

2017 / 18 Charging Statement

60 day notice of charges effective from 1st April
2017

1. Introduction

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1 Introduction

This publication sets out the Local Distribution Zone (LDZ) transportation charges which apply from 1 April 2017 for the use of the Northern Gas Networks Limited (NGN) Distribution Network, as required by Standard Special Condition A4 of the Gas Transporter Licence. This document does not override or vary any of the statutory, licence or Uniform Network Code obligations.

For more information on the charges contained within this document, please contact the NGN Pricing Manager on 0113 397 5354.

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 Notice 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 ratchet charges, 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 on the Joint Office of Gas Transporters website (www.gasgovernance.co.uk).

1.2 Units

Commodity charges are expressed and billed in pence per kilowatt hour.

Capacity charges are expressed and billed in pence per peak day kilowatt hour per day

Fixed charges are expressed and billed in pence per day.

1.3 Invoicing

Xoserve produce and issue the invoices that are derived from the transportation charges shown within this notice. To clarify the link between charging and invoicing, charge codes and invoice names are included in the tables. For more information on invoicing, please contact Xoserve directly at Css.Billing@xoserve.com.

1.4 The Distribution Network Price Control Formula

Transportation charges are derived from a Price Control Formula which is set by Ofgem, the gas and electricity market regulator. This dictates the maximum revenue that can be earned from the transportation of gas.

- It is estimated that the allowed revenue for the NGN network for the forthcoming formula year (1 April 2017 to 31 March 2018) is **£409.2m**. This is a decrease year on year of £2.4m and results in unit rates decreasing by -3.5% overall. (LDZ areas -3.2%, exit capacity -17.7% year on year)

- Should more or less than the maximum permitted revenue be earned in any formula year, then a compensating adjustment is made to the allowed revenue two formula years following the current formula year (i.e. for the 2017/18 formula year, any under or over recovery will be adjusted in the 2019/20 formula year).

The allowed revenue number of **£409.2m** is made up of the following:

- Allowed revenue from RIIO final proposals is **£420.4m**.
- NGN is **returning £14.1m** back to customers as calculated by the November 2016 Ofgem Annual Iteration Process. This is largely due to updating the allowances for cost of debt, the sharing factor within the Totex Incentive Mechanism for 15/16 Totex outperformance vs. the allowances and restatement of tax allowances after changes to corporation tax rates.
- Networks receive 100% funding for Non Controllable costs and are given an allowance up front to cover this. If there is a difference between the allowance and actual cost this is trued up 2 years later. As a result NGN is **returning £7.1m** for these expenditure areas.
- RPI used when setting prices for the following regulatory year is a forecast and is based on the previous November's HM Treasury report. Prices have been set for 17/18 with a forecast RPI rate of +3.4%.
Any difference between the forecast and actual is trued up 2 years after. In 17/18 NGN is **returning £9.4m** as a result of RPI being 1.5% lower than forecast in 15/16 regulatory year.
- RIIO incentive income also has a 2 year lag in terms of when networks can recover income. During 17/18 NGN will be allowed to collect an additional **+£10.4m** from 15/16 incentive performance on shrinkage/environmental emissions, customer satisfaction and exit capacity. An additional **+£2.5m** is also included for forecasted network innovation spend during 17/18.
- NGN is also **recovering +£6.5m** during 17/18 due to under collection of income during 15/16 regulatory year. This is linked to differences between forecast and actual AQ (Annual Quantities) which play an integral part in how income is collected from shippers.

Distribution revenue recovery is split between LDZ system charges and customer charges. LDZ system charges comprise capacity and commodity charges. Customer charges comprise capacity charges, although certain supply points receive a fixed charge and in addition a variable capacity-based charge. All transportation is provided on a firm basis only.

1.5 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.

1.6 Project Nexus Charging Methodology

When we published our indicative unit rates in November we left the charging methodology on the “as is” basis and did not include the impact of moving to a fixed SOQ in line with Project Nexus principles. Following further industry updates on Nexus 2017 delivery status we have now included the impact in

our charges. This results in a further reduction from our indicative unit rates for 17/18 of -1.4%. This methodology is in line with other GDN's as discussed in the DNCMF on the 9th January 2017.



Northern Gas Networks Transportation Charges Effective from 1st April 2017

2. Transportation Charges

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2 Transportation Charges

2.1 LDZ System Charges

The standard LDZ system charges comprise capacity and commodity charges, with the same rates and functions for directly connected supply points and connected systems 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) 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 End User Category (EUC) and the appropriate load factor.

2.1.1 Directly Connected Supply Points

The unit charges and charging functions used to calculate system charges to directly connected supply points are as follows:

Charge type	LDZ Capacity	LDZ Commodity
Charge code	ZCA	ZCO
Unit rate	Pence per peak day kWh per day	Pence per kWh
Up to 73,200 kWh p.a.	0.1987	0.0313
73,200 to 732,000 kWh p.a.	0.1708	0.0268
732,000 kWh and above p.a.	$2.0033 \times \text{SOQ}^{-0.2834}$	$0.3445 \times \text{SOQ}^{-0.2940}$
Subject to a minimum rate of	0.0052	0.0010
Minimum reached at SOQ of	1,330,465,740	426,476,718

2.1.2 Connected System Exit Points

In the calculation of LDZ charges payable, the unit rate 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.

The unit charges and charging functions used to calculate charges to CSEPs are as follows:

Charge type	LDZ Capacity	LDZ Commodity
Charge code	891	893
Unit rate	Pence per peak day kWh per day	Pence per kWh
Up to 73,200 kWh p.a.	0.1987	0.0313
73,200 to 732,000 kWh p.a.	0.1708	0.0268
732,000 kWh and above p.a.	$2.0033 \times \text{SOQ}^{-0.2834}$	$0.3445 \times \text{SOQ}^{-0.2940}$
Subject to a minimum rate of	0.0052	0.0010
Minimum reached at SOQ of	1,330,465,740	426,476,718

2.1.3 Optional LDZ Charge

The optional LDZ tariff is available, as a single charge, as an alternative to the standard LDZ system charges. The rationale for this tariff is that, for large LDZ loads located close to the NTS, the standard tariff can appear to give perverse economic incentives for the construction of new pipelines when LDZ connections are already available. This tariff may be attractive to large loads located close to the NTS, but it is strongly advisable to contact the NGN Pricing Manager on 0113 397 5354 prior to doing so.

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 and D is the direct distance, in km, from the site boundary to the nearest point on the NTS.

2.2 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 of 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 SOQ.

For supply points with an AQ of greater than 732,000 kWh per annum, the customer charge is based on a function related to the registered SOQ.

2.2.1 Directly Connected Supply Points

The unit charges and charging functions used to calculate customer charges to directly connected supply points are as follows:

Charge type	LDZ Capacity
Charge code	CCA
Unit rate	Pence per peak day kWh per day
Up to 73,200 kWh p.a.	0.1061
73,200 to 732,000 kWh p.a.	0.0038
732,000 kWh and above p.a.	$0.0809 \times \text{SOQ}^{-0.2100}$

In addition to the above, the following fixed charge applies to supply points with an AQ of between 73,200 and 732,000 kWh:

Charge type	LDZ Capacity
Charge code	CFI
Unit rate	Pence per day
Non-monthly read supply points	33.32
Monthly read supply points	35.48

2.3 Exit Capacity Charges

The LDZ Exit Capacity NTS (ECN) charge is a capacity charge that is applied to the supply point or CSEP in the same manner as the LDZ system capacity charge. These charges are applied per exit zone on an administered peak day basis. The exit zone for a DN supply point is determined by its postcode.

Charge type	LDZ Exit Capacity
Charge code - directly connected supply points/CSEPs	ECN/C04
Unit rate	Pence per peak day kWh per day
NE1	0.0076
NE2	0.0007
NE3	0.0007
NO1	0.0016
NO2	0.0064

2.4 Other Charges

Other charges include administration charges at CSEPs and shared supply meter points.

2.4.1 CSEP Administration Charges

There is no customer charge payable for CSEPs, 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 non-daily metered (NDM) and daily metered (DM) site is as follows:

CSEP administration charge

Charge per supply point	0.0755 pence per day (£0.27 per annum)
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The invoice and charge codes are:

Invoice	Charge Code	
DM CSEP	ADU	883
NDM CSEP	ADC	894

2.4.2 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 for 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 as follows, expressed as £ per shipper per supply point:

Invoice	Charge Code
ADU	883

Agent Service	Telemetered	Non-telemetered
Set-up charge	107	183
Shipper-shipper transfer charge	126	210
Daily charge	2.55	2.96

Transporter Service	Telemetered	Non-telemetered
Set-up charge	107	202
Shipper-shipper transfer charge	126	210
Daily charge	2.55	3.05

2.4.3 DN Entry Charges

The LDZ System Entry Commodity charge rates reflect the operating costs associated with the entry of the distributed gas and the benefits from not using the distribution network from point of entry to the offtake. The rate associated with the LDZ system Entry Commodity Charge is calculated on a site by site basis.

The table below shows sites that are currently live – for sites that become live during 17/18 unit rates will be calculated accordingly and Xoserve notification made so the shipper gets charged correctly. Please contact the NGN pricing manager on 0113 397 5354 if rates are needed prior to go live date.

Xoserve Site name	Charge Type	LDZ System Entry Commodity	
	Charge Code	LEC	
	Site Name	Pence per kWh	Unit Rate : Charge or Credit
HOWDOS	Howdon	(0.03147)	Credit
LEEMOS	Leeming	(0.01636)	Credit
FOOTOS	Teeside	(0.01300)	Credit
ASPAOS	Cumbria	(0.02634)	Credit
SHEROS	Agri Sherburn in Elmet	(0.03469)	Credit
RIDGOS	Ridge Road Sherburn in Elmet	0.01397	Charge
BURTOS	Burtos Agnes	0.02444	Charge
NEWTOS	Emerald Biogas	(0.03341)	Credit
GRAVOS	Gravel Pit	(0.01553)	Credit



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3. Charging Examples

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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 the North East LDZ within the NE1 Exit Zone. The calculations described are applicable to loads in either network.

Example A

A shipper has a daily metered customer in the NE1 Exit Zone 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.

Process	Calculations Used
LDZ Capacity Invoice: LDZ Capacity (ZCA) See: Section 2.1.1 Basis: p / peak day kWh / day	Volume: 365 days x 100,000 (SOQ) = 36,500,000 Unit Rate: $2.0033 \times 100,000 (\text{SOQ})^{-0.2834}$ = 0.0767 p / pdkWh / day Annual Charge: £27,995.50
Plus	
LDZ Commodity Invoice: Commodity (ZCO) See: Section 2.1.1 Basis: p / kWh	Volume: 20,000,000 (AQ) Unit Rate: $0.3445 \times 100,000 (\text{SOQ})^{-0.2940}$ = 0.0117 p / kWh Annual Charge: £2,340.00
Plus	
Customer (Capacity) Invoice: LDZ Capacity (CCA) See: Section 2.2.1 Basis: p / peak day kWh / day	Volume: 365 days x 100,000 (SOQ) = 36,500,000 Unit Rate: $0.0809 \times 100,000 (\text{SOQ})^{-0.2100}$ = 0.0072 p / pdkWh / day Annual Charge: £2,628.00
Plus	
LDZ Exit (Capacity) Invoice: Exit Capacity (ECN) See: Section 2.3 Basis: p / peak day kWh / day	Volume: 365 days x 100,000 (SOQ) = 36,500,000 Unit Rate: 0.0076 p / pdkWh / day Annual Charge: £2,774.00
Total Annual Charge	Total annual charge = £35,737.50

Example B

A shipper has a domestic customer and the load has an AQ of 20,000 kWh per annum. Using the appropriate small NDM supply points load factors, it can be seen that the load factor for such a site in the NE1 Exit Zone is 34.6%. The peak daily load (SOQ) is therefore $20,000 \div (365 \times 0.346) = 158$ kWh.

Process

LDZ Capacity
Invoice: LDZ Capacity (ZCA)
See: Section 2.1.1
Basis: p / peak day kWh / day

Plus

LDZ Commodity
Invoice: Commodity (ZCO)
See: Section 2.2.1
Basis: p / kWh

Plus

Customer (Capacity)
Invoice: LDZ Capacity (CCA)
See: Section 2.2.1
Basis: p / peak day kWh / day

Plus

LDZ Exit (Capacity)
Invoice: Exit Capacity (ECN)
See: Section 2.3
Basis: p / peak day kWh / day

Total Annual Charge

Calculations Used

Volume: 365 days x 158 (SOQ) = 57,670

Unit Rate: 0.1987 p / pdkWh / day

Annual Charge: £114.59

Volume: 20,000 (AQ)

Unit Rate: 0.0313 p / kWh

Annual Charge: £6.26

Volume: 365 days x 158 (SOQ) = 57,670

Unit Rate: 0.1061 p / pdkWh / day

Annual Charge: £61.19

Volume: 365 days x 158 (SOQ) = 57,670

Unit Rate: 0.0076 p / pdkWh / day

Annual Charge: £4.38

Total annual charge = £186.42

Example C

Suppose that instead of supplying just one domestic customer (as in Example B) the shipper actually supplies a connected system in the NE1 Exit Zone 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 premise)	SOQ (AQ / (365 x load factor))
Prevailing	100 houses x 20,000 (AQ) = 2,000,000 kWh	$2,000,000 \div (365 \times 0.346) =$ 15,837 kWh
Maximum	150 houses x 20,000 (AQ) = 3,000,000 kWh	$3,000,000 \div (365 \times 0.346) =$ 23,755 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.

Process	Calculations Used
LDZ Capacity Invoice: ADC (891) See: Section 2.1.2 Basis: p / peak day kWh / day	Volume: 365 days x 15,837 (pre SOQ) = 5,780,505 Unit Rate: $2.0033 \times 23,755 (\text{max SOQ})^{-0.2834}$ $= 0.1153 \text{ p / pdkWh / day}$ Annual Charge: £6,664.92
Plus	
LDZ Commodity Invoice: ADC (893) See: Section 2.1.2 Basis: p / kWh	Volume: 2,000,000 (pre AQ) Unit Rate: $0.3445 \times 23,755 (\text{max SOQ})^{-0.294}$ $= 0.0178 \text{ p / kWh}$ Annual Charge: £356.00
Plus	
CSEP Administration Charge Invoice: ADC (894) See: Section 2.4 Basis: p / supply point / day	Volume: 100 houses x 365 days = 36,500 Unit Rate: Standard tariff = 0.0755 p / supply point / day Annual Charge: £27.56
Plus	
LDZ Exit (Capacity) Invoice: Exit Capacity (ECN) See: Section 2.3 Basis: p / peak day kWh / day	Volume: 365 days x 15,837 (SOQ) = 5,780,505 Unit Rate: 0.0076 p / pdkWh / day Annual Charge: £439.32
Total Annual Charge	Total annual charge = £7,487.80



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4. Appendix

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4 Appendix

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 – a full list of war bands and end user category load factors can be found on the Xoserve sharepoint site. The examples that follow use the data from the 16/17 tables.

In the tables 'XX' refers to the LDZ Code (e.g. NE).

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 a 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 East (NE) LDZ with an annual consumption of 1,000 MWh per annum.

Assume consumption December to March inclusive is 500 MWh.

Winter: annual ratio = $500 \div 1000 = 0.5$

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 NE: E1604W02.

For a site in this category, the load factor is 42.2% and the peak daily load is therefore

$$\frac{1000 \times 100}{365 \times 42.2} = 6.49 \text{ MWh}$$

If the required meter reading information is not available to calculate the winter: annual ratio, the supply point is allocated to a EUC simply on the basis of its annual quantity, in this case NE: E1604B.

For a site in this category, the load factor is 34.7% and the peak daily load is therefore

$$\frac{1000 \times 100}{365 \times 34.7} = 7.90 \text{ MWh}$$

Six monthly read sites

In the case of six monthly read sites, the supply point is allocated to a 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: E1602B. For a site in this category, the load factor is 32.6% and the peak daily load is therefore

$$\frac{200 \times 100}{365 \times 32.6} = 1.68 \text{ MWh}$$

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:E1609B 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.

WAR Bands and End User Categories

A full list of the latest WAR bands and End User Categories can be found by accessing the data on the Xoserve sharepoint site.