DISTRIBUTION NETWORKS PRICING CONSULTATION REPORT ON DNPC06

Proposals for LDZ Charges to Recover NTS Exit Capacity Costs

A report on behalf of all the Distribution Networks

1. The Proposals

Currently NTS Exit Capacity and Commodity Charges for transportation to DN connected Supply Points are set by National Grid (NG) NTS and the revenue from the charges paid by DN Shippers is credited directly to NG NTS.

Under the provisions of UNC Modification Proposal 0195AV, with effect from 1 October 2012, DNs will purchase NTS Exit (Flat) Capacity at NTS/LDZ Offtakes directly from NG NTS. At the same time NG NTS will cease to levy NTS Exit Capacity Charges directly to DN Shippers.

Under Special Condition E2 of the DN Transporter's Licence the total costs incurred by a DN Licensee for NTS Exit Capacity in respect of all NTS/LDZ Offtakes in its Distribution Network will be included in the DN's Allowed Revenue, as set out in Special Condition E6, and the DN will then charge the DN Shippers to recover these costs. To do this, the DNs are proposing that new LDZ Charges be introduced, to be called LDZ ECN Charges, where ECN stands for Exit Capacity NTS. In DNPC06 it was proposed that these charges would be called LDZ NEC Charges, where NEC stood for NTS Exit Capacity. However as the acronym NEC is already used elsewhere within the UNC and in the xoserve billing system it is necessary to change the title. These charges will be payable by DN Shippers to the DNs. For the avoidance of doubt the DN Shippers will continue to pay the other NTS Charges (including all NTS Commodity Charges) in respect of their DN registered Supply Points and DN CSEPs to NG NTS.

2. Summary of Responses

There were six responses to the consultation, all from Shippers. There were no confidential responses.

Shippers/Suppliers	
British Gas	BG
EDF Energy	EDF
RWE npower	RWE
Scottish and Southern Energy	SSE
E.ON UK	EON
Scottish Power	SP

The responses are summarised below based on the four questions for consultation in the original consultation paper, DNPC06.

2.1 Should LDZ ECN Charges be based on a flat rate pence per peak day kWh per day rate in the same way as the NTS Exit Capacity Charges are now.

All the respondents supported this proposal.

2.2 Should LDZ NEC Charges to be applied by Network or by Exit Zone as discussed in Section 4.

Five respondents (BG, RWE, SSE, EON, SP) supported charging by Exit Zone on the basis that it was the most cost reflective option, and that as it maintained current arrangements it was the most practical. Two respondents (BG, RWE) thought that charging by Network would introduce cross-subsidies between customers. One respondent (EDF) preferred charging by Network on the basis that it would produce predictable and transparent charges and would be the easiest to implement. However, EDF also supported charging by Exit Zone albeit to a lesser extent.

DNs' Response

The DNs consider that Network-wide charging has advantages, in particular more stable and predictable charges, whereas Exit Zone charging has small cost-reflectivity benefits. The views of the clear majority of respondents indicate that the benefits of charging by Exit Zone are more highly valued than the benefits of Network-wide charging. Taking account of the responses, the DNs are proposing that the Exit Zone structure be adopted in the Final Proposals to Ofgem.

The DNs still consider that in the longer-term there may be merit in adopting Network-wide charging for the LDZ ECN charge, and therefore, depending on experience with the Exit Zone structure and future developments, it may be appropriate to review this in the future.

2.3 Should the misalignment of NTS and DN dates for changing charges be addressed by the DNs seeking to change the LDZ NEC Charges in October or should no change be sought until the industry has some experience of the operation of the new regime?

Four of the respondents (BG, RWE, SSE, EDF) opposed this proposal, mainly because they preferred DN charges to change only once per year, in April, and that there was no evidence as yet that the misalignment of the charge change dates would be a material issue. Two respondents (EON, SP) supported an alignment of the charge change dates. SP said it

could be April or October, but that other LDZ charges should be changed at the same time.

DNs' Response

The DNs note the feedback from the shippers to strive for a single price change per year, but the DNs need to fully understand the impact of setting Exit Charges in April compared to October. The DNs would like to ensure the appropriate timing that reflects the most up to date information to minimise K for Shippers and Networks. If the misalignment does emerge as a material problem then a solution can be sought when appropriate.

2.4 Should the DNs seek to introduce management of a separate K ECN relating to the LDZ ECN charges, for the purposes of setting the level of these charges?

All the respondents supported the introduction of the management of a separate K ECN relating to the LDZ ECN Charges for the purposes of setting the level of these charges. This is on the basis that it would be more cost reflective, and would ensure that over or under recoveries were paid back to, or recovered from, Shippers more closely to the proportions in which they arose.

EDF suggested that the ECN Charges should also be used to recover the incentives associated with the Capacity Outputs Incentive, on the basis that this Incentive is designed to encourage the efficient booking of NTS Exit Capacity.

DNs' Response

Given the unanimous support for a separate K, the DNs are proposing that this should be implemented. An example of how a separate K would be calculated is provided in Appendix 2.

The mechanism for recovery of associated DN licence incentives does not form part of this consultation as it is purely focussed on the process for recovering the NTS Exit (Flat) Capacity charges that DNs will incur. The implications for such incentives will be reviewed by the DNs / Ofgem at a later date.

3. Objectives of the Charging Methodology

The introduction of new DN charges would mean a change to the charging methodology so it should therefore be considered with respect to the achievement of the objectives of the charging methodology, set out in Standard Special Condition A5 of the Gas Transporter Licence. The relevant objectives are:

(a) That compliance with the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business;

(b) That, so far as is consistent with (a), the charging methodology properly takes account of developments in the transportation business;

(c) That, so far as is consistent with (a) and (b), compliance with the charging methodology facilitates effective competition between gas shippers and between gas suppliers.

(d) That the charging methodology reflects any alternative arrangements put in place in accordance with a determination made by the Secretary of State under paragraph 2A(a) of Standard Special Condition A27 (Disposal of Assets)

(a) Cost Reflectivity

In the Consultation Paper the DNs considered that the new charge should be determined either on an Exit Zone or DN-wide basis. Taking into account the responses received the DNs are proposing that the charges be based on Exit Zones. The NTS charges to the DNs will be based on Offtakes, and there are an average of 10 Offtakes to each Exit Zone. The option of basing the DN charges on Offtakes has already been considered and rejected as not providing a practical basis for charges. Of the viable options charging by Exit Zone will provide the optimum cost-reflectivity, because it will most closely reflect the charges which the DNs will themselves be paying to the NTS.

The levels of the charges could also be kept more cost reflective if the timing of changes to the LDZ NEC Charges were aligned with the timing of changes to the NTS Exit Capacity charges. A separate K NEC would also help to ensure that an appropriate level of revenue was obtained from LDZ NEC Charges over a number of years, so improving cost reflectivity.

(b) Take account of developments within the transportation business

The proposals for LDZ NEC Charges take account of NTS Exit Reform and the changes in the way NTS Exit Capacity will be booked from 1 October 2012.

(c) Facilitating Competition

The proposed change would probably have little impact on competition between shippers but would do nothing to discourage it.

4. Implementation

Under question 2.3 above EDF said they understood that the DNs would set indicative and final charges for the LDZ ECN charges in April 2012, to be effective from 1 October 2012. Consistent with the DNs' Licence obligations it is the intention of the DNs to publish the indicative charges 150 days prior to 1 October 2012, and then to give the two months notice of the final charges on 1 August 2012 as required by the UNC. Before publishing the final charges the DNs would hope to consult with NG NTS so that the charges they publish would reflect as closely as possible the charges which would be applied to them by NG NTS.

Thereafter the normal charge change date would be 1 April and the 150 days indicative and two months final notice would apply as for the other LDZ charges.

A UNC Modification Proposal will be required to add the new LDZ ECN charges to the charge types included in the UNC. This will be done when the Pricing Methodology Consultation has concluded.

5. Final Proposals

It is proposed that the DN Charging Methodology for all Networks will be changed so that:

a) **A new LDZ Charge will become effective from 1 October 2012. This charge will be known as the LDZ ECN Charge and will be a pence per peak day kWh rate per day applied to the Supply Point SOQ to determine the amount payable.**

b) **The LDZ ECN Charge will have a single uniform rate within each Exit Zone. The Exit Zones used will be equivalent to those used for the current NTS exit charging.**

c) **The DNs will introduce the management of a separate K ECN for the purposes of setting the levels of this new charge.**

d) **The level of the LDZ ECN Charges across Exit Zones will be set each year to reflect the forecast average unit NTS Exit Capacity costs for capacity at NTS/LDZ Offtakes within each Exit Zone for the forthcoming year plus or minus the appropriate K ECN under or over recovery (see Appendix 1). For the initial LDZ ECN charges applicable from 1st October 2012 the charges will reflect the forecast costs for the period October 2012 to March 2013 inclusive.**

The updated Methodology Statement taking account of the proposed change is shown in Appendix 3.

Appendix 1

The figures below are the NTS Indicative charges by Offtake averaged into Exit Zone charges. As such they provide an indication of the levels of the Exit Capacity charges which might be applied by the DNs but differences in timing and over- or under-recovery carried forward from one year to another will mean that the actual charges will be different.

May 2010 Indicative NTS Charges - Capacity Weighted		**p/pk day kWh per day**
Northern Gas Networks	**2012/13**	**2013/14**
NE1	0.0034	0.0038
NE2	0.0001	0.0005
NE3	0.0001	0.0001
NO1	0.0075	0.0103
NO2	0.0133	0.0158
Northern Gas DN	**0.0053**	**0.0067**
Wales & West Utilities		
WN	0.0207	0.0218
WS	0.0001	0.0001
SW1	0.0165	0.0175
SW2	0.0130	0.0141
SW3	0.0077	0.0089
Wales & West DN	**0.0080**	**0.0094**
Scotia Gas Networks		
SC1	0.0005	0.0011
SC2	0.0113	0.0143
SC4	0.0095	0.0124
Scotland DN	**0.0083**	**0.00109**
SE1	0.0128	0.0137
SE2	0.0185	0.0196
SO1	0.0133	0.0141
SO2	0.0199	0.0212
Southern DN	**0.0156**	**0.0166**
National Grid Gas		
EA1	0.0040	0.0044
EA2	0.0041	0.0045
EA3	0.0001	0.0001
EA4	0.0095	0.0102
EM1	0.0001	0.0001
EM2	0.0021	0.0025
EM3	0.0125	0.0134
EM4	0.0081	0.0087
East of England DN	**0.0072**	**0.0078**

NT1	0.0185	0.0196
NT2	0.0103	0.0111
NT3	0.0098	0.0105
London DN	**0.0102**	**0.0110**
NW1	0.0144	0.0153
NW2	0.0184	0.0196
North West DN	**0.0164**	**0.0175**
WM1	0.0165	0.0175
WM2	0.0130	0.0141
WM3	0.0077	0.0089
West Midlands DN	**0.0133**	**0.0144**

Appendix 2 – Setting of ECN Charges and Separate Management of K ECN

The level of the LDZ ECN Charges in each DN will be set so as to reflect the forecast costs relating to NTS Exit (Flat) Capacity charges at NTS/LDZ Offtakes within each Exit Zone for the forthcoming year plus or minus the appropriate K ECN under or over recovery. This K ECN will be calculated as the difference between the revenue collected from the LDZ ECN Charges and the amounts paid to NG NTS in respect of the Exit Capacity Charges in respect of the previous Formula Year plus or minus any K ECN from the previous period.

For the initial LDZ ECN Charges applicable from 1st October 2012 for the period October 2012 to March 2013 there would be no K ECN element.

There may be disparity between the level of capacity booked at the NTS/LDZ Offtakes and the level of DN Supply Point capacity to which the ECN Charges applied. For example, where the DN has contracted for DN interruption rights the level of offtake capacity booked may be less than the DN Supply Point capacity. This disparity will be taken into account by scaling of the ECN Charges by a constant factor for each DN rather than by adjustment at the zonal level.

The charge setting procedure will thus be to determine the average of the offtake charges for each zone as a p/pdkWh/day based on the offtake capacity levels booked by the DN for the forthcoming year. The forecast revenue from these averaged offtake charges applied to the DN supply point capacity across all the Exit Zones will be determined. The ECN charges will be determined by scaling the average offtake charges by a constant factor for the DN so that the forecast revenue from the charges equates to the target revenue to be collected.

Example of ECN Charge Setting Process and K ECN Allocation

Exit Capacity Cost to DN				Exit Capacity Revenue to DN				
Offtakes	DN Booked Capacity GWh	NTS Unit Rate p/pfkWh/d	Annual Cost to DN £ mn	Total Supply Point Capacity in Exit Zone GWh	Revenue if Avg NTS Charge applied to Supply Points £ mn	Scaling Factor	Target Revenue by Exit Zone £ mn	ECN Derived Charge p/pfkWh/d
M	80	0.0141	4.12					
N	90	0.0198	6.50					
Total for Zone EZ1	**170**	**0.0171**	**10.62**	**185**	**11.56**	96.14%	**11.11**	**0.0165**
Q	70	0.0146	3.73					
R	30	0.0214	2.34					
Total for Zone EZ2	**100**	**0.0166**	**6.07**	**95**	**5.77**	96.14%	**5.55**	**0.0160**
Total for DN			**16.70**		**17.33**		**16.66**	
K ECN from previous year, say			-0.04					
Target revenue for ECN charge			**16.66**				**16.66**	

The numbers shown are purely illustrative

Appendix 3 – Updated Methodology Statement

GAS DISTRIBUTION TRANSPORTATION CHARGING METHODOLOGY

1. Introduction

Gas distribution transportation charges consist of:
- LDZ System charges;
- Customer charges;
- LDZ Exit Capacity NTS (ECN) charges;
- Administration charges.

For transportation to Supply Points directly connected to the distribution system the LDZ System, Customer and Administration charges are applicable. For transportation to Connected System Exit Points (CSEPs) the LDZ System and Administration charges are applicable.
The LDZ System charges and the Customer charges are set so as to maintain the proportional split of revenue recovery between them determined by the methodology. The levels of these charges are scaled proportionately to recover the target level of revenue. The LDZ ECN charges are set to aim to recover the level of cost incurred by the DN for NTS Exit Capacity in respect of NTS/LDZ offtakes in the Distribution Network. The levels of the Administration charges are based on the costs of providing the services and these charges are not scaled to recover any given proportion of the targeted revenue.

2. Split of revenue recovery between LDZ System and Customer Charges

The target balance of revenue recovery between LDZ System charges and Customer charges for each DN is based upon a network-specific analysis of the split of relevant costs. The costs are taken from the regulatory reporting packs submitted to Ofgem.
Customer charges reflect costs relating to service pipes funded by the transporter and the costs of emergency work relating to service pipes and supply points (i.e. not including any costs associated with gas mains). Service pipe costs include all operational and depreciation costs associated with DN-connected service pipes; these costs also include the replacement of such pipes and service pipe leakage. The relevant portion of support, employee overheads and work management costs of supporting Customer cost activities, based on direct work activity costs are attributed to the Customer cost category.
LDZ System charges reflect costs which include the cost of all work relating to assets upstream of the service pipe (including the gas mains to which the service pipes are connected) and those costs associated with managing the flow of gas through the system including capacity management. Accordingly, costs for all activities upstream of service pipes relating to the maintenance, replacement and repair of mains and larger pipes, as well as energy management work and the construction of new pipes are included in this cost category. The relevant portion of support, employee overheads and work management costs of supporting LDZ System cost activities, based on direct work activity costs are attributed to the LDZ System cost category. Depreciation costs associated with gas mains and Local Transmission System (LTS) pipes and LDZ System activity assets are attributed to the LDZ System cost category. All odorant and shrinkage costs except for service pipe leakage are attributed to the LDZ System cost category.
The network-specific estimate of the split of relevant costs is assessed using an average of an appropriate number of years for which data on a consistent basis is available for each network.
The current target revenue recovery splits are as shown in the table below.

Target Revenue Recovery Split between LDZ System and Customer Charges

	LDZ System	Customer
East of England	70.5%	29.5%
London	68.1%	31.9%
North West	73.7%	26.3%
West Midlands	74.0%	26.0%
Scotland Gas Networks	71.2%	28.8%
Southern Gas Networks	72.8%	27.2%
Northern Gas Networks	71.2%	28.8%
Wales & West	71.8%	28.2%

3. Split of revenue recovery between LDZ System Capacity and Commodity Charges

The capacity element of the LDZ System charges is targeted to recover 95%, and the commodity element of the LDZ System charges is targeted to recover 5%, of the revenue from the LDZ system charges. This split is based on an assessment of the extent to which LDZ System associated costs are related to throughput or to system capacity. The 95:5 split applies to all the DNs.

4. Standard LDZ System Charges

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 73.2 MWh/a charging band a fixed unit charge is determined. The rate applies to directly connected Supply Points and CSEPs;
- For the 73.2 to 732 MWh/a charging band a fixed unit charge is determined. The rate applies to directly connected Supply Points and CSEPs;
- For the 732 MWh/a and above charging band, functions based on a power of the peak daily load (SOQ) are fitted. There are separate power functions for directly connected Supply Points and for CSEPs as the cost data justified separate functions for the >732 MWh charging band.

The form of the LDZ System functions is currently derived on a national basis.

5. Standard LDZ System Charges for Interruptible Supply Points

The Standard LDZ System charges for interruptible Supply Points are based on the principle that interruptible Supply Points typically receive a discount of 50% on the standard LDZ System charges they would pay if they were Firm.
Prior to 1st October 2011, this means interruptible Supply Points pay 47.37% of the appropriate LDZ System Capacity charge which would apply if the Supply Point were firm plus the appropriate LDZ System Commodity charge.
On and after 1st October 2011 all Supply Points will pay firm capacity and commodity charges.
Prior to 1st October 2011, where the transporter requires a Supply Point to be interrupted for more than 15 days in a particular year there is a transportation charge credit. For each day of interruption over 15 days, a transportation charge credit equivalent to 1/15 of the annual LDZ standard capacity charge avoided by having interruptible rather than firm transportation is payable to the Shipper User.
From 1st October 2011 transportation credits in respect of interruption will cease.

6. Optional LDZ System Charge

The rationale for the Optional LDZ System charge is that, for large DN-connected loads located close to the NTS, the standard LDZ System charges can appear to give perverse economic incentives for the construction of new pipelines to supply loads that are already connected to the transportation system, or for potential new loads to build lengthier and costlier pipelines than are available via nearby DN connections. This may give rise to economically inefficient bypass of the Distribution Network system, and unnecessary duplication of infrastructure.
The level of the Optional LDZ System charge is based on the estimated costs to the Distribution Network of laying and connecting a dedicated pipeline for a range of flow rates and distances from the NTS.
The costs considered in deriving the Optional LDZ System charge include the capital cost of laying the hypothetical pipeline and other capital costs relating to connection, metering, volumetric control and other requirements, and the ongoing direct and indirect costs of the hypothetical pipeline.
The level of the Optional LDZ System charge is independent of the overall level of revenue recovery targeted and so the level of the charging function remains unchanged until its cost basis is reanalysed.
Shipper Users opting for the Optional LDZ System charge pay this charge instead of the Standard LDZ System capacity and commodity charges.

7. Customer Charges

Customer charges reflect Supply Point costs, primarily costs relating to service pipes and emergency work relating to service pipes and supply points. The customer charge methodology is based on an attribution of the costs across Supply Points grouped into a number of consumption bands.
The costs are made up of two cost pools, broadly comprising costs associated with service pipes and costs associated with emergency work. Each cost pool is then divided among the consumption bands based on weighted consumer numbers by consumption band. The weightings are derived from estimates of how the costs of providing each of the services vary with consumption band. A total average cost per Supply Point is then calculated for each consumption band.
Functions are developed that best fit the relationship between supply point size and total average cost per supply point. The peak supply point capacity (SOQ) is used as a measure of supply point size.
For Supply Points up to 73.2 MWh/a, the Customer charge is a fixed unit capacity charge.
For Supply Points between 73.2 and 732 MWh/annum, the Customer charge consists of a fixed daily charge which varies with meter-reading frequency and a fixed unit capacity charge.
For Supply Points in excess of 732 MWh/annum, the Customer charge is a capacity charge whose unit rate is determined by a function based on a power of the peak daily load (SOQ).

8. LDZ Exit Capacity NTS (ECN) Charges

The LDZ ECN Charges are effective from 1 October 2012 and are a pence per peak day kWh charge applied to the supply point SOQ to determine the amount payable. The charge has a single unit rate within each Exit Zone.
The level of the LDZ ECN charges for any Exit Zone is set each year to reflect the forecast average unit NTS charges for capacity at the NTS/LDZ Offtakes which make up that Exit Zone for the coming year plus or minus the appropriate portion of the ECNK.
The ECNK is managed separately from the overall K for the purposes of setting the levels of the LDZ Exit Capacity NTS charges. It is calculated as the difference between the revenue collected from the LDZ ECN charges and the amounts paid to NG NTS in respect of the Exit Capacity Charges in the previous formula year plus or minus any ECNK from the previous period.
K means the Distribution Network Transportation Activity Revenue adjustment factor to the Distribution Network Transportation Activity Revenue in respect of over or under recovery for a Distribution Network in a Formula Year.

9. Administration Charges

There are specific administration charges for some services which are required by some Shipper Users but not by all. These administration charges are:
- Charges for the administration processes required to manage the daily operations and invoicing associated with CSEPs;
- Charges for the administration of allocation arrangements at Shared Supply Meter Points.

The methodology used to calculate the appropriate level of these charges is based on an assessment of the costs incurred of the ongoing activities involved in providing the services. The charges are forward looking and take into account anticipated enhancements to the methods and systems used.