be recovered from the LDZ system charges and LDZ customer charges respectively is based on the relative cost of each activity as defined in the recent pricing consultation, DNPC05. The cost breakdown used as the basis for the LDZ charges is set out below:

Table 3.1.3: Network Cost Breakdown based on NGN Activity Based Costing model

System	Customer	Total
%	%	%
71.2	28.8	100

Having established by the above methods the target revenue to be derived from each main category of charge, the next stage is to set the charges within each of these charge categories. The methodology used to do this is described in the appropriate sections below.

2. LDZ System Charges Methodology

2.1 System Charge Methodology

The distribution networks contain a series of pipe networks split into four main pressure tiers – Local Transmission System (LTS), Intermediate Pressure System (IPS), Medium Pressure System (MPS) and Low Pressure System (LPS). Because it accounts for the majority of the total system costs the LPS is then sub-divided on the basis of pipe diameter into a further six sub-tiers. All LDZ system related costs are attributed across these pressure tiers and sub-tiers.

The methodology below describes the derivation of the capacity charge function and is based on peak daily flows. A similar calculation, based on annual flows, is carried out to determine the commodity charge function.

The average cost of utilisation is calculated for each of the main pressure tiers of the system. The probability of a load within a consumption band using any given pressure tier is determined by an analysis of where supply points of different sizes tend to connect to the system. Combining the average cost of utilisation with the probability of connection generates a tier charge for an average load within any given band. These tier charges are added together to give the total relative charge for a load within the consumption band to use the system.

To provide a workable basis for charging individual customers of differing sizes, the total average unit costs of utilising each tier of the distribution network are plotted. Functions are fitted to the data points representing the total unit costs such that the overall measure of error is minimised.

For the purposes of deriving charging functions the data points for the consumption bands are grouped into 3 charging bands:

- For the 0 to 73,200kWh per annum charging band a fixed unit charge is determined. The rate applies to directly connected supply points and CSEPs

- For the 73,200kWh to 732,000kWh per annum charging band a fixed unit charge is determined. The rate applies to directly connected supply points and CSEPs

- For the 732,000kWh per annum and above charging band, functions based on a power of the peak daily load (SOQ) are fitted. The rate and power function is the same for directly connected supply points and CSEPs

The form of the LDZ system functions is currently derived on a network-specific basis.

2.2 Charging for Connected Systems (CSEPs)

Previously, CSEP customer had been treated differently from other customers with equivalent annual consumption with essentially lower system charges. As part of the updated analysis carried out in the 2010 pricing consultation, DNPC08, it was found that CSEP customers are insufficiently different from other customers to justify this. It was therefore agreed that CSEP customer will be treated the same as customers with equivalent annual consumption for transportation charging purposes.

3. LDZ Customer and Other Charges Methodology

Customer charges reflect supply point costs, namely costs relating to service pipes and emergency work relating to supply points.

3.1 Customer Charge Methodology

The customer charge methodology is based on an analysis of the extent to which service pipe and emergency service costs vary with supply point size. This analysis is used to determine the allocation of the recovery of the target revenue (based on Table 1.3 - Network Cost Breakdown) from supply points grouped in broad load bands. This is described in more detail below.

1. Using activity based costing analysis, the customer cost pool is sub-divided into the following cost pools:

    i.   service pipes

    ii.   emergency work

2. Each cost pool is then divided among a number of consumption bands based on weighted consumer numbers by consumption band. The consumption bands are based on the annual quantity of gas consumed. The weightings are derived from an analysis of how the costs of providing each of the services listed in 1 above vary with consumption size.

3. For each cost pool, an average cost per consumer is then calculated for each consumption band by dividing by the number of consumers in that consumption band.

4. A total average cost per consumer is then calculated for each consumption band by adding the unit costs of each service, that is, service pipes and emergency work.

5. Finally, using regression analysis, functions are developed that best fit the relationship between consumption size and total average cost per consumer.

6. Charges for supply points consuming below 73,200kWh (mainly domestic) consist of just a Capacity related charge. Charges for smaller Industrial and Commercial (I&C) supply points, consuming between 73,200 and 732,000 kWh per annum, are based on a capacity-related charge and a fixed charge which varies with meter-reading frequency. Charges for larger I&C supply points are based on a function that varies with supply point capacity.

3.2 Charging for Connected Systems (CSEPs)

The standard customer charge is not levied in respect of supply points within CSEPs. However a CSEP administration charge is levied to reflect the administration costs related to servicing these loads.

The methodology for setting this charge was established in 1996 and is based on the same methodology described in 3.3 below for setting other charges.

3.3 Other Charges

There are other charges applied to services which are required by some shippers but not by all, for example charges for the administration of special allocation arrangements at Shared Supply Meter Points and Interconnectors. It is more equitable to levy specific cost reflective charges for these services on those shippers that require them. Income from these charges is included in the regulated transportation income.

The methodology used to calculate the appropriate level of these charges is based on an assessment of the direct costs of the ongoing activities involved in providing the services. The costs are forward looking and take into account anticipated enhancements to the methods and systems used. A percentage uplift based on the methodology described in Transco's background paper "Charging for Specific Services - Cost Assignment Methodology" (May 1999) is added to the direct costs to cover support and sustaining costs. The latest level of the uplift was published in PD16, Section 5, (November 2002).