

ES Pipelines Ltd.
Transportation
Charges
Statement



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1. INTRODUCTION



This document sets out the Gas Transportation Charges which apply for the use of the Gas Transportation Networks operated by ES Pipelines, hereafter referred to as ESP.

This Transportation Charges Statement is prepared in accordance with the requirements of Condition 4 of ESP's Gas Transporters (GT) licence, the Utilities Act 2000 and the Relative Price Control (RPC) guidelines. It is important to note that this document does not override or vary any of the statutory, licence or Network Code obligations upon ESP.

The purpose of this Gas Transportation Charges Statement is to set out the charges issued by ESP to Gas Shippers for the transportation of Natural Gas through its Gas Distribution Networks and the methodology used to determine those charges. This document is intended to be read by Gas Shippers to understand the Transportation Charges ESP issues in order to accurately and fairly calculate charges to End Users.

The Gas Transportation Charges Statement will be reviewed on an annual basis and any adjustments will become effective on the relevant day in accordance with RPC guidelines. Because RPC charges are a defined methodology, ESP will be deemed to be following its methodology when carrying out such adjustments and ESP will not be required to give Shippers prior notification of the change.

For more information on the charges set out below, please contact ESP at the following address:

**ESP Utilities Group
Bluebird House
Mole Business Park
Leatherhead
KT22 7BA**

**Tel: 01372 587 500
Fax: 01372 377 996**

Regulation@espug.com

2. Definitions

The following definitions apply to all terms within this Transportation Charges Statement. For those terms within the statement not defined in this section, please refer to the Independent Gas Transporter Uniform Network Code [here](#) or the Uniform Network Code [here](#).

Ancillary Equipment	A meter's associated equipment or installations which may include any or all of the following components: the regulator, filters, valves, seals, mountings and any associated pipework.
AQ	Annual Quantity. It is the sum of the annual consumption based on historical usage from previous years. Measured in kWh. There are several ways in which the AQ is calculated and applied.
Capacity Charge	A fee levied on the maximum availability of gas through the system to a Supply Point.
Charging Methodology	Contained within the Transportation Charges Statement, the Transportation Charging Methodology is used to calculate Gas Transportation Charges.
Class 1	A Supply Point whose annual quantity (consumption) is greater than 58,600,000kWh (2,000,000 therms per annum), will have a mandatory DM logger fitted.
Class 2	A site with equipment installed that allows settlement in the same way as a Class 1 site, but is not mandated to do so.
Commodity Charge	A fee levied on the quantity of gas transported through the system.
Connection Charge	The costs of a Customer's Connection work, which may include the cost of any required Reinforcement.
Corrector	A device for calculating, summing and determining increments of gas volume measured by a gas meter.
CSEP	Connected System Exit Point - a point on the Network comprising of one or more exit point that are not Supply Points.
CSEP AQ	Aggregated IGT System AQ. The aggregated consumption nominated at the CSEP for ESP's network.
DM	Daily Metered. A Supply Point that has equipment installed that allows delivery of daily reads. There are 2 classifications of sites of this nature, Class 1 and Class 2.
BEIS	Department of Business, Energy and Industrial Strategy. A UK government department which, among other responsibilities, has a leading role in the UK Government's oversight of UK energy policy.
Domestic / Non-Domestic Supply	A Supply Point with an AQ of 73,200kWh (2500 therms) or less, is deemed as a Domestic site. This does not mean the user is necessarily residential. A Supply Point with an AQ of over 73,00kWh is deemed as Non-Domestic.

End User	The individuals or organisations who consume the gas conveyed through ESP's pipeline system.
EUC	End User Category. Is a series of codes used to classify End Users into groups. The code is based on weather correction factors, geographical region, aggregate demand for one or more years and other relevant factors including day of the week.
Entry Date	The date of the binding contractual agreement which relates to the whole network.
Fixed Charge	A charge that remains fixed regardless of variations in, for example, energy usage.
Formula Year SMPAQ	The Supply Meter Point AQ that is fixed throughout the formula year for determination of Transportation rates.
Gas Act	The Gas Act 1986.
GDN	Gas Distribution Network. A gas network within a specific geographic location.
Gas Transportation Charges	The charges levied to shippers for transportation of gas through ESP's network.
GT	Gas Transporter. They develop, operate and maintain local Gas Transportation Networks.
HSE	Health and Safety Executive.
I&C	Industrial and Commercial.
IGT	Independent Gas Transporter.
IGT System	The gas pipeline system operated by a Gas Transporter licensee that is connected to a GDN system at a CSEP or another IGT System
IGT UNC	The Independent Gas Transporter Uniform Network Code.
Interruptible	A Supply Point for which the GDN reserves the right to interrupt the supply of Gas due to network demand or security.
kWh	Kilowatt hours.
LDZ	Localised Distribution Zone. 13 areas in the UK primarily governed by the GDNs.
LDZ Capacity	The capacity charge levied by the GDN for connection to their network.
LDZ Commodity	The commodity charge levied by the GDN for connection to their network.
MAM	Meter Asset Manager. The contracted provider of maintenance services to a Meter Unit and, where applicable, Correctors.

MAP	Meter Asset Provider. The contracted provider and installer of a Meter Unit.
Meter Unit	A meter and any Ancillary Equipment owned by ESP and installed at a premise.
Metering Charge	Charges to Shippers relating to the Provision, Installation and Maintenance of a Meter Unit.
Metering Service	The provision, installation and maintenance of gas Meter Units and associated activities (including those services where Transactional Charges apply).
Network Code	Together, the Individual Network Code of ESP, the framework agreement and the Independent Gas Transporters' Uniform Network Code (IGT UNC) that forms the contractual arrangements that exist between ESP and the Shippers that have acceded to its Networks.
NExA	Network Exit Agreement. A bilateral agreement between a user and the GDN (or upstream IGT) operator to take gas off the upstream network. The NExA will set out the gas pressure associated with the exit point, gas quality requirement, the ramp rate, and notice periods for increases in offtake rates.
NDM	Non Daily Metered. NDM gas consumed at a Supply Point is recorded at monthly, quarterly or longer intervals by traditional meter reading.
Offtake	Gas consumed by a site or customer.
Ofgem	The Office of Gas Electricity and Markets (OFGEM), the independent authority that regulates the onshore gas and electricity industries in Great Britain.
PL	Peak Load. This is the same as SOQ.
Qmax	The highest flow rate at which the Meter Unit accuracy is within the maximum permitted tolerance. Also known as a Meter Unit's "badged capacity".
RPC	Relative Price Control. A requirement from the Regulator that IGT charges to all End Users should be capped at a level broadly consistent with the equivalent charges of the host GDN.
Reinforcement	Physical works to build additional capacity into the ESP system.
RPC Supply Points	All premises that are not defined as Legacy Supply Points.
Safety Case	The Safety Case is a statement that sets out the processes and procedures used by ESP in operating its gas networks and evidences that they are safe for the intended application used within the intended operating environment.
scmh	Standard Cubic Meters per Hour. The units in which the capacity of a meter is measured. Expressed in Standard Cubic Meters per Hour where a Standard Cubic Meter (Sm ³) equals one cubic meter of gas measured at a temperature of 20°C, and a pressure of 1.01325 barA.

Shipper	An entity licenced to buy gas from producers/importers and convey this through the gas networks owned by Gas Transporters.
SHQ	Supply Hourly Quantity. SHQ is the maximum hourly consumption for a Supply Point.
SOQ	Supply Offtake Quantity. The maximum daily consumption for a Supply Point.
Supplier	An entity authorised by a supply licence to supply gas to the End Users via the Shipper.
SNI	Supplier Nominated Interruptible. A site where the supplier has the right to interrupt the supply for commercial reasons.
SMPAQ	Supply Meter Point AQ. The annual offtake quantity of a Supply Point. This AQ may be revised following read submission.
Supply Point	The offtake point on ESP's network at which a Meter Unit is installed, enabling the consumption of gas by an End User.
Therm	A unit of energy measurement. It is approximately the energy equivalent of burning 100 cubic feet (2.83 cubic metres) of natural gas. To calculate equivalent value in kWh, multiply by 29.3072.

3. Principal Terms & Conditions

3.1 Persons Entitled to Convey Gas

A person entitled to convey gas will be a suitably licensed gas Shipper that has agreed to ESP's terms and conditions to enable it to convey gas through ESP's Gas Transportation system. This includes being a signatory to the appropriate ESP Network Code(s).

For the purpose of this Transportation Charges Statement, the relevant licensed gas Shipper will be a Shipper entitled to convey gas that is responsible for a relevant Supply Point to which a Transportation Charge applies. For the avoidance of doubt, when a Supply Point transfers to another Shipper, the ESP Transportation charges that apply will transfer with the Supply Point and the new Shipper will become the relevant licensed gas Shipper for that Supply Point.

3.2 Standards of Service

Where the applicant is not satisfied with the terms and conditions offered, and an agreement with ESP cannot be reached within a reasonable time, either party may request settlement by Ofgem (Address found in Appendix D).

ESP has produced a separate document outlining the standards of service End Users connected (or connecting) to its networks can expect. A downloadable PDF version is available [here](#). For a hard copy, please contact ESP at the address given. This document can also be made available in large print upon request.

3.3 ESP Network Codes

The ESP Network Codes are the legal documents that define the rights and responsibilities of ESP and Shippers in relation to the use of ESP's Gas Transportation systems. Reference should be made to the ESP Network Codes (as modified from time to time), which details all relevant obligations and liabilities. For the most recent version of these codes, and further information, go to www.igt-unc.com.

3.4 Payment Terms

A more detailed description of the payment terms can be found in the [ESP Network Code](#) (incorporating the [IGT UNC](#)).

3.4.1 Invoices

Shippers will be invoiced on a monthly basis and the invoice will be for the applicable charges for the previous month. The invoices are derived from the Transportation Charges shown within this document. A Shipper will normally be invoiced for a Supply Point as soon as they take responsibility for that Supply Point.

3.4.2 Units

Charges expressed in pence per kilowatt hour (kWh) or pence per peak day kWh are definitive charges for billing purposes. The tables in Section 4 show capacity charges for peak kWh at a daily rate which will be used for capacity, commodity and fixed charges.

3.4.3 VAT

All charges given in this Transportation Charges Statement are net of VAT. Where VAT applies, it will be added at the appropriate rate according to the tax laws prevailing at the time.

3.5 Modification of Gas Transportation Charges

The Gas Transportation Charges will be reviewed on an annual basis and any adjustments will become effective on the relevant day in accordance with RPC guidelines. Because RPC charges are a defined methodology, ESP will be deemed to be following its methodology when carrying out such adjustments and so ESP will not be required to give Shippers prior notification of the change.

There may be occasions when the Gas Transportation Charges will need to be modified before the annual review, and on these occasions all reasonable endeavours will be made to forewarn the relevant Shippers and any other relevant parties before the changes become effective. Some examples of when such modifications may be required are as follows:

- Directed to do so by Ofgem, or at a Director's request;
- Changes in the regulations, or the law;
- Unforeseen expenses and significant changes in the economic environment;
- Modifications to the GDNs' and other GTs' transportation charges; and
- The formulas for the GDNs' tracking need changing to ensure RPC is adhered to (see section 5 for more details).

4. Gas Transportation Charges

4.1 Introduction

The RPC fixed and unit charges for each network can be requested from ESP. Contact details for this purpose can be found in Appendix B.

In the formulae describing the charges there are terms which are defined as follows:

PL_{SP}/SOQ	This is the Peak Load of the individual Supply Points on ESP's networks (also known as the SOQ) which are calculated from the EUC load factors (applicable at the time) and the Supply Point's Formula Year SMPAQ. This will change if the Formula Year SMPAQ and/or load factor changes in the future.
PL_{CSEP}	This is the aggregated Peak Load obtained from the CSEP AQ for ESP's network which is normally calculated by the GDNs applying the Domestic load factor to the AIGTS AQ. Occasionally ESP and the GDNs may agree this to be inappropriate (e.g. there is a large dominant Supply Point with a load factor significantly different to the Domestic one) and therefore agree on a different load factor value being used. It is also the aggregated Peak Load which the GDNs use to calculate the CSEP capacity and commodity unit charges at any time.
PL_{RPC}/SOQ_{RPC}	This is the Peak Load of the individual Supply Points on the ESP networks (also known as the SOQ) which are calculated from the EUC load factors (applicable when the RPC charges were calculated) and the Supply Point's AQ_{RPC} . Note that once set the PL_{RPC} does not change even if the Supply Point's AQ and SOQ changes in the future.
$CSPL_{RPC}$	This is the aggregated Peak Load obtained from the total of all PL_{RPC} 's for ESP's network (also known as the $CSAQ_{RPC}$ SOQ).
Formula Year SMPAQ	This is the forecast annual consumption of gas for the individual Supply Points on the ESP network, which is used to calculate the PL_{SP} from the load factors given by the EUC. These AQs are used by the GDNs to calculate the individual CSEP capacity and commodity charges for each Supply Point. It should be noted that these change when an AQ review is carried out.
$AQ_{CSEP}/CSEP\ AQ$	This is the aggregated consumption nominated at the CSEP for ESP's network which the GDNs use to calculate the CSEP capacity and commodity unit charges. This includes Supply Points not yet connected to the ESP network, but predicted to connect in the future. It should be noted that this aggregate AQ will not change when the individual AQ_{SP} change because of an AQ review, therefore it is not the Aggregate of the "current" AQ_{SP} but the aggregate of the "initial" AQ_{SP} .
AQ_{RPC}	This is the deemed annual consumption of gas for the individual Supply Points on the ESP network based on the principles of RPC.
$CSAQ_{RPC}$	This is the aggregated consumption for the ESP network when fully developed based on the principles of RPC (also known as the RPC CSEP AQ) which are calculated from the total of the AQ_{RPC} described above.

NOTE: The AQ_{CSEP} and the $CSAQ_{RPC}$ would be the same in most cases. This is because when a connection agreement is made with the GDNs, it is based on the aggregated initial AQs of all Supply Points expected to

connect to the ESP network when it is fully developed, which generally is the same as the aggregate of the AQ_{RPCS} . However they may differ because:

- ESP may use different initial AQ values for the Supply Points when dealing with the GDNs where it believes the AQs calculated using the principles of RPC are not suitable, as it should be noted that the GDNs and ESP also use the AQ_{CSEP} for designing the network; or
- The network may be extended which requires the AQ_{CSEP} to be increased (for both charging and design purposes), for example, another GT connects a new network to ESP's. Under the principles of RPC, the $CSAQ_{RPC}$ cannot always be increased to reflect this.

For charging purposes the PL_{SP} and PL_{CSEP} used are those calculated at the end of each month.

4.2 Mains Network Charges

The Mains Network Charges are calculated by taking the relevant GDN's LDZ Capacity and Commodity charging formulae for Supply Points and subtracting the relevant GDN's LDZ capacity and commodity charging formulae for the CSEP. The charges are therefore designed to ensure that they produce values which when added to the relevant GDN's CSEP Charges would be the same as the equivalent GDN's Supply Point Charges. The Mains Network Charges consist of the following three charges.

4.2.1 Capacity Charges

Capacity charges are levied based on the cost to maintain, repair and operate distribution networks. For illustrative purposes, taking National Grid's East of England DN in 2018, the inputs would be as follows:

Load Size (AQ)	CSEP Size (AQ)	Pence per peak day kWh per day
< 73,200 kWh	< 73,200 kWh	0
	≥ 73,200 kWh	0.0359
	< 732,000 kWh	
	≥ 732,000 kWh	$0.1784 - 0.9102 \times (CSPL_{RPC})^{-0.2155}$
≥ 73,200 kWh and < 732,000 kWh	≥ 73,200 kWh	0
	< 732,000 kWh	
	≥ 732,000 kWh	$0.1425 - 0.9102 \times (CSPL_{RPC})^{-0.2155}$

$\geq 732,000$ kWh	$\geq 732,000$ kWh	$0.9102 \times (PL_{SP})^{-0.2155} - 0.9102 \times (CSPL_{RPC})^{-0.2155}$
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4.2.2 Commodity Charges (with no reconciliation)

Commodity charges are levied based on the actual flow of gas through the network. For illustrative purposes, taking National Grid's East of England DN in 2018, the inputs would be as follows:

Load Size (AQ)	CSEP Size (AQ)	Pence per kWh
< 73,200 kWh	< 73,200 kWh	0
	$\geq 73,200$ kWh	0.0061
	< 732,000 kWh	
	$\geq 732,000$ kWh	$0.0297 - 0.1881 \times (CSPL_{RPC})^{-0.2376}$
$\geq 73,200$ kWh and < 732,000 kWh	$\geq 73,200$ kWh < 732,000 kWh	0
	$\geq 732,000$ kWh	$0.0236 - 0.1881 \times (CSPL_{RPC})^{-0.2376}$
$\geq 732,000$ kWh	$\geq 732,000$ kWh	$0.1881 \times (PL_{SP})^{-0.2376} - 0.1881 \times (CSPL_{RPC})^{-0.2376}$

Note that for the above charts:

where \leq is shown it means "less than or equal to";

where \geq is shown it means "greater than or equal to"; and

where $>$ is shown it means "greater than".

ESP does not carry out any reconciliation for the Commodity Charges and therefore these charges are based on the allocated AQ only and will not be adjusted retrospectively based on actual meter reads. The AQ will however be reviewed each year (subject to the required meter reads being available) therefore the commodity charges will be based on actual consumption, however it will be for gas consumed in the previous year.

Note: If requested, ESP will accept the monthly gas consumption of Class 1 or Class 2 Supply points based on meter reads from the Shipper and use these in calculating the commodity charges for that month. Therefore this gives the Shipper the option of having the commodity charges based on actual gas consumption similar to daily read sites. If a Shipper does choose this option then it must give ESP prior warning of its intention, and it must provide the information as the total gas consumed (corrected for temperature and pressure) within the first five working days of the following month.

The ESP element of the commodity charge is not the whole commodity charge the Shipper would normally pay to the GDN for a Supply Point, as it is split between the GDN's CSEP charges and ESP charges. In addition for larger sites, as a general rule, most of the commodity charge is levied by the GDN at the CSEP as the site will dominate the AQCSEP making ESP's commodity charge only a small proportion of the overall commodity charge. The GDNs do carry out reconciliation for the CSEP commodity charges and ESP believes that even if a Shipper decides to provide monthly gas consumption figures, the amounts the Shipper would receive, or pay, through ESP reconciliation would not be significant.

For the reasons described above ESP believes there is very little benefit in ESP carrying out reconciliation for the commodity charges as the extra administration required would outweigh the benefits (if any).

4.2.3 Customer Charges

The customer charges reflect the GDNs' customers charge which relate to emergency services and other customer related overheads. For illustrative purposes, taking National Grid's East of England DN in 2018, the inputs would be as follows:

4.2.3.1 < 73,200 kWh per annum

Pence per peak day kWh per day	
Capacity Charge	0.1000

4.2.3.2 ≥ 73,200 kWh and < 732,000 kWh

Pence per day	
Fixed Charge	29.3252
Pence per peak day kWh per day	
Capacity Charge	0.0033

4.2.3.3 $\geq 732,000$ kWh per annum

Pence per day	
Fixed Charge	31.2248
Pence per peak day kWh per day	
Capacity Charge	$0.0708 \times (\text{PLSP})^{-0.21}$

4.3 Changes to the Mains Network and Customer Charges

As the basis of these charges is 'to track the GDNs' charges on a continual basis' as required by RPC, they must be modified when the relevant GDNs' charges are modified, and must also be levied from the same date as the modified GDNs' charges. Because of these requirements, ESP charges will be deemed as following its methodology when carrying out such modifications to its charges and ESP will not be required to give Shippers prior notification of these modifications.

4.4 Metering Charges

Shippers and End Users have a choice of who provides their metering assets and therefore are not restricted to having an ESP meter to measure their gas offtake. If the Shipper or End User does choose ESP as the Meter Asset Provider (MAP) then there will be an additional metering charge added to the transportation charges to cover the Provision and Installation of the ESP meter. Meter Asset Management (MAM) services are typically included in this that attract an additional charge for Maintenance of the Meter Unit.

Details of the metering charges can be found in the ESP's Metering Charges Statement, a copy of which can be requested by contacting ESP at the address given in Appendix B.

4.5 Other Charges

In addition to the transportation charges there are other charges which are applicable in relation to the use of ESP gas networks.

4.5.1 Meter Reading Charges (Limited Service)

There is a requirement to read the meters at an offtake point, the conditions for which are set out in the ES Pipelines Network Code (incorporating the IGT UNC). Shippers are required to organise the agent that will read the meters they are responsible for.

ESP has in the past offered a meter reading service. However, because most, if not all, Shippers and suppliers now use their own meter reading agents, this service is no longer viable for ESP to provide at a competitive rate. Therefore ESP has withdrawn its meter reading service and intends to provide only a limited service at its own discretion under special circumstances on a short-term basis. This limited

service will only be offered where a Shipper has specific problems with getting a meter reading agent organised initially for specific sites, and is therefore designed as a last resort service for a limited period.

Further information on ESP's meter reading service can be obtained from the contact specified in Appendix B.

4.5.2 Must Reads

If a Shipper is unable to provide meter readings in compliance with the ESP Network Code, then ESP may initiate processes to obtain a meter read, referred to as a "Must Read". A charge will be made for each Must Read and will depend on the number of Meter Units at a Supply Point requiring a Must Read. The charge per Must Read is £45.

These Must Read charges are based on the average costs associated with obtaining a single meter read, which is not part of a scheduled visit to an area by a meter reader. Therefore it includes the full cost of travelling to and from the site, additional administrative costs, possible multiple visits to the site and obtaining warrants of entry if required.

4.6 Connected System Exit Points

A CSEP is a system point comprising one or more individual exit points which are not Supply Points. This includes connections to a pipeline system operated by a GT other than ESP. Currently there are no ESP CSEPs, however if this situation changes this section will be updated.

5. Gas Transportation Charging Methodology

5.1 Introduction

This section sets out details of the prevailing charging methodology that ESP utilises to levy transportation charges for use of its gas pipeline.

Ofgem introduced the Relative Price Control as a method of ensuring that all IGTs apply charges in a manner where a connection to a GDN network and a connection to an IGT network would bear the same transportation charges.

5.2 Relative Price Control

The basic principle of Relative Price Control (RPC) is that the maximum charge levied by ESP should be the difference between the GDNs' Single Supply Point ("SSP") Charge and the GDNs' charges to the CSEP ("CSEP") with the exclusions listed below. The individual Supply Points can be categorized in three ways:

- **New Housing:** The initial charge calculated is expressed as a fixed amount in "£ per year" based on the charges applicable at the time. Then each year Ofgem will issue an average "% Change" based on how the GDNs' charges have changed on average that year. The IGT must then multiply the % Change by the initial £ per annum to calculate its new charge for the coming year (For example if the initial charge was £50 per annum and Ofgem issues an average price rise of 2% the new charge will be £51 per annum).

As this is a fixed charge it will not vary in line with the AQ of the Supply Point, if the AQ is varied because a review was carried out using meter reads the fixed charge will NOT change as a result. This charge is also subject to a floor and ceiling as outlined below.

- **Domestic Infill:** The initial charge calculated is expressed as a unit charge in "pence per kWh" based on the charges applicable at the time. Therefore, the actual charge for an individual Supply Point is the current AQ for that Supply Point multiplied by the unit charge. Each year Ofgem will issue an average "% Change" based on how the GDNs' charges have changed on average. The IGT must then multiply the % Change by the current base unit charge to calculate its new charge for the coming year. (For example if the initial charge was 6.25 pence per kWh and the AQ is 800 kWh then the annual charge will be £50. If Ofgem then issues an average price rise of 2% the new charge will be 6.375 pence per kWh, which if the AQ does not change, means an annual charge of £51.) As this is a unit charge the total charge will vary with the AQ of the Supply Point, if the AQ is varied because a review was carried out using meter reads the total charge WILL change if this actual AQ is different from the initial AQ used. This charge is also subject to a Floor and Ceiling as outlined below.

In addition to this unit charge based on the GDNs' equivalent charges, ESP has the option, in prescribed circumstances, of adding a Supplemental unit charge of up to 0.3412 pence per kWh for up to 20 years (from the date of the first connection) for Domestic Supply Points only. (This cannot apply to commercial Supply Points even if they use less than 73,200 kWh annually.) This Supplemental charge is increased every year from the entry date in line with inflation.

- **I&C:** ESP continually tracks the GDNs' charges making sure its charges are always equal to the difference between the SSP Charge and the CSEP Charge based on the GDNs' current methodology and the Supply Points' actual AQ. These charges are NOT subject to a Floor and Ceiling in recognition that these charges will never deviate from the GDNs Equivalent prices. ESP has concluded that using

a unit charge based on an initial AQ that is not updated when the AQ is changed will result in deviation of future charges from the GDNs' Equivalent charges.

ESP reserves the right to review its I&C methodology should changes to arrangements outside of our control result in a significant impact on costs or revenues at affected Supply Points.

5.3 Exclusions from RPC Charges

When calculating the SSP and CSEP charges based on the RPC charging frameworks, it should be noted that the following charges are NOT included in any calculations:

- All charges for the provision, installation and maintenance of Meter Units.
- Meter reading services.
- The GDNs CSEP administration charge (if applicable).
- Unidentified Gas (UIG) charges
- Any other charges determined by Ofgem (currently there are no other exclusions).

5.4 Floor and Ceiling

Ofgem annually issues a forecast of how the GDNs' charges are expected to change in the 8 regions of the country. A tolerance of +5% and -5% on each side of these expected changes is the allowed range that IGTs charges are may vary within. If after Ofgem has issued an average "% Change" based on how the GDNs' charges have changed on average that year, and this causes the fixed or unit charge to go above the Ceiling then the IGT **cannot** increase its charges to this amount. Instead it can only increase to the Ceiling's value. Likewise, if the fixed or unit charge goes below the floor then the IGT only has to decrease its charges to the Floor's value.

The path of the Floor and Ceiling declines (on a real basis) in accordance with a fixed percentage set out in the IGT's licence. This is designed to reflect the relevant decline in the GDNs' charge over a twenty year period as forecast by Ofgem.

The Floor and Ceiling are only applied at the Entry Date of a network. Therefore, regardless of how the GDNs' charges have changed in the past and whether other networks have been restricted by either the Floor or Ceiling, new networks will start on the basis that there is no variance from the GDNs' charges.

5.5 Entry Point

To determine which of the GDNs' transportation charges should be used to set the initial fixed or unit rate, an "Entry Date" needs to be set. ESP determines this to be the date of the binding contractual agreement which relates to the whole network. This ensures that the initial charge is calculated for all Supply Points which are expected to connect off the network using the GDNs' charges. This allows for the same set of calculations to be used for all Supply Points which are then all modified by Ofgem's yearly adjuster regardless of whether or not individual Supply Points of each property type are connected to the network. The charges which are calculated and adjusted annually for Supply Points not yet connected are termed "Shadow Charges".

To determine what is a binding contractual arrangement ESP will use the following principles:

- This concept of a binding contractual agreement is simple to define for new housing developments, as there is generally a developer which the IGT contracts to for the installation of the gas network for all houses. This is also generally the case for new I&C estates where a developer is building the site in the same way.
- However, for Domestic Infill and I&C projects where individual customers are dealt with this is not easily defined because contracts are issued over a period of time, as and when connections are required. Therefore for these projects the Entry Date will be when the IGT informs Ofgem of its intention to develop a project and so will be making a commercial commitment to the project within the near future. This commercial commitment usually starts with contracting to a contractor for the installation of the network, which takes the form of a binding contractual agreement. It should also be noted that because these projects can have a significant lead-in time the Entry Date could be much in advance of the first connection.

5.6 Gas Consumption Values

There are several different types of gas consumption values used for the purposes of RPC depending on the circumstances. They are as follows:

- **New Domestic Housing:** The NExA AQ table lists the average annual gas consumptions for different property types depending on their location. When calculating the initial charges for new housing the IGT must use these NExA AQ values. The NExA AQ table is updated periodically when IGTs carry out a review of their AQs using meter reads (as a larger sample of actual AQs can be used to determine the average AQ for each house type). The new table comes into effect in February each year alongside release of the IGT UNC unless the code's Panel cannot agree on implementation of the new table in which case the prevailing NExA AQ table will continue to apply.
- **Domestic Infill:** There are no standard AQ values which can be used for Domestic Infill Supply Points as the variation in property type is extremely high. ESP can only estimate an average AQ_{RPC} based on an overall assessment of the types of properties within the network's area. ESP cannot agree initial AQ_{RPC} values with Shippers as when the charges are being calculated the network is unlikely to be installed and so there will be no gas contracts between suppliers and customers in place.

The initial AQ_{RPCS} will be determined by ESP and the $CSAQ_{RPC}$ used for the calculation of the CSEP charges must be an aggregate of these AQ_{RPCS} . There is **no difference** in the unit charge if different AQ_{RPC} values are used, therefore it does not matter if accurate AQ_{RPCS} are used or not. (For example taking a theoretical network using an AQ of 1,000 kWh the ESP charge would be 0.241 pence/kWh, however if the AQ used was 70,000 kWh the ESP charge would STILL be 0.241 pence/kWh.)

- **I&C:** Unless an existing site is being connected where the gas load required could be accurately calculated from the existing fuel usage, in most cases AQ values are difficult to calculate accurately. For example, for a new industrial estate the occupants of the units are unknown when the calculations need to be carried out and the actual occupants may have very different gas requirements (i.e. it could be only a small office heating requirement, or it could have a process load using a very large quantity of gas). If an existing premise does not want to connect to the gas network initially it is not possible to forecast what AQ it will have when it does connect in the future. ESP cannot agree initial AQ_{RPC} values with Shippers because when the charges are being calculated

the network is unlikely to be installed and there will be no gas contracts between suppliers and customers in place. Therefore the initial AQ_{RPC} will be determined by ESP and the $CSAQ_{RPC}$ used for the calculation of the CSEP charges must also be an aggregate of these AQ_{RPC} s.

- **Mixed Developments:** Where a network has a mixture of the above property types, then the $CSAQ_{RPC}$ is the sum of ALL the AQ_{RPC} s of all the property types, calculated by the principles described above.
- **Peak Loads (SOQ):** To calculate the PL_{RPC} for all the above property types, the applicable GDN's EUC load factor (current at the Entry Point) is applied to the individual AQ_{RPC} s. The $CSPL_{RPC}$ (total Peak Load for the CSEP) is the sum of all these PL_{RPC} s.

5.7 The GDNs' CSEP Charges

The GDNs' charges to the CSEP are based primarily on the Aggregate AQ for the network for ALL connections that are forecast to take gas from the network. ESP submits a 10-year forecast to the GDNs when it requests a connection and the GDNs take the 10th year's total AQ value (both Domestic and I&C) as the AQ_{CSEP} . This is used from the outset and does not change in value unless the IGT needs to re-submit its connection request. This occurs where there has been a significant change to the network (e.g. it is extended, or a Supply Point requires an increase gas load) at which point the GDNs update the AQ_{CSEP} to reflect the new total AQ value for the 10th year.

The AQ_{CSEP} should be the same as the $CSAQ_{RPC}$. This is not always the case because the AQ_{CSEP} is used by both the IGT and the GDNs for design purposes. Therefore the individual site AQs used for RPC may not be suitable for calculating the total AQ required at the connection point. There may also be additional capacity required for loads the IGT cannot use in its RPC calculations, for example other Gas Transporters' networks that connect at a later date.

The aggregated SOQ (PL_{CSEP}) which a GDN uses to calculate the CSEP LDZ capacity and commodity unit charges are derived directly from the AQ_{CSEP} . This is calculated at the start of the project and remains fixed until the AQ_{CSEP} is modified. The PL_{CSEP} is normally calculated by the GDNs applying the Domestic load factor to the AQ_{CSEP} (i.e. no allowance is made for different load factors for any I&C AQs). However occasionally an IGT and the GDNs may agree this to be inappropriate (e.g. there is a large dominant Supply Point with a load factor significantly different to the Domestic one) and therefore agree on a different load factor value being used.

It should be noted that as the $CSPL_{RPC}$ (total Peak Load for the CSEP) is the sum of all the PL_{RPC} s which use individual load factors, where a network has I&C sites the PL_{CSEP} will not be the same as the $CSPL_{RPC}$ even if the AQ_{CSEP} is the same as the $CSAQ_{RPC}$, as the GDNs only use the Domestic load factor. The only exception to this is where the IGT agrees with the GDNs to use another load factor.

When calculating the CSEP charges for I&C Supply Points, ESP will use $CSPL_{RPC}$ to calculate both the capacity and commodity unit charges, not PL_{CSEP} as used by the GDNs.

The individual AQs of the connections (" AQ_{SP} ") used to nominate gas at the CSEP will however change over time as they are updated from AQ reviews carried out periodically. This means the individual SOQs (PL_{SP}) will also change as the AQ_{SP} changes and if the End Users of the connection point crosses over a threshold or a winter ratio changes.

5.8 Region and Relevant Load Factors

The calculation of all charges should use the same regional values as defined by the GDNs and any load factors used should be calculated using the same End User Categories ("EUC") and their associated load factors as used by the GDNs.

5.9 Interruptible Transportation

Certain supply points may be deemed as Interruptible. For these supply points, GTs retain the ability to interrupt supply during period of high demand. Interruptible supply points are being phased out of the market and as such, ESP has no supply points which can be classed as Interruptible.

However, Shippers may have a legacy Interruptible service from the GDNs up to the CSEP and for these Shippers, ESP may offer a reduction in its transportation charges. This is to ensure its charge plus the GDNs' CSEP charge is the same as the GDNs' Supply Point Charge, in line with the RPC GDN-tracking methodology.

6. Appendix A: Examples of Charges on our Networks

This section provides two examples demonstrating how the transportation charges are calculated.

Unit rates for example 6.1 are illustrative only and may not reflect current GDN charges.

6.1 Domestic Connections

- **New Housing:** A new 3 bedroom semi-detached (3BS) house connected to the network reference number ESN 0003. Based on RPC pricing for new homes the annual charge is £25.91 per year. There will also be a meter rental charge levied if it is an ESP Meter Unit.
- **Domestic Infill (No Supplemental Charge):** An existing Domestic Supply Point that has an annual consumption of 18,000 kWh per annum connected to an Infill network. Based on RPC pricing the unit rate is 0.2859 pence per kWh. Therefore the total charge is equal to $18,000 \times 0.2859 = 5,146$ pence/year = £51.46 per year. There will also be a meter rental charge levied if it is an ESP Meter Unit.
- **Domestic Infill (with Supplemental Charge):** An existing Domestic Supply Point that has an annual consumption of 16,000 kWh per annum connected to an Infill network. Based on RPC pricing the unit rate is as follows:

Pence per kWh	
GDN Equivalent Charge	0.3577
Supplemental Charge	0.3613

Therefore the total charge is as follows:

	Calculation		Pence per year
Total RPC Charge	$16,000 \times 0.3577$	=	5723
Total Supplemental Charge	$16,000 \times 0.3613$	=	5781
Total Transportation Charge	£115.04 per year		

Meter Rental Charges:

There will also be a meter rental charge levied if it is an ESP Meter Unit. Please refer to ESP's Metering Charges Statement.

6.2 Commercial Connection

- Consider a commercial building LDZ East of England (LDZ: EA 2018 prices) which has an annual consumption of **6,000,000 kWh** with a load factor of **45%**. The building is connected to an ESP network which has a total annual consumption of **30,000,000 kWh** and an overall load factor of **35% (based on RPC)**.

	Calculation		kWh
Peak daily load of building	$6,000,000 / (365 \times 0.45)$	=	36,530
Peak daily load of CSEP	$30,000,000 / (365 \times 0.35)$	=	234,834

Mains Network Charges:

	Calculation		
Capacity Charge	$[0.9102 \times (36,530)^{-0.2155} - 0.9102 \times (234,834)^{-0.2155}] \times 365$	=	11.41 pence per peak kWh per annum
Commodity Charge	$0.1881 \times (36,530)^{-0.2376} - 0.1881 \times (234,834)^{-0.2376}$	=	0.0055 pence per kWh
Customer Charge	$0.0708 \times (36,530)^{-0.21} \times 365$	=	2.85 pence per peak kWh per annum

Therefore, annual charges will be:

	Calculation		£
Capacity Charge	$11.41 \times 36,530 / 100$	=	4,161.07
Commodity Charge	$0.0055 \times 6,000,000 / 100$	=	330.00
Customer Charge	$2.85 \times 36,530 / 100$	=	1,039.49
Total Charge	£5,537.56		

Meter Rental Charges:

There will also be a Meter Rental Charge levied if it is an ESP Meter Unit. Please refer to the appropriate ESP Metering Charges Statement.

7. Appendix B: Network Transportation Charges

Full transportation charges may be requested for any specific network by contacting ESP using the details provided.

Regulations

1st Floor

Bluebird House

Mole Business Park

Leatherhead

Surrey

KT22 7BA

01372 587500

Regulation@espug.com

8. Appendix C: Useful Contacts and Addresses

Ofgem
10 South Colonnade
Canary Wharf
London
E14 4PU

Tel: (0207) 901 7000
Fax: (0207) 901 7066

Website: <https://www.ofgem.gov.uk/>

Health and Safety Executive
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Tel: (0845) 345 0055

Website: <http://www.hse.gov.uk/>

Ombudsman Services
PO Box 966
Warrington
WA4 9DF

Telephone: 0330 440 1624
Textphone: 0330 440 1600

E-mail: osenquiries@os-energy.org

Website: www.ombudsman-services.org/energy



For more information on the content of this document please contact us at the following address:

ESP Utilities Group
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Tel: 01372 587 500
Fax: 01372 377 996
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