Northern Gas Networks

2020/21 Charging Statement

we are the network

60-day notice of Transportation charges effective from 1 April 2020

Introduction

This publication sets out the Local Distribution Zone (LDZ) transportation charges which apply from 1 April 2020 for the use of the Northern Gas Networks Limited (NGN) Distribution Network, as required by Standard Special Condition A4 of the Gas Transporters 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 many 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 Principal 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.

- Allowed revenue for the NGN network for the forthcoming formula year (1 April 2020 to 31 March 2021) is **£439.9m**. This is an increase year on year of +£3m/+0.7% and results in **LDZ unit rates increasing by +0.6%** and **Exit Capacity rates reducing by (56.4%)**

- 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 2020/21 formula year, any under or over recovery will be adjusted in the 2022/23 formula year).

The allowed revenue number of **£439.9m** is made up of the following:

- Allowed revenue from RIIO final proposals is **£470.5m**.

- NGN is **returning (£37.8m)** back to customers as calculated by the November 2019 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 18/19 outperformance vs. the allowances, revising pension deficit allowances and restatement of tax allowances after changes to corporation tax rates and the special rate capital allowance 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 (£6.6m)** for these expenditure areas.

- NGN is also **collecting £0.5m** during 20/21 due to under collection of income during 18/19 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.

- RPI used when setting prices for the following regulatory year is a forecast and this year is based on the previous December's HM Treasury publication (November 2019 RPI data which is normally used for price setting purposes was

not available due to the general election). Prices have been set for 20/21 with a forecast RPI rate of +2.5%.

Any difference between the forecast and actual is trued up 2 years after. In 20/21 NGN is **returning (£0.3m)** because actual RPI was 0.3% lower than forecast when prices were set for 18/19 regulatory year.

- Allowed Revenue also includes **+£0.9m** as part of 3 Supplier of Last Resort claims – these are as follows:
  - £235k for One Select / Together Energy - as part of a £4.5m total industry claim
  - £643k for Ovo Energy / Economy Energy - as part of a £12.4m total industry claim
  - £18k for Shell Energy / Usio Energy - as part of a £0.4m total industry claim

- RIIO incentive income also has a 2-year lag in terms of when networks can recover income. During 20/21 NGN will be allowed to collect an additional **+£10.0m** from 18/19 incentive performance on shrinkage/environmental emissions, customer satisfaction, stakeholder engagement, discretionary reward scheme and exit capacity.

- An additional **+£2.7m** is also included for forecast network innovation spend during 20/21.

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

Our price change includes an assumption that capacity levels will reduce by **-1.9%** from April 2020. This is due to new load factors being included within the charging calculations from April onwards.

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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 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) 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.	0.2125	0.0335
73,200 to 732,000 kWh p.a.	0.1826	0.0287
732,000 kWh and above p.a.	2.1423 x SOQ ^ -0.2834	0.3684 x SOQ ^ -0.2940
Subject to a minimum rate of	0.0055	0.0011
Minimum reached at SOQ of	1,383,096,554	387,424,301

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.	0.2125	0.0335
73,200 to 732,000 kWh p.a.	0.1826	0.0287
732,000 kWh and above p.a.	2.1423 x SOQ ^ -0.2834	0.3684 x SOQ ^ -0.2940
Subject to a minimum rate of	0.0055	0.0011
Minimum reached at SOQ of	1,383,096,554	387,424,301

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 opting for this tariff.

Invoice	Charge Code
ADU	**881**

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

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.	0.1134
73,200 to 732,000 kWh p.a.	0.0041
732,000 kWh and above p.a.	0.0866 x 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	35.6391
Monthly read supply points	37.9474

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.

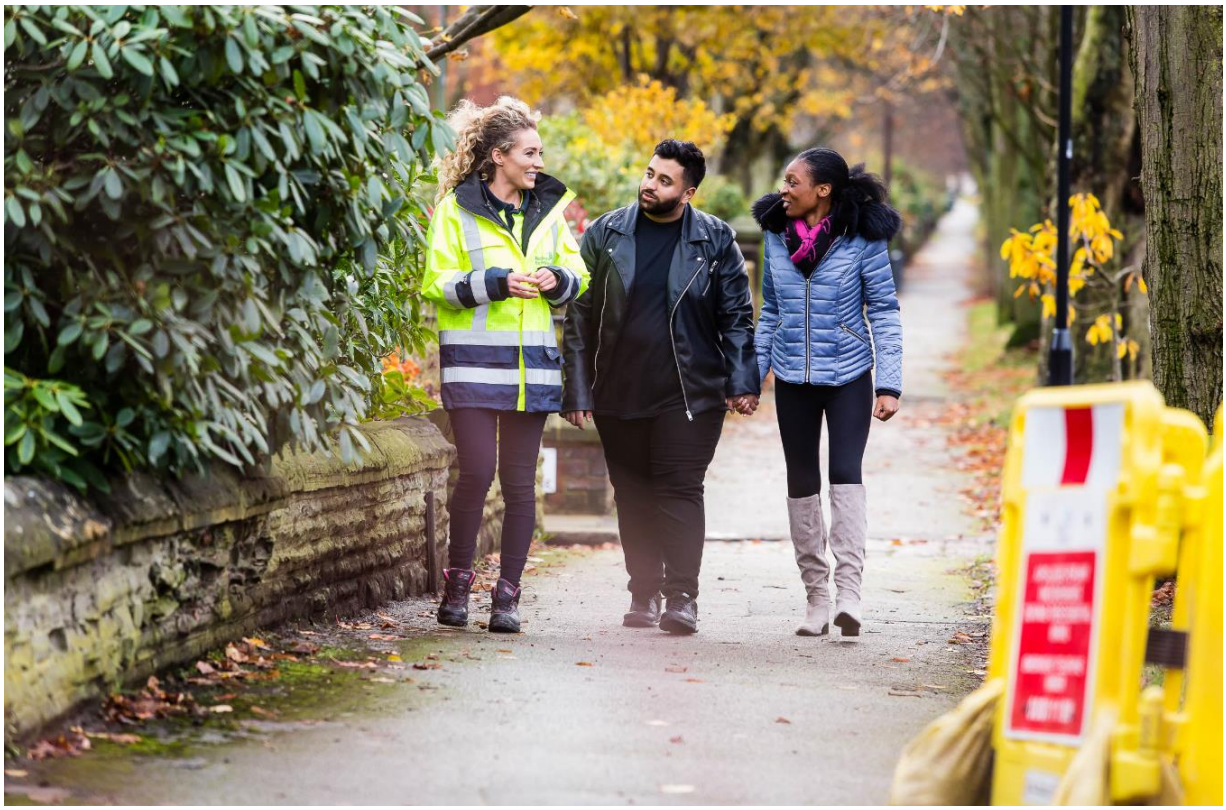
Charge type	LDZ Exit Capacity
Charge code - directly connected supply points/CSEPs	**ECN/C04**
Unit rate	**Pence per peak day kWh per day**
NE1	0.0032
NE2	0.0003
NE3	0.0003
NO1	0.0007
NO2	0.0033

2.4 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 20/21 unit rates will be calculated accordingly and an 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 the go live date.

Xoserve Site name	Charge Type		LDZ System Entry Commodity	
	Charge Code		LEC	
	Site Name	Go Live Date	Pence per kWh	Unit Rate: Charge or Credit
HOWDOS	Howdon	17/02/2015	(0.03249)	Credit
FOOTOS	Teeside	29/09/2015	(0.02236)	Credit
LEEMOS	Leeming	22/12/2015	(0.03660)	Credit
ASPAOS	Cumbria	31/05/2016	(0.01715)	Credit
RIDGOS	Ridge Road Sherburn in Elmet	21/07/2016	0.02535	Charge
SHEROS	Agri Sherburn in Elmet	01/12/2016	(0.03317)	Credit
GRAVOS	Gravel Pit	06/12/2016	(0.00324)	Credit
NEWTOS	Emerald Biogas	08/12/2016	(0.04350)	Credit
BURTOS	Burtos Agnes	18/01/2017	0.03413	Charge
LANEOS	Lanes Farm	14/10/2019	(0.02639)	Credit
SPALOS	Spaldington	22/10/2019	0.03756	Charge
BRANOS	Bran Sands	28/11/2019	(0.03325)	Credit
WARDOS	Wardley	09/12/2019	(0.00979)	Credit
PARKOS	Park Farm	18/12/2019	(0.02245)	Credit
PLAXOS	Plaxton Bridge	24/01/2020	0.04543	Charge
MILLOS	Mill Nurseries	n/a	n/a	n/a



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:** 2.1423 x 100,000 (SOQ) ^-0.2834 = 0.0820 p / pdkWh / day **Annual Charge: £29,930.00**
Plus	
LDZ Commodity **Invoice:** Commodity (ZCO) **See:** Section 2.1.1 **Basis:** p / kWh	**Volume:** 20,000,000 (AQ) **Unit Rate:** 0.3684 x 100,000 (SOQ) ^-0.2940 = 0.0125 p / kWh **Annual Charge: £2,500.00**
Plus	
Customer (Capacity) **Invoice:** LDZ Capacity (CCA) **See:** Section 2.2.1 **Basis:** p / peak day kWh / day	**Volume:** 365 days x100,000 (SOQ) = 36,500,000 **Unit Rate:** 0.0866 x 100,000 (SOQ) ^-0.2100 = 0.0077 p / pdkWh / day **Annual Charge: £2,810.50**
Plus	
LDZ Exit (Capacity) **Invoice:** Exit Capacity (ECN) **See:** Section 2.3 **Basis:** p / peak day kWh / day	**Volume:** 365 days x100,000 (SOQ) = 36,500,000 **Unit Rate:** 0.0032 p / pdkWh / day **Annual Charge: £1,168.00**
Total Annual Charge	**Total annual charge = £36,408.50**

Example B

A shipper has a non prepayment 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 33.5%. The peak daily load (SOQ) is therefore 20,000 ÷ (365 × 0.335) = 164 kWh.

Process	Calculations Used
LDZ Capacity **Invoice:** LDZ Capacity (ZCA) **See:** Section 2.1.1 **Basis:** p / peak day kWh / day	**Volume:** 365 days x 164 (SOQ) = 59,860 **Unit Rate:** 0.2125 p / pdkWh / day **Annual Charge: £127.20**
Plus	
LDZ Commodity **Invoice:** Commodity (ZCO) **See:** Section 2.2.1 **Basis:** p / kWh	**Volume:** 20,000 (AQ) **Unit Rate:** 0.0335 p / KWh **Annual Charge: £6.70**
Plus	
Customer (Capacity) **Invoice:** LDZ Capacity (CCA) **See:** Section 2.2.1 **Basis:** p / peak day kWh / day	**Volume:** 365 days x 164 (SOQ) = 59,860 **Unit Rate:** 0.1134 p / pdkWh / day **Annual Charge: £67.88**
Plus	
LDZ Exit (Capacity) **Invoice:** Exit Capacity (ECN) **See:** Section 2.3 **Basis:** p / peak day kWh / day	**Volume:** 365 days x 164 (SOQ) = 59,860 **Unit Rate:** 0.0032 p / pdkWh / day **Annual Charge: £1.92**
Total Annual Charge	**Total annual charge = £203.70**

Example C

Suppose that instead of supplying just one non prepayment 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 ÷ (365 × 0.335) = 16,357 kWh
Maximum	150 houses x 20,000 (AQ) = 3,000,000 kWh	3,000,000 ÷ (365 × 0.335) = 24,535 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 16,357 (pre SOQ) = 5,970,305 **Unit Rate:** 2.1423 x 24,535 (max SOQ) ^-0.2834 = 0.1221 p / pdkWh / day **Annual Charge: £7,289.74**
Plus	
LDZ Commodity **Invoice:** ADC (893) **See:** Section 2.1.2 **Basis:** p / kWh	**Volume:** 2,000,000 (pre AQ) **Unit Rate:** 0.3684 x 24,535 (max SOQ) ^-0.294 = 0.0189 p / KWh **Annual Charge: £378.00**
Plus	
LDZ Exit (Capacity) **Invoice:** Exit Capacity (ECN) **See:** Section 2.3 **Basis:** p / peak day kWh / day	**Volume:** 365 days x 16,357 (SOQ) = 5,970,305 **Unit Rate:** 0.0032 p / pdkWh / day **Annual Charge: £191.05**
Total Annual Charge	**Total annual charge = £7,858.79**

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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 End User Categories (EUC). Each NDM supply point is allocated to an EUC. In each LDZ each EUC has an associated load factor – a full list of Winter Annual Ratio (WAR) bands and EUC load factors can be found below and on the Xoserve SharePoint site. The examples that follow use the data from the 19/20 tables.

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 WAR 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 based on 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.

WAR ratio = 500 ÷ 1000 = 0.5

For a site with an annual consumption of 1,000 MWh, a ratio of 0.5 falls within WAR ratio band W03 and the site is thus within End User Category NE: E1904W03.
For a site in this category, the load factor is 32.3% and the peak daily load is therefore

$$\frac{1000 \text{ x } 100}{365 \text{ x } 32.3} = 8.48 \text{ MWh}$$

If the required meter reading information is not available to calculate the winter: annual ratio, the supply point is allocated to a EUC simply based on its annual quantity, in this case NE: E1904B.

For a site in this category, the load factor is 38.6% and the peak daily load is therefore

$$\frac{1000 \times 100}{365 \times 38.6} = 7.10 \text{ MWh}$$

Six monthly read sites

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

Example

For a non-prepayment supply point in NE LDZ with an annual consumption of 200 MWh per annum, the EUC will be NE: E1902BNI. For a site in this category, the load factor is 35.9% and the peak daily load is therefore

$$\frac{200 \times 100}{365 \times 35.9} = 1.53 \text{ MWh}$$

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 because of difficulties installing the daily read equipment. In such cases the end user category code XX:E1909B 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

The latest set of data from October 2019 can be found below:

EUC Code	Annual Load (MWh)		Winter Annual Ratios (WAR)			
			W01	W02	W03	W04
E1901W0y	0 to 73.2	Small NDM Sector	0	0	0	0
E1902W0y	73.2 to 293		0	0	0	0
E1903W0y	293 to 732		0.000 - 0.405	0.406 - 0.463	0.464 - 0.535	0.536 - 1.000
E1904W0y	732 to 2,196		0.000 - 0.405	0.406 - 0.463	0.464 - 0.535	0.536 - 1.000
E1905W0y	2,196 to 5,860	Large NDM Sector	0.000 - 0.370	0.371 - 0.437	0.438 - 0.506	0.507 - 1.000
E1906W0y	5,860 to 14,650		0.000 - 0.331	0.332 - 0.395	0.396 - 0.474	0.475 - 1.000
E1907W0y	14,650 to 29,300		0.000 - 0.322	0.323 - 0.350	0.351 - 0.415	0.416 - 1.000
E1908W0y	29,300 to 58,600		0.000 - 0.322	0.323 - 0.350	0.351 - 0.415	0.416 - 1.000
E1909W0y	> 58,600		0	0	0	0

Load Factors from Oct 2019	Notes	NE	NO
E1901B	Old code replaced by the 4 below:	-	-
E1901BND	Non-Prepayment - Domestic	33.5%	34.5%
E1901BNI	Non-Prepayment	31.8%	34.8%
E1901BPD	Prepayment Domestic	37.1%	38.4%
E1901BPI	Prepayment I&C	31.8%	34.8%
E1902B	Old code replaced by the 4 below:	-	-
E1902BND	Non-Prepayment - Domestic	40.4%	40.3%
E1902BNI	Non-Prepayment	35.9%	37.8%
E1902BPD	Prepayment Domestic	37.1%	38.4%
E1902BPI	Prepayment I&C	35.9%	37.8%
E1903B		37.5%	39.3%
E1903W01		55.6%	56.2%
E1903W02		44.8%	43.6%
E1903W03		32.3%	30.9%
E1903W04		24.3%	24.3%
E1904B		38.6%	37.8%
E1904W01		55.6%	56.2%
E1904W02		44.8%	43.6%
E1904W03		32.3%	30.9%
E1904W04		24.3%	24.3%
E1905B		43.7%	42.2%
E1905W01		60.2%	61.9%
E1905W02		49.0%	51.0%
E1905W03		38.0%	38.6%
E1905W04		26.6%	26.0%
E1906B		55.1%	49.0%
E1906W01		66.9%	64.9%
E1906W02		60.1%	60.5%
E1906W03		44.7%	46.2%
E1906W04		29.6%	31.5%
E1907B		68.7%	63.7%
E1907W01		70.2%	70.6%
E1907W02		72.6%	73.4%
E1907W03		60.2%	61.1%
E1907W04		36.8%	40.9%
E1908B		68.7%	63.7%
E1908W01		70.2%	70.6%
E1908W02		72.6%	73.4%
E1908W03		60.2%	61.1%
E1908W04		36.8%	40.9%
E1909B		64.0%	63.9%