

UNIFORM NETWORK CODE – TRANSPORTATION PRINCIPAL DOCUMENT**SECTION Y – CHARGING METHODOLOGIES****PART A – NTS CHARGING METHODOLOGIES****PART A-I – NTS TRANSPORTATION CHARGING METHODOLOGY****1 GENERAL****1.1 Introduction**

1.1.1 This Part A-I sets out the charging methodology established by National Grid NTS pursuant to Standard Special Condition A4(5) of National Grid NTS' Gas Transporter's Licence for determining charges (as referred to in Standard Special Condition A4(1)(a)) and reserve prices (as referred to in Standard Special Condition A4(1)(b)).

1.1.2 Part A-II sets out the connection charging methodology established by National Grid NTS pursuant to Standard Condition 4B and 4C of National Grid NTS' Gas Transporter's Licence.

1.1.3 This Part A-I includes provisions which give effect to the requirements of the Tariff Regulation, so far as those requirements are to be given effect in the Code (and having regard to the decisions of the Authority reflected in the direction dated 8 March 2018 given pursuant to paragraph 7B of Standard Special Condition A11).

1.2 Structure of charges

1.2.1 Transportation Charges in relation to the NTS comprise:

- (a) charges in respect of transmission services ("**Transmission Services Charges**"), comprising:
 - (i) Capacity Charges determined by Auction or Allocation Process pursuant to the provisions of the Code referred to in the Capacity Allocation Table in paragraph 2.2.1;
 - (ii) NTS Entry Capacity Retention Charges as provided for in paragraph 2.10;
 - (iii) Transmission Services Revenue Recovery Charges as provided for in paragraph 3; and
 - (iv) NTS Entry Transmission Services Rebate Charge as provided for in paragraph 3.4;
- (b) other charges ("**Non-Transmission Services Charges**") comprising:
 - (i) St Fergus Compression Charge;
 - (ii) NTS Meter Maintenance Charges;

- (iii) DN Pensions Deficit Charges;
- (iv) Shared Supply Meter Point Administration Charge;
- (v) Interconnection Point Allocation Charge; and
- (vi) General Non-Transmission Services Charges.

1.2.2 Transmission Services Charges are determined separately for Entry Points and Exit Points.

1.3 Interpretation

1.3.1 In this Part A-I, the following terms have the meanings given to them in the Special Conditions:

- (a) Maximum NTS Transportation Owner Revenue;
- (b) Maximum NTS System Operation Revenue;
- (c) NTS System Operation Revenue; and
- (d) NTS Transportation Owner Revenue.

1.3.2 For the purposes of this Part A-I:

- (a) **“Tariff Regulation”** means Commission Regulation (EU) 2017/460 establishing a network code on harmonised transmission tariff structures for gas;
- (b) **“Entry Point”** means a NTS Aggregate System Entry Point;
- (c) **“Exit Point”** means a NTS Exit Point;
- (d) **“NTS Point”** means an Entry Point or an Exit Point;
- (e) **“Storage Site Point”** means an Entry Point or Exit Point at which a ‘Storage Site’ (as specified in Table 4B in Special Condition 5F or Table 8 in Special Condition 5G) is connected to the NTS;
- (f) **“LNG Importation Terminal Point”** means an Entry Point at which an ‘LNG Importation Terminal’ (as specified in Table 4B in Special Condition 5F) is connected to the NTS;
- (g) **“NTS Capacity”** means NTS Entry Capacity or NTS Exit (Flat) Capacity;
- (h) **“Intra-System”** in relation to a System Point means other than an Interconnection Point; and **“Intra-System Point”** means any Intra-System System Point;
- (i) **“Excluded Storage Quantities”** are quantities of gas delivered to or offtaken from the NTS at a Storage Site Point, other than storage use gas offtaken by a storage gas use provider (as referred to in TPD Section R);

- (j) in relation to a Gas Year the “**Charges Publication Date**” is 1 August in the preceding Gas Year, or such other date as National Grid NTS may, with Condition A11(18) Approval of the Authority, decide;
- (k) “**Tariff Regulation Effective Date**” means 6 April 2017.

1.3.3 References in this Part A-I:

- (a) to Standard Conditions, Special Conditions, or Standard Special Conditions are to conditions of National Grid NTS’ Gas Transporter’s Licence; and
- (b) to an Interconnection Point, as an Entry Point, are to an IP ASEP.

1.3.4 For the purposes of this Part A-I, information or any document is “**published**” if it is provided or made available to Users, including posting on a website accessible to Users.

1.3.5 All calculations that are required in accordance with this Part A-I shall be performed by National Grid NTS.

1.4 Classification of revenue

1.4.1 For the purposes of this Part A-I:

- (a) “**Transmission Services Revenue**” is revenue derived by National Grid NTS from Transmission Services Charges, and corresponds to revenue included in NTS Transportation Owner Revenue (excluding revenue derived from NTS Meter Maintenance Charges and DN Pensions Deficit Charges) and TS-Related NTS System Operation Revenue;
- (b) “**Non-Transmission Services Revenue**” is revenue derived by National Grid NTS from Non-Transmission Services Charges, and corresponds to revenue included in NTS System Operation Revenue (excluding TS-Related NTS System Operation Revenue) and revenue derived from NTS Meter Maintenance Charges and DN Pensions Deficit Charges;
- (c) “**TS-Related NTS System Operation Revenue**” is the net amount of NTS System Operation Revenue which is attributable (as determined by National Grid NTS) to charges in respect of NTS Capacity (but not including Overrun Charges) or the surrender of NTS Capacity.

1.4.2 Transmission Services Revenue is divided into:

- (a) “**Transmission Services Entry Revenue**” (in £), being Transmission Services Revenue attributable to charges or payments made in respect of Entry Points; and
- (b) “**Transmission Services Exit Revenue**” (in £), being Transmission Services Revenue attributable to charges or payments made in respect of Exit Points,

and any question as to the basis of such attribution shall be decided by National Grid NTS in its discretion.

1.5 Allowed Revenue – Formula Years

1.5.1 In relation to a Formula Year:

- (a) **“Base Maximum NTS Transportation Owner Revenue”** is Maximum NTS Transportation Owner Revenue calculated disregarding the correction term revenue adjustment K_t in the formula in Special Condition 2A.5.
- (b) **“Base Maximum NTS TO (Excluding Non-TS) Revenue”** is Base Maximum NTS Transportation Owner Revenue, less Forecast NTS Meter Maintenance Revenue and Forecast Pensions Deficit Revenue, for such Formula Year;
- (c) **“Allowed FY Non-Transmission Services Revenue”** is Maximum NTS System Operator Revenue, less Allowed TS-Related NTS System Operation Revenue, plus Forecast NTS Meter Maintenance Revenue and Forecast Pensions Deficit Revenue, for such Formula Year;
- (d) **“Allowed TS-Related NTS System Operation Revenue”** is that amount of the Maximum NTS System Operation Revenue which is attributable (as determined by National Grid NTS) to charges in respect of NTS Capacity net of charges for the surrender of NTS Capacity;
- (e) **“Forecast NTS Meter Maintenance Revenue”** is the revenue which National Grid NTS estimates will be derived from NTS Meter Maintenance Charges in that Formula Year;
- (f) **“Forecast Pensions Deficit Revenue”** is the revenue which National Grid NTS estimates will be derived from DN Pensions Deficit Charges in that Formula Year;

1.5.2 Allowed TS-Related NTS System Operation Revenue is divided into:

- (a) **“Allowed TS-Related NTS System Operation Entry Revenue”** being Allowed TS-Related NTS System Operation Revenue attributable (as determined by National Grid NTS) to Entry Points; and
- (b) **“Allowed TS-Related NTS System Operation Exit Revenue”** being Allowed TS-Related NTS System Operation Revenue attributable (as determined by National Grid NTS) to Exit Points.

1.5.3 For the purposes of this Part A-I, in relation to a Formula Year (t):

- (a) **“Allowed FY Transmission Services Entry Revenue”** ($AFTSEnR_t$, in £) is determined as follows:

$$AFTSEnR_t = (0.5 * BMTOExcNTR_t) + ATSSOEnR_t - K_{En,t}$$

where for the Formula Year:

$BMTOExcNTR_t$ is Base Maximum NTS TO (Excluding Non-TS) Revenue;

$ATSSOEnR_t$ is Allowed TS-Related NTS System Operation Entry Revenue;

$K_{En,t}$ is the Entry Revenue Adjustment;

- (b) **“Allowed FY Transmission Services Exit Revenue”** (AFTSExR_t, in £) is determined as follows:

$$\text{AFTSExR}_t = (0.5 * \text{BMTOExcNTR}_t) + \text{ATSSOExR}_t - \text{K}_{\text{Ex},t}$$

where for the Formula Year:

BMTOExcNTR_t is Base Maximum NTS TO (Excluding Non-TS) Revenue;

ATSSOExR_t is Allowed TS-Related NTS System Operation Exit Revenue;

K_{Ex,t} is the Exit Revenue Adjustment;

and for the purposes of paragraphs 1.5.3(a) and 1.5.3(b), in relation to the Formula Year:

- (c) the **“Entry Revenue Adjustment”** (K_{En,t}, in £) is determined as the Entry Adjustment Proportion of the correction term revenue adjustment K_t;
- (d) the **“Exit Revenue Adjustment”** (K_{Ex,t}, in £) is determined as the Exit Adjustment Proportion of the correction term revenue adjustment K_t;

where:

- (e) the **“Entry Adjustment Proportion”** for Formula Year t is determined as:

$$\text{K}_{\text{En},t}^{\text{TS}} / (\text{K}_{\text{En},t}^{\text{TS}} + \text{K}_{\text{Ex},t}^{\text{TS}})$$

- (f) the **“Exit Adjustment Proportion”** for Formula Year t is determined as:

$$\text{K}_{\text{Ex},t}^{\text{TS}} / (\text{K}_{\text{En},t}^{\text{TS}} + \text{K}_{\text{Ex},t}^{\text{TS}})$$

where

K_{En,t}^{TS} is determined by applying the formula in Special Condition 2A.19 substituting:

- (A) Transmission Services Entry Revenue in respect of Formula Year t-2 for NTS Transportation Owner Revenue in respect of Formula Year t-2; and
- (B) Allowed FY Transmission Services Entry Revenue in respect of Formula Year t-2 for Maximum NTS Transportation Owner Revenue in respect of Formula Year t-2;

K_{Ex,t}^{TS} is determined by applying the formula in Special Condition 2A.19 substituting:

- (A) Transmission Services Exit Revenue in respect of Formula Year t-2 for NTS Transportation Owner Revenue in respect of Formula Year t-2; and

- (B) Allowed FY Transmission Services Exit Revenue in respect of Formula Year t-2 for Maximum NTS Transportation Owner Revenue in respect of Formula Year t-2.

1.6 Apportionment of allowed revenue to Gas Year

1.6.1 For the purposes of this Part A-I, where an amount of allowed revenue (AR_y) is to be determined for a Gas Year (y), such amount shall be determined, on the basis of the corresponding allowed revenue for the Formula Year (the “**Related Formula Year**”, t) which ends in such Gas Year, as follows:

$$AR_y = (AR_t - R_{pt}) * F_{ry} * 2$$

where

- AR_t is the corresponding allowed revenue for Formula Year t;
- R_{pt} is the amount of revenue (of the corresponding kind) which National Grid NTS estimates will be earned in respect of the part of Formula Year t which falls prior to Gas Year y;
- F_{ry} is a factor which represents National Grid NTS's estimate of (A / B) where A is the amount of revenue (of the corresponding kind) which would be expected to be earned on average in any month in Gas Year y as a whole, and B is the amount of revenue (of the corresponding kind) which would be expected to be earned on average in any month in the part of Formula Year t which falls within Gas Year y.

1.7 Publication/Transportation Statement

1.7.1 The Transportation Statement published by National Grid NTS for each Gas Year will include (without limitation) the following information:

- (a) Transmission Services Charges relating to Capacity Charges:
- (i) the Reference Price for each NTS Point;
 - (ii) the Duration Multipliers;
 - (iii) the Interruptible Discounts;
 - (iv) the Specific Point Discounts;
 - (v) for each NTS Point, the Reserve Price for each applicable Capacity Allocation Type;
 - (vi) for each Entry Point, the step prices;
- (b) the Transmission Services Revenue Recovery Charges;
- (c) Non-Transmission Services Charges:
- (i) the values of each of the Specific Non-Transmission Services Charges;

- (ii) the General Non-Transmission Services Charge.

1.7.2 In addition to what is published in the Transportation Statement, National Grid NTS will, for each Gas Year, publish a summary of its determinations made for the purposes of determining:

- (a) Reference Prices under paragraph 2, including:
 - (i) the determination of Base Allowed Transmission Services Revenue, Allowed FY Transmission Services Entry Revenue, Allowed FY Transmission Services Exit Revenue, and Allowed FY Non-Transmission Services Revenue for each Related Formula Year, and Allowed Transmission Services Entry Revenue and Allowed Transmission Services Exit Revenue for the Gas Year; and
 - (ii) the calculations made (for each Entry Point and Exit Point) under paragraphs 2.4, 2.6 and 2.7;
- (b) Transmission Services Revenue Recovery Charges under paragraph 3, including the determination of Forecast Entry Revenue Difference, Forecast Exit Revenue Difference, Forecast Aggregate Fully-Adjusted Entry Capacity and Forecast Aggregate Fully-Adjusted Exit Capacity; and
- (c) General Non-Transmission Services Charges under paragraph 4.7, including the determination of Allowed FY Non-Transmission Services Revenue for each Related Formula Year, Net Allowed Non-Transmission Services Revenue for the Gas Year and Forecast Aggregate NTS Quantity.

1.8 Estimates

1.8.1 Where any charge or other amount is determined under this Part A-I on the basis of any estimate or forecast made by National Grid NTS, except as expressly provided in this Part A-I, no change shall be made in respect of such charge or amount by reason of any subsequent revision of such estimate or forecast or (without prejudice to the application of an error correction term in a subsequent period) the outturn value of the thing subject to such estimate or forecast.

1.9 Rounding

- 1.9.1 The prices determined under this Part A-I, in pence per kWh/Day or pence per kWh, shall be rounded to:
- (a) 4 decimal places (that is, to the nearest 0.0001p) for Intra-System NTS Points; and
 - (b) (consistent with EID Section B12.2.3), 8 decimal places (that is, to the nearest 0.00000001p) for Interconnection Points.

1.10 Subsequent revision of charges

1.10.1 This paragraph 1.10 applies where (under a provision of this Part A-I) National Grid NTS is entitled, after determining a Relevant Charge for a Gas Year, to revise the rate of the Relevant Charge, on the basis of a revision of any estimate(s) (“**revised estimate(s)**”) made by National Grid NTS for the purposes of determining such rate.

1.10.2 For the purposes of this paragraph 1.10:

- (a) a **“Relevant Charge”** is a Transportation Charge the rate of which is derived under this Part A-I in the form (TR / CB) where
- TR is the target revenue, i.e. the aggregate amount of allowed or estimated revenue for the Gas Year in respect of such Transportation Charge, and
- CB is the charge base, i.e. the aggregate estimated quantity (in kWh/Day, or kWh) for the Gas Year by reference to which the charge is to apply;
- (b) the **“Revision Month”** is the month of the Gas Year with effect from (and including) which the revised Relevant Charge is to apply;
- (c) the **“Prior Period”** (yp) is the period from the start of the Gas Year to (but not including) the Revision Month (and if the Revision Month is the first month of the Gas Year, there is no Prior Period); and
- (d) the **“Remaining Period”** (yr) is the period from (and including) the Revision Month to the end of the Gas Year;

1.10.3 Where this paragraph 1.10 applies, the revised Relevant Charge shall be determined as:

$$(RTR_y - AR_{yp}) / CB_{yr}$$

where

RTR_y is the revised target revenue for the Gas Year as a whole determined by National Grid NTS on the basis of its revised estimate(s);

AR_{yp} is the aggregate amount (as estimated by National Grid NTS) payable in respect of the Relevant Charge in respect of the Prior Period (and is zero where there is no Prior Period);

CB_{yr} is the revised charge base for the Remaining Period determined by National Grid NTS on the basis of its revised estimate(s).

1.11 Further interpretation

1.11.1 In this Part A-I references to Users include DNO Users (but without prejudice to provisions of TPD Section B under which particular Transportation Charges are payable by or to Shipper Users only).

1.11.2 In this Part A-I direct or indirect references to Supply Points include (where applicable) CSEP Supply Points.

2 TRANSMISSION SERVICES CHARGES – CAPACITY CHARGES

2.1 Introduction

2.1.1 The purpose of the rules in this paragraph 2 is to determine prices in respect of the allocation of NTS Capacity of different Capacity Allocation Types (as specified in the Capacity Allocation Table in paragraph 2.2.1) as follows:

- (a) in relation to Interconnection Points, for each Auction, the ‘Reserve Price’ (as defined in and for the purposes of the relevant provision of EID Section B);
- (b) in relation to Intra-System Entry Points, for each Auction, the reserve price (as referred to in and for the purposes of the relevant provision of TPD Section B2), and (where applicable) the further prices referred to in paragraph 2.9;
- (c) in relation to Intra-System Exit Points, for each Auction, the reserve price (as referred to in and for the purposes of the relevant provision of TPD Section B3); and
- (d) in relation to Interconnection Points and Intra-System NTS Points, for each Allocation Process (including under a PARCA where applicable), the applicable price used to determine the Applicable Daily Rate (as referred to in and for the purposes of the relevant provision of TPD Section B2 or B3 or EID Section E).

2.1.2 The rules in this paragraph 2 which apply:

- (a) for the purposes specified in paragraphs 2.1.1(a), (b) and (c), determine reserve prices referred to in Standard Special Condition A4(1)(b);
- (b) for the purposes specified in paragraph 2.1.1(d), determine charges referred to in Standard Special Condition A4(1)(a).

2.1.3 In summary (and subject to the further provisions of this paragraph 2, including adjusting for Existing Registered Holdings), the basis for determining Reference Prices and Reserve Prices for each Gas Year is as follows:

- (a) determine (as provided in paragraphs 1.5 and 1.6) Allowed Transmission Services Entry Revenue and Allowed Transmission Services Exit Revenue for the Gas Year;
- (b) for each Entry Point and Exit Point:
 - (i) determine Forecast Contracted Capacity; and
 - (ii) on the basis of the Forecast Contracted Capacity, determine Capacity Weighting;
- (c) on the basis of Capacity Weighting, allocate Allowed Transmission Services Entry Revenue between Entry Points and Allowed Transmission Services Exit Revenue between Exit Points, to determine Entry Point Allowed Revenue for each Entry Point and Exit Point Allowed Revenue for each Exit Point;
- (d) for each Entry Point and Exit Point, divide Entry Point Allowed Revenue or Exit Point Allowed Revenue by Forecast Contracted Capacity to determine provisional reference price, and then scale to reflect the revenue shortfall implied by the multipliers and discounts referred to below, to determine Reference Price;
- (e) determine Reserve Price, for different Capacity Allocation Types, from Reference Price, by applying specified multipliers in certain cases, and then for Interruptible NTS Capacity applying specified discounts, and then for certain types of Entry Point and Exit Point applying further specified discounts.

2.1.4 In relation to NTS Capacity at a NTS Point for a given Gas Year (the “**capacity year**”) which is:

- (a) allocated pursuant to an Auction held in a given Gas Year (the “**auction year**”), except where the Capacity Charge is determined by reference to each User’s bid price, or
- (b) (in the case of NTS Entry Capacity) allocated in a given Gas Year (the “**allocation year**”) pursuant to a PARCA

the Applicable Daily Rate of the Capacity Charge payable by Users in respect of such NTS Capacity shall be determined as the sum of:

- (c) the Reserve Price determined in respect of the relevant Capacity Allocation Type for the capacity year; and
- (d) the Premium (if any) determined under the Auction held in the auction year or (as the case may be) determined in respect of the PARCA in the allocation year.

2.1.5 Paragraph 2.1.4 shall not apply in respect of NTS Entry Capacity held pursuant to an Existing Registered Holding, and accordingly the Applicable Daily Rate for such NTS Entry Capacity shall be continue to be determined (where applicable) on the basis of the clearing price or reserve price for the Auction in which the NTS Entry Capacity was allocated.

2.1.6 In relation to:

- (a) Annually Allocated NTS Exit (Flat) Capacity at an Intra-System Exit Point;
- (b) NTS Exit (Flat) Capacity at an Intra-System Exit Point allocated pursuant to a PARCA;
- (c) NTS Capacity at an Interconnection Point allocated pursuant to an alternative allocation mechanism under EID Section E,

for a given Gas Year (the “**capacity year**”), irrespective of the Gas Year in which the Allocation Process was held, the Applicable Daily Rate of the Capacity Charge payable by Users in respect of such NTS Exit (Flat) Capacity shall be equal to the Reserve Price determined in respect of the capacity year.

2.1.7 For the purposes of any Auctions in respect of NTS Capacity for more than one Gas Year, the Reserve Price to be used in each Auction is the Reserve Price for the first such Gas Year.

2.1.8 Where under this Part A-I:

- (a) any charge or price is:
 - (i) determined on the basis of an allowed or estimated revenue stated in pounds (£); but
 - (ii) required to be expressed in pence (p),

such charge or price so determined shall be divided by 100 in order to be so

expressed;

- (b) any charge or price is:
 - (i) determined on the basis of an allowed or estimated revenue for a Gas Year; but
 - (ii) required to be expressed as a daily rate,

such charge or price so determined shall be divided by the number of days in the Gas Year in order to be so expressed.

2.1.9 Where the value of any Reserve Price determined under this paragraph 2 would (pursuant to rounding under paragraph 1.9) be rounded down to have a value of zero, the Reserve Price shall be rounded up to the minimum non-zero value under paragraph 1.9.

2.1.10 At the same time it publishes the information under paragraph 1.7.2 for a Gas Year, National Grid NTS will publish a simplified version of its model for determining Reserve Prices.

2.1.11 It is acknowledged that:

- (a) the reference price methodology in this paragraph 2 is a 'postage stamp' rather than 'capacity-weighted distance' methodology;
- (b) upon any consultation under Article 26(1) of the Tariff Regulation, a comparison will be made (as required by Article 26(1)(1)(vi)) against the results of applying the 'capacity-weighted distance' methodology in Article 8 of the Tariff Regulation.

2.2 Interpretation

2.2.1 For the purposes of this Part A-I, “Capacity Allocation Type” means a type of NTS System Capacity defined by type of NTS System Point, class, basis of allocation, allocation frequency and duration as set out in the table (“Capacity Allocation Table”) below:

Point	Class	Basis of allocation	UNC reference	Allocation frequency	Duration
Interconnection Point	Firm	Auction	EID Section B2.4.1(a)	Annual	Yearly (Y+1 to Y+15)
			EID Section B2.4.1(b)	Quarterly	Quarterly (for the remaining quarters in Y+1 or Y)

Point	Class	Basis of allocation	UNC reference	Allocation frequency	Duration
			EID Section B2.4.1(c)	Monthly	Monthly
			EID Section B2.4.1(d)	Daily and hourly	Daily and hourly
			EID Section B2.4.1(f)		
		Allocation	EID Section E	Biennial	Annual
	Interruptible	Auction	EID Section B2.4.1(e)	Daily	Daily
Intra-System Entry Point	Firm	PARCA	TPD Section B1.14.4(a)	Ad-hoc	Quarterly (Y+2 to Y+16)
		Auction	TPD Section B2.2.2(b)	Annual	Quarterly (Y+2 to Y+16)
			TPD Section B2.2.2(a)	Annual	Monthly (Y to Y+1)
			TPD Section B2.3	Monthly	Monthly
			TPD Section B2.4	Daily and within day	Daily and part-day
	Interruptible	Auction	TPD Section B2.5	Daily	Daily
Intra-System Exit Point	Firm	PARCA	TPD Section B1.14.4(b)	Ad-hoc	Enduring (from Y+4 to Y+6)
		Allocation	TPD Section B3.2	Annual	Enduring (from Y+4 to Y+6)
			TPD Section B3.4	Annual	Annual (Y+1 to Y+3)

Point	Class	Basis of allocation	UNC reference	Allocation frequency	Duration
		Auction	TPD Section B3.5	Daily and within day	Daily and within day
	Off-Peak	Auction	TPD Section B3.6	Daily	Daily

2.2.2 For the purposes of this Part A-I:

- (a) **“Auction”** means any of the auction processes for the allocation of NTS Capacity provided for in EID Section B, TPD Section B2 and TPD Sections B3.5 and 3.6;
- (b) **“Allocation Process”** means any of the allocation processes for the allocation of:
 - (i) NTS Exit (Flat) Capacity provided for in TPD Sections B1.14, B3.2 and 3.4;
 - (ii) NTS Capacity pursuant to a PARCA; or
 - (iii) NTS Capacity at an Interconnection Point provided for in EID Section E4;
- (c) **“Firm”** NTS Capacity means:
 - (i) Firm Interconnection Point Capacity (as defined in EID Section B) at an Interconnection Point;
 - (ii) Firm NTS Entry Capacity at an Intra-System Entry Point; and
 - (iii) NTS Exit (Flat) Capacity (other than Off-Peak Daily NTS Exit (Flat) Capacity) at an Intra-System Exit Point;
- (d) **“Interruptible”** NTS Capacity means:
 - (i) Interruptible Interconnection Point Capacity (as defined in EID Section B) at an Interconnection Point;
 - (ii) Interruptible NTS Entry Capacity at an Intra-System Entry Point; and
 - (iii) Off-Peak Daily NTS Exit (Flat) Capacity at an Intra-System Exit Point;
- (e) **“Existing Registered Holding”** means, in relation to an Entry Point, a User and a Day or other period, the amount, as at the Tariff Regulation Effective

Date, of the User’s Registered NTS Entry Capacity for such Entry Point and Day or other period;

- (f) **“Existing Available Holding”** means, in relation to an Entry Point, a User and a Day, the amount, as at the Tariff Regulation Effective Date, of the User’s Available NTS Entry Capacity for such Entry Point and Day;
- (g) **“Annually Auctioned”** NTS Capacity is NTS Capacity allocated by Auction for which the Allocation Frequency (as set out in the Capacity Allocation Table) is Annual;
- (h) **“Premium”** in relation to NTS Capacity:
 - (i) in respect of an Interconnection Point, has the meaning given in EID Section B2.1.5(k), but includes any mandatory minimum premium as referred to in EID Section E8.1.2;
 - (ii) which is Annually Auctioned in respect of an Intra-System Entry Point (comprising Quarterly NTS Entry Capacity and Monthly NTS Entry Capacity), means the amount (if any) by which the applicable step price under TPD Section B2.6 or bid price (as referred to in TPD Section 2.11.3(b)) is greater than the applicable reserve price in the Auction;
 - (iii) which is allocated pursuant to a PARCA in respect of a Entry Point, means the amount (if any) by which the price of the NTS Entry Capacity (in accordance with paragraph 2.10.3) is greater than the applicable Reserve Price for the Gas Year in which such NTS Entry Capacity is allocated;
- (i) **“Forecast Contracted Capacity”** is determined in accordance with paragraph 2.5; and
- (j) **“Capacity Weighting”** is determined in accordance with paragraph 2.7.

2.2.3 Where any provision of this Part A-I refers to an amount of NTS Capacity allocated at a NTS Point or NTS Points for a Gas Year or other period, amounts of NTS Capacity of different Durations (as specified in the Capacity Allocation Table) shall be taken into account by averaging such amounts weighted by Duration.

2.2.4 Where any provision of this Part A-I refers to the amount of a User’s Fully Adjusted Available NTS Entry Capacity for a Day at an Entry Point **“Excluding Existing Available Holding”**, such amount shall be determined as the User’s Fully Adjusted Available NTS Entry Capacity for the Day at the Entry Point, less the amount (if any) of the User’s Existing Available Holding for the Day, but not less than zero (0).

2.3 Allowed Transmission Services Revenue for the Gas Year

2.3.1 For the purposes of this Part A-I:

- (a) **“Allowed Transmission Services Entry Revenue”** for a Gas Year is determined in accordance with paragraph 1.6 from the Allowed FY Transmission Services Entry Revenue for the Related Formula Year;
- (b) **“Allowed Transmission Services Exit Revenue”** for a Gas Year is determined in accordance with paragraph 1.6 from the Allowed FY Transmission Services Exit Revenue for the Related Formula Year;
- (c) **“Net Allowed Transmission Services Entry Revenue”** (NATSEnR_y, in £) for a Gas Year is Allowed Transmission Services Entry Revenue less Existing Entry Contract Revenue for that Gas Year;
- (d) **“Existing Entry Contract Revenue”** (in £) for a Gas Year is revenue attributable to Existing Registered Holdings of NTS Entry Capacity in relation to that Gas Year.

2.4 Reference Price

2.4.1 The Reference Price (RP_{En,y}, to be expressed as a daily rate in p/kWh/Day) for an Entry Point for a Gas Year is determined as follows:

$$RP_{En,y} = (AR_{En,y} / NCAP_{En,y}) * RSF_{En,y}$$

where, for the Entry Point and the Gas Year:

AR_{En,y} is Entry Point Allowed Revenue;

NCAP_{En,y} is Net Forecast Contracted Capacity,

and where, for the Gas Year

RSF_{En,y} is the Entry Revenue Scaling Factor.

2.4.2 The Reference Price (RP_{Ex,y}, to be expressed as a daily rate in p/kWh/Day) for an Exit Point for a Gas Year is determined as follows:

$$RP_{Ex,y} = (AR_{Ex,y} / CAP_{Ex,y}) * RSF_{Ex,y}$$

where, for the Exit Point and the Gas Year:

AR_{Ex,y} is Exit Point Allowed Revenue;

CAP_{Ex,y} is Forecast Contracted Capacity,

and where, for the Gas Year

RSF_{Ex,y} is the Exit Revenue Scaling Factor.

2.4.3 For the purposes of this paragraph 2.4, in relation to each Gas Year:

- (a) the “**Entry Revenue Scaling Factor**” ($RSF_{En,y}$) is determined as follows:

$$RSF_{En,y} = ATSEnR_y / EstRev_{En,y}$$

- (b) the “**Exit Revenue Scaling Factor**” ($RSF_{Ex,y}$) is determined as follows:

$$RSF_{Ex,y} = ATSExR_y / EstRev_{Ex,y}$$

where, for the Gas Year:

$ATSEnR_y$ is Allowed Transmission Services Entry Revenue;

$ATSExR_y$ is Allowed Transmission Services Exit Revenue,

and where $EstRev_{En,y}$ and $EstRev_{Ex,y}$ respectively are the aggregate amounts of Transmission Services Revenue which National Grid NTS estimates would be earned in the Gas Year by way of Capacity Charges in respect of NTS Entry Capacity or (as the case may be) NTS Exit (Flat) Capacity:

- (i) on the assumption that Reference Prices were set on the basis of an Entry Revenue Scaling Factor or (as the case may be) Exit Revenue Scaling Factor equal to one (1);
- (ii) after taking account of the Duration Multipliers, Interruptible Discounts, and Specific Point Discounts in paragraphs 2.8.2, 2.8.3, and 2.8.4;
- (iii) on the basis of Net Forecast Contracted Capacity at each Entry Point and Forecast Contracted Capacity at each Exit Point; and
- (iv) disregarding any Premium.

2.5 Forecast Contracted Capacity

2.5.1 For the purposes of this paragraph 2, in relation to a NTS Point and a Gas Year:

- (a) the “**Forecast Contracted Capacity**” is the amount determined in accordance with the FCC Methodology to represent the average amount (in kWh/Day) of NTS Capacity forecast to be allocated to Users (pursuant to all applicable Auctions or Allocation Processes) at that NTS Point for that Gas Year, on the basis in paragraph 2.2.3, and
- (b) in the case of an Entry Point:
 - (i) the “**Net Forecast Contracted Capacity**” is the Forecast Contracted Capacity less the Existing Contracted Capacity; and

- (ii) the “**Existing Contracted Capacity**” is the average amount (in kWh/Day) of NTS Capacity for that Gas Year comprised in Existing Registered Holdings, on the basis in paragraph 2.2.3.

2.5.2 National Grid NTS shall:

- (a) maintain, keep under review, and consult with Users on any material change (and the effect of such change) in, a methodology (“**FCC Methodology**”) consistent with paragraph 2.5.3 by which expected allocated amounts of NTS Capacity will be forecast as provided in paragraph 2.5.1(a);
- (b) notify Users of any proposed change to the FCC Methodology not less than 40 Business Days before the time specified in paragraph 2.5.3(a) in relation to the Gas Year for (and with effect from) which the changed FCC Methodology is to be effective;
- (c) not make such proposed change to the FCC Methodology if:
 - (i) within 20 Business Days after it notifies Users of the proposed change, a User gives notice to National Grid NTS to the effect that the change should not be made (and referring to this paragraph 2.5.2(c)); and
 - (ii) following such notice the Authority gives Condition A11(18) Disapproval in respect of the proposed change;
- (d) publish the FCC Methodology and all changes made to it.

2.5.3 The FCC Methodology shall:

- (a) take account of historical and forecast data relating to each NTS Point including:
 - (i) forecast demand;
 - (ii) Registered Capacity for which the Capacity Charge is greater than zero;
 - (iii) the quantities of gas delivered or offtaken on past Days; and
 - (iv) the quantities of gas forecast to be delivered or offtaken on future Days.
- (b) reflect National Grid NTS's estimate of how Users will change their approach to procuring NTS Capacity as a result of the application of the Interruptible Discount (as compared with the 100% discount under the prior methodology).

2.5.4 For each Gas Year, National Grid NTS shall:

- (a) by the time required to notify Reserve Prices in respect of the first Auction or Allocation Process relating to the Gas Year to be held in the preceding Gas Year, determine in accordance with the FCC Methodology for all NTS Points

Forecast Contracted Capacity and (for Entry Points) Net Forecast Contracted Capacity; and

- (b) no later than the Charges Publication Date, publish such values for all NTS Points together with a statement of how the FCC Methodology was applied to determine such values.

2.6 NTS Point Allowed Revenue

- 2.6.1 The “**Entry Point Allowed Revenue**” ($AR_{En,y}$, in £) for an Entry Point for a Gas Year is determined as follows:

$$AR_{En,y} = NATSEnR_y * CAPW_{En}$$

where, for the Entry Point and Gas Year:

$NATSEnR_y$ is Net Allowed Transmission Services Entry Revenue; and

$CAPW_{En}$ is the Capacity Weighting determined in accordance with paragraph 2.7.1.

- 2.6.2 The “**Exit Point Allowed Revenue**” ($AR_{Ex,y}$, in £) for an Exit Point for a Gas Year is determined as follows:

$$AR_{Ex,y} = ATSExR_y * CAPW_{Ex}$$

where, for the Entry Point and Gas Year:

$ATSExR_y$ is Allowed Transmission Services Exit Revenue; and

$CAPW_{Ex}$ is the Capacity Weighting determined in accordance with paragraph 2.7.2.

2.7 Capacity Weighting

- 2.7.1 The Capacity Weighting ($CAPW_{En}$) for an Entry Point for a Gas Year is determined as follows:

$$CAPW_{En} = NCAP_{En,y} / \sum_{En} NCAP_{En,y}$$

where, for the Entry Point and Gas Year:

$NCAP_{En,y}$ is Net Forecast Contracted Capacity;

and where

\sum_{En} is the sum over all Entry Points.

- 2.7.2 The Capacity Weighting ($CAPW_{Ex}$) for an Exit Point for a Gas Year is determined as follows:

$$CAPW_{Ex} = CAP_{Ex,y} / \sum_{Ex} CAP_{Ex,y}$$

where for the Exit Point and Gas Year:

$CAP_{Ex,y}$ is Forecast Contracted Capacity;

and where

\sum_{Ex} is the sum over all Exit Points.

2.8 Reserve Price

2.8.1 The **“Reserve Price”** for NTS Capacity (of a Capacity Allocation Type) held or to be held at a NTS Point for a period falling within a Gas Year is determined:

- (a) subject to paragraphs (b) and (c), as the Reference Price for that Gas Year multiplied by the Duration Multiplier applicable to such NTS Capacity in accordance with paragraph 2.8.2;
- (b) subject to paragraph (c), in the case of Interruptible NTS Capacity, as the price determined under paragraph (a) multiplied by $\{(100 - ID) / 100\}$ where ID is the Interruptible Discount for Entry Points or (as the case may be) for Exit Points in accordance with paragraph 2.8.3; and
- (c) in the case of an Entry Point or Exit Point which is a Storage Site Point, or an Entry Point which is an LNG Importation Terminal Point, as the price determined under paragraph (a) and (where applicable) 0, multiplied by $\{(100 - SPD) / 100\}$ where SPD is the applicable Specific Point Discount in accordance with paragraph 2.8.4;

provided that if the Reserve Price determined in accordance with the foregoing provisions would be less than 0.0001 p/kWh/Day, the Reserve Price shall be equal to 0.0001 p/kWh/Day.

2.8.2 The **“Duration Multiplier”** applicable for a Gas Year to:

- (a) Annually Allocated NTS Capacity, and NTS Capacity allocated pursuant to a PARCA or pursuant to EID Section E, is one (1); and
- (b) NTS Capacity of each other Duration (as specified in the Capacity Allocation Table) is one (1).

2.8.3 The **“Interruptible Discount”** for Interruptible NTS Capacity for a Gas Year:

- (a) at all Entry Points, is 10%; and
- (b) at all Exit Points, is 10%.

2.8.4 The **“Specific Point Discount”** is:

- (a) for Storage Site Points, 50%; and

- (b) for LNG Importation Terminal Points, zero (0%).

2.9 Further pricing terms

2.9.1 The step price for incremental Quarterly NTS Entry Capacity (as referred to in TPD Section B2.11.3(a)(i)) will be the greater of 5% of the applicable Reserve Price and 0.0001 p/kWh/Day.

2.9.2 For the purposes of EID Section B:

- (a) the NTS large price step for an Auction will be the greater of 5% of the applicable Reserve Price and 0.0001 p/kWh/Day; and
- (b) unless otherwise agreed with the Adjacent TSO in connection with a Bundled Auction, the SPS Fraction will be 1/5,

(and terms in paragraphs (a) and (b) have the meanings given to them in EID Section B).

2.9.3 The price (for the year of allocation) of NTS Entry Capacity allocated pursuant to a PARCA will be determined in accordance with the prevailing Entry Capacity Release Methodology Statement.

2.10 NTS Entry Capacity Retention Charge

2.10.1 For the purposes of TPD Section B2.15 (and the Entry Capacity Substitution Methodology Statement) the amount of the NTS Entry Capacity Retention Charge is 0.2922 pence per kWh/day (being equal to the minimum rate of 0.0001p per kWh/day per day for a period of 32 quarters).

3 TRANSMISSION SERVICES REVENUE RECOVERY CHARGES

3.1 Revenue differences

3.1.1 For the purposes of this paragraph 3, in relation to a Gas Year:

- (a) **“Forecast Entry Revenue”** is the aggregate amount of Transmission Services Revenue which National Grid NTS estimates will be earned by way of Capacity Charges in respect of NTS Entry Capacity for that Gas Year;
- (b) the **“Forecast Entry Revenue Difference”** (FEnRDy) is the amount by which the Forecast Entry Revenue is greater (in which case FEnRDy is positive) or less (in which case FEnRDy is negative) than Allowed Transmission Services Entry Revenue;
- (c) **“Forecast Exit Revenue”** is the aggregate amount of Transmission Services Revenue which National Grid NTS estimates will be earned by way of Capacity Charges in respect of NTS Exit (Flat) Capacity for that Gas Year;

- (d) the **“Forecast Exit Revenue Difference”** (FExRDy) is the amount by which the Forecast Exit Revenue is greater (in which case FExRDy is positive) or less (in which case FExRDy is negative) than Allowed Transmission Services Exit Revenue;
- (e) **“Forecast Aggregate Fully-Adjusted Entry Capacity”** is the aggregate amount of NTS Entry Capacity (of all Capacity Allocation Types) which National Grid NTS estimates will be held at Entry Points for the Gas Year, Fully-Adjusted (as provided in TPD Section B2.1.7(d)) each Day, Excluding Existing Available Holding, on the basis in paragraph 2.2.3; and
- (f) **“Forecast Aggregate Fully-Adjusted Exit Capacity”** is the aggregate amount of NTS Exit (Flat) Capacity (of all Capacity Allocation Types) which National Grid NTS estimates will be held at Exit Points for the Gas Year, Fully-Adjusted (as provided in TPD Section B3.8.6(c)) each Day, on the basis in paragraph 2.2.3.

3.1.2 In estimating Forecast Entry Revenue, National Grid NTS will not take account of estimated net revenue in respect of NTS Entry Capacity Retention Charges (such amounts being assumed not to be significant for these purposes).

3.2 Determination of Transmission Services Revenue Recovery Charges

3.2.1 In relation to each Gas Year, the Applicable Daily Rate of the Entry Transmission Services Revenue Recovery Charge (EnRRCy, to be expressed as a daily rate in p/kWh/Day) is determined as follows:

$$\text{EnRRCy} = \text{FEnRDy} / \text{FAFEnCy}$$

where, for the Gas Year

FEnRD,y is Forecast Entry Revenue Difference; and

FAFEnCy is Forecast Aggregate Fully-Adjusted Entry Capacity.

3.2.2 The Entry Transmission Services Revenue Recovery Charge is payable by Users to National Grid NTS where it is negative and to Users by National Grid NTS where it is positive.

3.2.3 In relation to each Gas Year, the Applicable Daily Rate of the Exit Transmission Services Revenue Recovery Charge (ExRRCy, to be expressed as a daily rate in p/kWh/Day) is determined as follows:

$$\text{ExRRCy} = \text{FExRDy} / \text{FAFExCy}$$

where, for the Gas Year:

FExRDy is Forecast Exit Revenue Difference; and

FAFExCy is Forecast Aggregate Fully-Adjusted Exit Capacity.

- 3.2.4 The Exit Transmission Services Revenue Recovery Charge is payable by Users to National Grid NTS where it is negative and to Users by National Grid NTS where it is positive.
- 3.2.5 For each Gas Year, National Grid NTS shall, no later than the Charges Publication Date, determine and publish the Applicable Daily Rates of the Entry Transmission Services Revenue Recovery Charge and the Exit Transmission Services Revenue Recovery Charge together with an explanation of the basis on which such charges have been determined.

3.3 Subsequent revision

- 3.3.1 In relation to a Gas Year, if (after determining the Entry Transmission Services Revenue Recovery Charge or the Exit Transmission Services Revenue Recovery Charge under paragraph 3.2) National Grid NTS considers that any of its estimates made (as referred to in paragraph 3.1.1) for the purposes of determining such charge is or will prove to be materially inaccurate, National Grid NTS may revise such estimates and determine and apply a revised Entry Transmission Services Revenue Recovery Charge or Exit Transmission Services Revenue Recovery Charge in accordance with paragraph 1.10 and this paragraph 3.3.
- 3.3.2 Where National Grid NTS pays or expects to pay the NTS Entry Transmission Services Rebate Charge in respect of the Formula Year which ends in a Gas Year, National Grid NTS shall take account of the amount so payable in deciding whether to determine and apply a revised Entry Transmission Services Revenue Recovery Charge for such Gas Year and (if so) the revised Forecast Entry Revenue Difference for the Gas Year.
- 3.3.3 Where National Grid NTS proposes to revise the Entry Transmission Services Revenue Recovery Charge or Exit Transmission Services Revenue Recovery Charge for a Gas Year pursuant to this paragraph 3.3, National Grid NTS shall, consistent (but subject as provided in paragraph (b) below) with the requirements of Standard Special Condition A4(2)(d) and (e):
- (a) give a first notice setting out the reasons for the revision, the proposed Revision Month and an estimate of the revised Entry Transmission Services Revenue Recovery Charge or Exit Transmission Services Revenue Recovery Charge;
 - (b) where it decides to make such revision, give notice (not less than two months before the first Day of the Revision Month, as provided in TPD Section B1.8.2(a)) setting out the Revision Month and the revised Entry Transmission Services Revenue Recovery Charge or Exit Transmission Services Revenue Recovery Charge.

3.4 NTS Entry Transmission Services Rebate Charge

- 3.4.1 If for any Formula Year (t) the Transmission Services Entry Revenue (including revenue or negative revenue in respect of the Entry Transmission Services Revenue Recovery Charge, and determined provisionally before the application of this paragraph 3.4) would exceed the Allowed FY Transmission Services Entry Revenue by at least £1,000,000, a charge by way of rebate (the “**NTS Entry Transmission Services Rebate Charge**”) is payable by National Grid NTS to Users.
- 3.4.2 The rate of the NTS Entry Transmission Services Rebate Charge (NETSR_{Ct}, to be expressed as a daily rate in p/kWh/Day) for Formula Year t is calculated as:

$$\text{NETSR}_{Ct} = (\text{TSER}_t - \text{AFTSER}_t) / \text{AEnC}_t$$

where, for Formula Year t:

TSER_t is Transmission Services Entry Revenue provisionally determined as provided in paragraph 3.4.1;

AFTSER_t is Allowed FY Transmission Services Entry Revenue; and

AEnC_t is the aggregate amount of NTS Entry Capacity which Users are Registered as holding at all Entry Points aggregated over all Days in the Formula Year.

- 3.4.3 The NTS Entry Transmission Services Rebate Charge shall be accounted for as a charge relating to and payable in respect of Formula Year t (and the amounts payable by National Grid NTS in respect of such charge shall be deducted in determining the value of Transmission Services Entry Revenue in respect of such Formula Year).
- 3.4.4 For each Formula Year, National Grid NTS shall, as soon as reasonably practicable after the end of the Formula Year, determine and publish whether the NTS Entry Transmission Services Rebate Charge is payable in respect of such Formula Year and if so the applicable rate of such charge (but the Transportation Statement for the prevailing Gas Year will not be revised to reflect such charge).

4 NON-TRANSMISSION SERVICES CHARGES

4.1 Introduction

4.1.1 This paragraph 4 sets out the basis on which Non-Transmission Services Charges are determined.

4.1.2 Non-Transmission Services Charges comprise:

- (a) the following specific charges:
 - (i) St Fergus Compression Charge;
 - (ii) NTS Meter Maintenance Charges;
 - (iii) DN Pensions Deficit Charges;

- (iv) Shared Supply Meter Point Administration Charges;
- (v) Allocation Charges at Interconnection Points; and
- (b) General Non-Transmission Services Charges.

4.1.3 For each Gas Year, National Grid NTS shall, no later than the Charges Publication Date, determine and publish each of the Non-Transmission Services Charges together with an explanation of the basis (including the assumptions) on which each of such charges has been determined.

4.2 St Fergus Compression Charges

4.2.1 The “**St Fergus Compression Charge**” is a charge in respect of the delivery of gas to the NTS at the NTS System Entry Point (“**SFCC System Entry Point**”) for the North Sea Midstream Partners sub-terminal at St Fergus (at which the Gas Entry Conditions as to minimum delivery pressure were set on the assumption of additional compression within the NTS).

4.2.2 The St Fergus Compression Charge (SFCCy, to be expressed in p/kWh) for a Gas Year determined as follows:

$$SFCCy = ECy / EQy$$

where:

ECy is the aggregate amount, as estimated by National Grid NTS, of St Fergus Compression Costs for the Gas Year; and

EQy is the aggregate quantity, as estimated by National Grid NTS, of gas that will be delivered to the NTS at the SFCC System Entry Point in the Gas Year.

4.2.3 “**St Fergus Compression Costs**” are the additional variable costs that will be incurred by National Grid NTS in respect of compression of gas in the NTS as a result of the delivery of gas at the SFCC System Entry Point.

4.2.4 The St Fergus Compression Charge for a Gas Year is subject to revision within the Gas Year as provided in paragraph 4.8.

4.3 NTS Meter Maintenance Charges

4.3.1 The “**NTS Meter Maintenance Charge**” is a charge payable by the Registered User of a NTS Supply Meter Point at which of NGNTS Supply Meter Installation is installed.

4.3.2 A “**NGNTS Supply Meter Installation**” is a Supply Meter Installation (including telemetry or datalogger) owned by National Grid NTS and installed at a NTS Supply Meter Point.

4.3.3 The NTS Meter Maintenance Charge (in £/year) for a Gas Year is determined by:

- (a) determining the aggregate cost, as estimated by National Grid Gas, that National Grid NTS will incur in the Gas Year in maintaining all NGNTS Supply Meter Installations; and
- (b) apportioning such estimated aggregate cost between all NGNTS Supply Meter Installations, on an equal basis or such other basis as National Grid NTS determines to be appropriate.

4.4 DN Pensions Deficit Charges

4.4.1 The “**DN Pension Deficit Charge**” is a charge, payable by a DN Operator to National Grid NTS, to allow National Grid NTS to recover that part of the allowance, in the Maximum NTS Transportation Owner Revenue, for the part-funding of the deficit in the NGUK Pension Scheme, that relates to pension deficit costs associated with former employees of that DN Operator.

4.4.2 The DN Pension Deficit Charge is determined (in £/year) for a Gas Year and for each DN Operator:

- (a) so as to reflect the Authority's decision in 2007 to allow the recovery of such pension deficit costs by such a charge to DN Operators;
- (b) by setting a fixed charge for each consecutive three-year period with an annual inflation adjustment within the three-year period; and
- (c) with a true-up adjustment (reflecting differences between actual costs and the fixed charge) following each such three-year period.

4.4.3 The DN Pension Deficit Charge is not payable by a DN Operator which (with effect from 1 April 2017) directly bears the funding costs of the deficit referred to in paragraph 4.4.1; but without prejudice to charges in respect of the true-up adjustment (as referred to in paragraph 4.4.2(c)) relating to prior periods.

4.5 Shared Supply Meter Point Administration Charges

4.5.1 “**Shared Supply Meter Point Administration Charges**” are charges payable by each Registered User of a Shared Supply Meter Point in respect of the implementation of the provisions of the Code (including without limitation TPD Section G1.7) relating to Shared Supply Meter Points, comprising a charge for establishing a Supply Meter Point as a Shared Supply Meter Point, a charge for a change in the Sharing Registered Users of a Shared Supply Meter Point, and a daily charge for the implementation of the allocation rules under TPD Section G1.7.

4.5.2 Shared Supply Meter Point Administration Charges is determined (in £ per User, or £ per Supply Meter Point per User per Day, as applicable) for a Gas Year based on the amount of the charges expected to be payable (in respect of the relevant Agency Service) by National Grid NTS to the CDSP under the DSC.

4.6 Interconnection Point Allocation Charges

- 4.6.1 **“Interconnection Point Allocation Charges”** are charges (comprising an initial 'set-up' charge for a User, and ongoing charges) payable by Users in respect of the implementation of the provisions of EID Section D in respect of allocation at Interconnection Points.
- 4.6.2 The Interconnection Point Allocation Charge is determined (in £ per User, or £ per User per Interconnection Point per Day, as applicable) for a Gas Year based on the amount of the charges expected to be payable (in respect of the relevant Agency Service) by National Grid NTS to the CDSP under the DSC.

4.7 General Non-Transmission Services Charge

- 4.7.1 The **“General Non-Transmission Services Charge”** is a charge in respect of system operation of the NTS (with the aim of National Grid NTS recovering Allowed Non-Transmission Services Revenue which is not recovered by the specific Non-Transmission Services Charges set out above).
- 4.7.2 For the purposes of this paragraph 4.7, in relation to a Gas Year:
- (a) the **“Allowed Non-Transmission Services Revenue”** is determined in accordance with paragraph 1.6 from the Allowed FY Non-Transmission Services Revenue for the Related Formula Year;
 - (b) the **“Forecast Aggregate NTS Quantity”** is the sum of:
 - (i) the aggregate quantity of gas which National Grid NTS estimates will be delivered by Users to the NTS at all Entry Points in the Gas Year, excluding Excluded Storage Quantities; and
 - (ii) the aggregate quantity of gas which National Grid NTS estimates will be offtaken by Users from the NTS at all Exit Points in the Gas Year, excluding Excluded Storage Quantities; and
 - (c) the **“Net Allowed Non-Transmission Services Revenue”** is the Allowed Non-Transmission Services Revenue less the sum of:
 - (i) Forecast NTS Meter Maintenance Revenue (as provided in paragraph 1.5.1(e));
 - (ii) Forecast DN Pension Deficit Revenue (as provided in paragraph 1.5.1(f));
 - (iii) the revenue which National Grid NTS estimates will be derived from St Fergus Compression Charges in the Gas Year;

- (iv) the revenue which National Grid NTS estimates will be derived from Shared Supply Meter Point Administration Charges in the Gas Year; and
- (v) the revenue which National Grid NTS estimates will be derived from at Interconnection Point Allocation Charges in the Gas Year.

4.7.3 The General Non-Transmission Services Charge for a Gas Year (GNTSC_y, to be expressed in p/kWh) is determined as follows:

$$\text{GNTSC}_y = \text{NANTSR}_y / \text{FANQ}_y$$

where, for Gas Year y:

NANTSR_y is Net Allowed Non-Transmission Services Revenue;

FANQ_y is Forecast Aggregate NTS Quantity.

- 4.7.4 The General Non-Transmission Services Charge is a Commodity Charge and is payable in respect of Entry Points and Exit Points.
- 4.7.5 The General Non-Transmission Services Charge for a Gas Year is subject to revision within the Gas Year as provided in paragraph 4.8.

4.8 Subsequent revision of certain Non-Transmission Services Charges

4.8.1 In relation to a Gas Year, if (after determining the St Fergus Compression Charge under paragraph 4.2 or the General Non-Transmission Services Charge under paragraph 4.7) National Grid NTS considers that any of its estimates made (as provided in paragraph 4.2.2 or paragraph 4.7.2 or the provisions therein referred to) for the purposes of determining either such charge is or will prove to be materially inaccurate, National Grid NTS may revise such estimates and determine and apply a revised St Fergus Compression Charge or (as the case may be) General Non-Transmission Services Charge in accordance with paragraph 1.10 and this paragraph 4.8.

4.8.2 Where National Grid NTS proposes to revise the St Fergus Compression Charge or General Non-Transmission Services Charge for a Gas Year pursuant to this paragraph 4.8, National Grid NTS shall, consistent (but subject as provided in paragraph (b) below) with the requirements of Standard Special Condition A4(2)(d) and (e):

- (a) give a first notice setting out the reasons for the revision, the proposed Revision Month and an estimate of the revised St Fergus Compression Charge or General Non-Transmission Services Charge; and
- (b) where it decides to make such revision, give notice (not less than two months before the first Day of the Revision Month, as provided in TPD Section B1.8.2(a)) setting out the Revision Month and the revised St Fergus Compression Charge or General Non-Transmission Services Charge.

PART A-II – THE GAS TRANSMISSION CONNECTION CHARGING METHODOLOGY

SECTION 1 - INTRODUCTION

1. This Methodology which is published in accordance with Standard Licence Condition 4B of the Licence applies exclusively to Design Works and Construction Works associated with:
 - a) new NTS connections;
 - b) modifications to existing NTS connection apparatus;
 - c) disconnections of existing NTS connection apparatus; and
 - d) diversions of sections of the NTS.
2. It should be noted that in addition to a physical connection to the NTS, the following additional requirements also need to be satisfied before gas can flow through that connection as specified in the Network Code:
 - a) National Grid will require Users at the connection point (or DNs in the case of Exit capacity for NTS/LDZ Offtakes) to acquire the appropriate Entry and/or Exit capacity in accordance with the Network Code and the ECR and ExCR methodology statements;
 - b) National Grid will require a customer to enter into a Supply Point Network Exit Agreement (NExA), Connected System Exit Point (CSEP) NExA, NTS/LDZ Supplemental Agreement, Network Entry Agreement (NEA), Interconnector Agreement or Storage Connection Agreement (SCA), as appropriate.
3. It should also be noted that the following Reinforcement will be triggered as a result of the release of Entry and Exit Capacity and not as part of the connection process:
 - a) For Entry Capacity – all necessary Reinforcement;
 - b) For Exit Capacity – only that Reinforcement that is needed upstream of the Connection Charging Point (“CCP”).

SECTION 2 - PRINCIPLES

4. National Grid shall be entitled to recover in respect of:
 - a) Standard Design Connections:
 - (i) Fixed Costs only in relation to Design Works;
 - (ii) Actual Costs in relation to Construction Works;
 - b) Non-Standard Design Connections Actual Costs for both Design Works and Connection Works

National Grid will recover the Actual Costs incurred when it carries out Construction Works in relation to both Non-Standard Design Connections and Standard Design Connections. Actual Costs are recovered on a cost pass-through basis.

5. In relation to Standard Design Connections and Non-Standard Design Connections National Grid NTS's Actual Costs will reflect the cost of labour, materials, and any other expenses required to carry out the work to the customer's requirements including applicable Lane Rental Charges. Each cost element will carry an appropriate level of overhead.
6. National Grid will calculate Estimated Costs and Actual Costs using:
 - a) National Grid's fully absorbed direct costs associated with undertaking any works, i.e. including appropriate overhead costs;
 - b) Individually tendered rates for indirect costs, and
 - c) Any other costs not included above related to the provision of connection activities.
7. National Grid may carry out work additional to that which is required to meet the requirements of the customer (in relation to both Standard Design Connections and Non-Standard Design Connections) to ensure that it develops the NTS in an economic and efficient manner. Where this occurs, the cost of any additional works will not be charged to the customer.
8. All charges are made subject to the appropriate Standard Conditions of Contract (SCCs), which will be made available on request in respect of specific projects.
9. Quotations will identify any assumptions that are used in the determination of the Estimated Costs.
10. National Grid will enter into commercial agreements with customers in relation to Non-Standard Design Connections and Standard Design Connections on the basis of Estimated Costs, and will seek an advance payment of these Estimated Costs in accordance with both the relevant commercial agreement and National Grid's prevailing credit policy.
11. However, to ensure that the Actual Costs of the project are recovered as described in paragraph 4 above, when final payment is due, as specified in the relevant commercial agreement, National Grid will compare Actual Costs with Estimated Costs invoiced to

date and charge for the additional costs incurred or refund any overpayment, as may be the case.

SECTION 3 - CONNECTION CHARGING METHODOLOGY

Design Philosophy

13. Design Works rely upon information provided by the customer and will also use other publicly available information as well as information relating to the NTS.
14. National Grid will construct apparatus on a least project cost 'fit for purpose' basis taking into account the customer's requirements and its relevant Licence obligations. Where there are different fit for purpose design solutions, which meet a customer's requirements, National Grid will base the charge to the customer on the solution with the lowest overall cost of construction. However, National Grid may choose to implement a solution that has a lower whole-life cost, with the balance of the cost of construction being met by National Grid.
15. The term 'fit for purpose' refers to a design that will safely transport the requisite quantity of gas at an appropriate pressure throughout the life of the apparatus taking into account the Gas Act requirement for economic pipe-line system development.

Design Charges

16. The Estimated Costs in respect of Design Works will be identified within quotations provided by National Grid. These quotations will be dependent upon the information provided by the customer, other publicly available information and information relating to the NTS.
17. If the Customer subsequently changes the data on which National Grid has based the Estimated Costs, then the Estimated Costs will be updated accordingly
18. National Grid will complete the Design Works before the Construction Works are commenced and irrespective of whether the Construction Works take place at a later date. The customer will be required to pay the Actual Costs of the Design Works.
19. In instances where the known requirements of a connection are insufficient to enable progression straight to a Conceptual Design Study, an initial Feasibility Study may be undertaken in order to refine the potential options and associated Estimated Costs for the Conceptual Design Works and Construction Works stages. Customers may also request a Feasibility Study to analyse potential connections options.
20. For the avoidance of doubt a Feasibility Study will be subject to a separate commercial agreement from the Conceptual Design Study.
21. If, as agreed with the customer, the Design Works are split into stages, e.g. Feasibility Study followed by Conceptual Design Study then National Grid will provide the Estimated Costs and timescales for undertaking each study in turn prior to entering into each agreement. The customer will be obliged to have paid the Actual Costs of each stage before the commencement of a subsequent phase.
22. Where the customer requests National Grid to design a System Extension to the customer's premises, National Grid will supply the customer with a copy of the design report once a study has been completed. Should the customer not choose National Grid to construct the System Extension, then the customer may use the information in this report, under licence, in respect of the hire of an alternative provider to construct the

pipeline. Should the customer choose to use an alternative provider to construct the pipeline, then the customer must inform National Grid and ask for a revised quotation for the connection.

Construction Charges

23. The Estimated Costs in respect of Construction Works will be identified in a quotation provided by National Grid and will be based on the best information available to National Grid, including wherever possible, utilising the costs of recent similar projects.
24. The output of a related Conceptual Design Study will normally include a more accurate value for the Estimated Costs of the Construction Works.
25. The customer will be required to pay the Actual Costs of the Construction Works.

NTS Connections: Connection Offers and Application Fees

- 25A. National Grid NTS shall establish, publish and review the types of NTS Connections and the fixed Initial Connection Offer Connection Application Fee payable by the Connection Applicant as follows:
 - (a) on an annual basis to reflect any changes to National Grid NTS staff costs; or
 - (b) on an ad-hoc basis where a modification is made to the contents of Section V, paragraph 13 - NTS Connections.
- 25B. The Connection Application Fee for a Connection Offer shall reflect the average National Grid NTS fully absorbed costs required to produce the information contained in a Connection Offer.

Remotely Operable Valve (ROV) Installations

- 26A. Subject to paragraph 26B and any determination by National Grid under paragraph 27 that an ROV installation is not required, all new connections will include an ROV Installation which may be situated either:
 - a) at a point on the NTS, where the customer wishes to:
 - i. construct and connect a pipeline with a view to owning and operating the pipeline (such pipeline would not be a System Extension as it would not be owned and operated by National Grid), or
 - ii. construct and connect a pipeline with the intention that it will transfer to National Grid under a Taking Ownership Agreement (in which case it would become a System Extension); or
 - b) at the termination point of a System Extension constructed by National Grid.
- 26B. If a new connection comprises a New Exit Point, National Grid may determine that a manually operated valve installation shall be installed rather than an ROV installation.
- 26C. The costs of the ROV Installation, or manually operated valve installation, will form a part of the connection charge irrespective of whether the connection is for Exit, Entry or Bidirectional purposes.
27. Where a connection is requested at or adjacent to an existing National Grid site, National Grid will at its sole discretion determine the most appropriate point and design

of the connection taking into account potential costs of connection, future operational costs, security of supply and operational flexibility.

28. National Grid does not provide gas flow and energy measurement equipment for transmission connections.
29. In addition to the equipment provided by National Grid, there are several technical requirements that a customer must fulfil if it is to have a connection to the NTS. These relate principally to the customer's metering and telemetry equipment and, where relevant, Gas Quality Instrumentation.

Gas Quality Instrumentation for Entry and Bidirectional connections

30. All connections that are to be used for the entry of gas to the NTS require Gas Quality Instrumentation to be installed by the customer.
31. National Grid's requirements in respect of the quality of gas entering the NTS are contained in the Gas Ten Year Statement,

System Extensions and Reinforcement for Entry (including the Entry element of Bidirectional) connections

32. The need for System Extensions and Reinforcement to accommodate Entry flows at the connection point will be determined when National Grid receives auction signals for incremental Entry Capacity in accordance with the Licence and Network Code.
33. The costs of System Extension and/or Reinforcement will not be charged to the customer within the connection charge, but will instead be taken into account in the auction price applicable in any capacity auction.
34. Where separately identifiable Reinforcement is required only to accommodate Exit flows to a Bidirectional connection, then this Reinforcement will be dealt with under the section below.

System Extensions and Reinforcements for Exit (including the Exit element of Bidirectional) connections

35. System Extensions for Exit purposes are treated as a component of connection apparatus (unless provided by the customer) and their costs form part of the connection charge as discussed in section 'Design Charges' above.
36. The need for Reinforcement to accommodate Exit flows at the connection point will be determined when National Grid receives the appropriate signals for Incremental Exit Capacity in accordance with the Licence and Network Code.
37. National Grid apportions the cost of Reinforcement according to its location in relation to the Connection Charging Point ("CCP"). Reinforcement downstream of the CCP is charged to the customer under the terms of this Statement and will form part of the connection. Reinforcement upstream of the CCP is not directly charged but may be funded by National Grid where required to enable the provision of capacity under the terms of the ExCR methodology statement.
38. The System Extension element is the only component that can be provided by the customer.

Quotation Assumptions

39. Quotations for Design Studies and/or Construction Works will include a statement to the effect that the customer, in accepting the quotation will also be accepting that the assumptions are appropriate and understood. If it is determined later that any stated assumption is incorrect, National Grid will determine in accordance with the Standard Conditions of Contract (SCCs) whether the Estimated Costs should be varied and the customer will be informed. In such circumstances, National Grid may cease or delay works pending the customer's acceptance of any increased Estimated Costs.

Taking Ownership of Connection Apparatus

40. Subject to the conditions detailed below, National Grid will take ownership of fit for purpose connection apparatus that is connected to the NTS and that is not intended to be operated by another system operator (e.g. a Connected System Operator that has received a Gas Act derogation).
41. Conditions relating to taking ownership:
- a) National Grid and the customer must have entered into a Taking Ownership Agreement before any works are undertaken in respect of the design or construction of any apparatus that the customer wishes National Grid to take into ownership. The Taking Ownership Agreement will allow National Grid to carry out audit work at all stages of the project from design through to construction and commissioning in order to determine whether the apparatus to be installed by the customer and adopted by National Grid is fit for purpose.
 - b) The apparatus shall **NOT**:
 - i. be designed to operate at pressures below those normally found in the NTS at the connection point;
 - ii. form part of a system of pipes that includes any apparatus that will become a connected system that will not also be owned by National Grid;
 - iii. include gas flow, energy measurement and associated equipment; and
 - iv. include apparatus that is not fit for purpose.
42. National Grid will charge for audit work carried out under a Taking Ownership Agreement. Charges will be based upon the cost of employing National Grid staff together with any costs incurred by service providers employed by National Grid and will include an appropriate level of overhead charges.

SECTION 4 – DISCONNECTION, DIVERSION AND MODIFICATION OF GAS CONNECTION APPARATUS

43. In general, National Grid will follow the same principles that it applies to connection works in respect of charges for disconnection, diversion and modification services, subject to appropriate commercial arrangements.
44. The precise nature of these works is likely to vary from project to project. Therefore, in order to determine the estimated charges for these works, it may be necessary for National Grid to undertake an assessment of the potential options under a Feasibility Study agreement, which the customer will be responsible for funding. The Customer may also wish to request a Feasibility Study in order to understand the potential options and to provide the Estimated Costs of the remaining Design Works phases and Construction Works. National Grid will provide an estimate of the charges and timescales for undertaking such an assessment prior to entering into an agreement.

SECTION 5: RESERVATION OF CAPACITY THROUGH A PARCA

45. Phase 1 PARCA Works

- a) The PARCA Application Fee will be:
 - i. shall be in accordance with the schedule of fees set out in the prevailing 'Statement for Gas Transmission Connection Charging' document published by National Grid NTS in accordance with Standard Licence Condition 4B of National Grid NTS's Transporters Licence; and
 - ii. shall be determined in respect of a PARCA Application by reference to the indicative Capacity Indicator notified by National Grid NTS in accordance with Section B1.14.16;
 - iii. shall be subject to an appropriate adjustment (in accordance with the schedule of fees set out in the prevailing 'Statement for Gas Transmission Connection Charging' document) where a PARCA Application is assigned (or re-assigned) a Capacity Indicator (which differs from the indicative or prevailing assigned Capacity Indicator) in accordance with Sections B1.15.9 or B1.15.11.
- b) Actual costs of the Phase 1 PARCA Works will be assessed and the difference (if any) between the PARCA Application Fee and the actual costs incurred by National Grid NTS to complete Phase 1 PARCA Works will either:
 - i. in case the Phase 1 PARCA Works are in excess of the PARCA Application Fee, be invoiced to the PARCA Applicant; or
 - ii. in case the PARCA Application Fee exceeds the Phase 1 PARCA Works, be refunded by National Grid NTS to the PARCA Applicant.
- c) The PARCA Application Fee payable by the PARCA Applicant will be reviewed, updated and published on an annual basis to reflect any changes to National Grid NTS costs associated with completing Phase 1 PARCA Works.

46. Phase 2 – Reservation of Capacity under the PARCA

- a) The amount required to be covered by the PARCA Applicant will be the PARCA security amount (“**Total PARCA Security Amount**”). The Total PARCA Security Amount will be calculated and phased as follows:
 - i. for Exit Capacity:

$$\text{Total PARCA Security Amount (£)} = (\text{PSAex} / 100) \times \text{Qex} \times 365$$

Where:

PSAex = the weighted average price of registered annual and enduring NTS Exit (Flat) Capacity, to be 0.0079 (p/kWh/Day), until values are published in the Transportation Statement. National Grid NTS is to be required to publish this value in all future Transportation Statements and it shall be calculated as:

$$PSA_{ex} = \frac{\sum_{j=1}^n (Exit\ Reg\ Cap_j * Exit\ Price_j)}{\sum_{j=1}^n (Exit\ Reg\ Cap_j)}$$

Where:

ExitRegCap_j = The Registered Annual plus Enduring Annual NTS Exit (Flat) Capacity plus any other Annual Yearly and Annual Quarterly capacity registered pursuant to the processes set out under the European Interconnection Document, as at the time of publication of actual charges, for each NTS Exit Point j.

ExitPrice_j = The prevailing Applicable Daily Rate, in accordance with Transportation Statement for each NTS Exit Point j.

Q_{ex} = the maximum amount of NTS Exit Capacity to be Reserved by the PARCA Applicant (kWh/Day) as specified in the Phase 1 PARCA Works Report

ii. for Entry Capacity:

$$\text{Total PARCA Security Amount (£)} = (PSA_{en} / 100) \times Q_{en} \times 365$$

Where:

PSA_{en} = the weighted average price of Registered Quarterly NTS Entry Capacity, to be 0.0098 (p/kWh/Day), until values are published in the Transportation Statement.

National Grid NTS is to be required to publish this value in all future Transportation Statements and it shall be calculated as:

$$PSA_{en} = \frac{\sum_{i=1}^n (Exit\ Reg\ Cap_i * Entry\ Price_i)}{\sum_{i=1}^n (Exit\ Reg\ Cap_i)}$$

Where:

EntryRegCap_i = The Registered NTS Entry Capacity booked through the QSEC and AMSEC processes, and any other Annual Yearly and Annual Quarterly capacity booked through the processes set out under the European Interconnection Document, as at the time of publication of actual charges, for each ASEP i.

EntryPrice_i = The prevailing MSEC reserve price or, in respect of an Interconnection Point, the prevailing reserve price for the Annual Yearly and Annual Quarterly capacity reserved in terms of the processes set out under the European Interconnection Document in accordance with the Transportation Statement for ASEP i.

Q_{en} = the maximum amount of NTS Entry Capacity to be Reserved by the PARCA Applicant (kWh/Day), in any one quarter as specified in the Phase 1 PARCA Works Report

iii. Annual Phasing:

The Total PARCA Security Amount will be phased on an annual basis as an annual requirement in accordance with the following:

Amount of Total PARCA Security Amount for Year Y = Total PARCA Security Amount x 0.25

Amount of Total PARCA Security Amount for Year Y+1 = Total PARCA Security Amount x 0.50

Amount of Total PARCA Security Amount for Year Y+2 = Total PARCA Security Amount x 0.75

Amount of Total PARCA Security Amount for Year \geq Y+3 = Total PARCA Security Amount x 1.0

Where Year Y is the period of 12 (twelve) calendar months from, and including, the calendar month in which the PARCA was countersigned.

- b) Should the PARCA be terminated prior to the allocation of the reserved capacity then, subject to the provisions in the PARCA, the PARCA Applicant will be liable for the PARCA termination amount (“**PARCA Termination Amount**”) which is calculated in accordance with paragraph 46 (c).
- c) In the event of a PARCA termination and subject to the provisions in the PARCA, a PARCA Termination Amount will be invoiced to the PARCA Applicant and will take into account the effective day of the PARCA termination e.g. if PARCA phase 2 began on January 1st 2015 and PARCA terminates 31st January, the no. of days = 31
 - i. PARCA Termination Amount = min of ((Total PARCA Security Amount / 1461*) x no. of days) or Total PARCA Security Amount

Where *1461 = 4 years in days

Where no. of days = number of days between and including the date the PARCA is countersigned and the date the PARCA terminates.

Appendix A – Definitions

1. **Actual Costs** are the costs efficiently incurred, in line with Section 1 of this Statement, by National Grid in carrying out the Design Works or Construction Works, as may be the case. Where they are incurred, National Grid will pass on the cost of efficiently incurred connections-related Lane Rental Charges to customers.
2. **Bidirectional connections** are connections that combine elements of both Entry and Exit connections to allow flows of gas onto and from the NTS, e.g. Storage Facilities, interconnector.
3. A **Conceptual Design Study** which may follow a Feasibility Study typically forms the majority of the Design Works and includes the provision of engineering analysis to assess the impact of the customer request for a connection, disconnection, diversion or modification. Outputs will include the provision of indicative drawings, material schedules and the Estimated Costs of the Construction Works.
4. The **Connection Charging Point (CCP)** is the closest economically feasible point on the NTS, which is deemed to have sufficient capacity to supply the new Exit load disregarding existing Exit loads. The CCP creates the financial distinction between Connection Costs that are fully chargeable to the person concerned (i.e. downstream) and upstream Reinforcement costs which may be funded by National Grid where required to enable the provision of capacity under the terms of the ExCR methodology statement.
5. **Construction Works** are:
 - a) the detailed design required to produce final drawings and material schedules; and
 - b) the physical works, including:
 - i. commissioning;
 - ii. excavation, backfill and reinstatement in the public highway and excavation, backfill and routine reinstatement on private land, except where requested otherwise; and
 - iii. works associated with telemetry and other systems required to enable National Grid to operate the connection apparatus in accordance with its statutory, Licence and Network Code obligations.
6. **Design Works** are the preparatory design of the connection, disconnection, diversion or modification, which must occur before Construction Works can commence. Design Works typically only involve the preparation of a Conceptual Design Study but in some instances may include a Feasibility Study (in one or more phases) prior to the Conceptual Design Study. For the avoidance of doubt, detailed design forms part of the Construction Works.
7. A **Disconnection** occurs when existing connection apparatus is disconnected.
8. A **Distribution Network (DN)** is a geographically defined network of distribution pipes, typically comprising interconnected local transmission, intermediate pressure, medium pressure and low pressure networks, connected to and downstream of the NTS (see

Special Condition 1A of the Licence for formal definition).

9. A **Diversion** is a change made to the route of an existing NTS pipeline or the relocation of other gas transportation (not normally connecting pipe associated) assets.
10. **Entry** connections are connections to delivery facilities processing gas from gas producing fields or LNG vaporisation (i.e. importation) facilities, for the purpose of delivering gas into the NTS.
11. **Estimated Costs** are the estimated costs of Design Works or Construction Works, as may be the case, calculated on the basis of the costs that National Grid expects to incur.
12. **Exit** connections are connections that allow gas to be offtaken from the NTS to premises (a ‘Supply Point’), to Distribution Networks or to Connected System Exit Points (CSEPs). There are several types of connected system including:
 - a) A pipeline system operated by another gas transporter; and
 - b) Any other non-National Grid pipeline transporting gas to premises consuming more than 2,196MWh (75,000 therms) per annum.
13. A **Feasibility Study** may form the first part of the Design Works to evaluate the full requirements of a connection or modification etc. and provide sufficient detail to enable progression to a Conceptual Design Study. Alternatively a customer may wish to request a Feasibility Study in order to understand the Estimated Costs of the Conceptual Design Works and Construction Works or to consider different connection options.
14. **Gas Quality Instrumentation** comprises instrumentation that will be installed by the customer to monitor compliance of gas entering the NTS with legislative and contractual specifications.
15. **Incremental Exit Capacity** is as defined in Paragraph 1 of Special Condition 1A of the NTS Gas Transporter’s Licence.
16. A **Metering Installation** may exist at an NTS Offtake and will typically comprise of a combination of;
 - a) Filters;
 - b) Meters;
 - c) Pre heating equipment;
 - d) Pressure regulators; and
 - e) Associated pipework

At NTS Offtakes constructed prior to approximately 2001, the Metering Installation may be owned by National Grid. For information, charges for such installations are covered by National Grid NTS’s Transportation Statement, which is available on the National Grid website:

<http://www2.nationalgrid.com/UK/Industry-information/System-charges/Gas-transmission/Charging-Statements/>

17. A **Modification** is any change made to an existing connection, and associated equipment.
18. The **National Transmission System (NTS)** is that part of the pipeline system for the time being designated by National Grid as such and described in the National Grid Gas Ten Year Statement.
19. **Network Code** means the network code prepared by National Grid, as from time to time modified, pursuant to the Licence. National Grid's Network Code comprises the provisions set out in the Uniform Network Code (UNC), more details of which can be obtained at the Joint Office website: www.gasgovernance.co.uk.
20. An **NTS/LDZ Offtake** is the exit connection from the NTS to a Distribution Network as defined in the Network Code - Transportation Principle Document Section A3.4.3.
21. **Reinforcement:** National Grid must ensure that the NTS has sufficient capacity to supply new and existing demands at the applicable pressures and to transport new and existing gas supplies. NTS pressures affected by the connection of a new load (or an increase in load at an existing connection) may cause National Grid to need to reinforce the NTS, prior to the load/supply coming on stream. This reinforcement may take the form of new pipelines being laid or the installation, modification of other equipment to increase the pressure within the NTS or commercial alternatives to physical works.
22. A **Remotely Operable Valve (ROV) Installation** comprises the apparatus, constructed by National Grid, at the interface between the NTS and apparatus provided by a third party and will typically include a valve as required with remote operation actuation, full bore bypass and telemetry. ROV Installation apparatus will remain in National Grid ownership irrespective of the ownership of the up/downstream system.
23. **Standard Conditions of Contract (SCCs)** are described in paragraph 0.
24. A **System Extension** is a new connecting pipeline, constructed by National Grid, which runs from the existing NTS to a location specified by the customer. In order to effect isolation and maintenance of System Extensions, they typically require two ROV Installations, one at each end with the addition of 'Pipeline Inspection Gauge (PIG) trap' facilities at both ends to allow inline inspections.

Appendix B – Additional Points Relating to Capacity

Capacity booking

The provision of a connection does not confer any rights on a party to offtake or introduce gas. Gas may only be offtaken / introduced by a Registered User who is a party to the Network Code and has been licensed by the Gas and Electricity Markets Authority to do so.

Allocation of available capacity

National Grid will make capacity available in accordance with the Network Code and the ECR and ExCR methodology statement rules.

PART B – DN TRANSPORTATION CHARGING METHODOLOGY

The Gas Distribution Transportation Charging Methodology

1. Introduction

- 1.1 Gas distribution transportation charges consist of LDZ System charges, Customer charges, LDZ Exit Capacity NTS (ECN) charges and Administration charges.
- 1.2 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.
- 1.3 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

- 2.1 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 target revenue recovery for LDZ System charges includes revenue for the Standard LDZ System charge, the Optional LDZ System charge and the LDZ System Entry commodity charge. The costs are taken from the regulatory reporting packs submitted to Ofgem.
- 2.2 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.
- 2.3 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.

- 2.4 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.
- 2.5 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

- 3.1 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.
- 3.2 The split described in paragraph 3.1 applies to the Standard LDZ System capacity and commodity charges. The LDZ System Entry commodity charge revenue is not taken into account for the purposes of determining the split.

4. Standard LDZ System Charges

- 4.1 All the data underlying the Standard LDZ System Charges is derived on a Network specific basis.
- 4.2 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 eight sub-tiers.

- 4.3 All LDZ System related costs, other than those attributed to LDZ System Entry Points, are attributed across these pressure tiers and sub-tiers.
- 4.4 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.
- 4.5 The average cost of utilisation is calculated for each of the main pressure tiers of the system.
- 4.6 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.
- 4.7 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.
- 4.8 For the purposes of deriving charging functions the data points for the consumption bands are grouped into 3 charging bands:
- 4.8.1 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;
- 4.8.2 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;
- 4.8.3 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.
- 4.9 The form of the LDZ System functions is currently derived on a national basis.

5.

6. **Optional LDZ System Charge**

- 6.1 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.
- 6.2 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.

- 6.3 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.
- 6.4 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.
- 6.5 Shipper Users opting for the Optional LDZ System charge pay this charge instead of the Standard LDZ System capacity and commodity charges.

7. LDZ System Entry Commodity Charge

- 7.1 LDZ System Entry commodity charges are payable in respect of gas delivered to the LDZ System at LDZ System Entry Points. For each LDZ System Entry Point the charge is a fixed unit commodity charge applicable to all gas delivered to the LDZ System. The unit rate may vary by LDZ System Entry Point and may be positive, resulting in a charge, or negative, resulting in a credit.
- 7.2 The LDZ System Entry commodity charge will be determined for each LDZ System Entry Point as the summation of the unit rates in respect of:
- 7.2.1 Opex Costs
- (a) The unit rate will be determined in respect of the forecast operating costs incurred by the DN associated with the provision or operation of:
- (i) the entry facilities related to the LDZ System Entry Point; and
- (ii) any network assets which have been provided for, or are operated solely for, the management of gas flows from LDZ System Entry Points. Where such network assets are provided or operated solely for the management of flows from one LDZ System Entry Point then the forecast operating costs will be wholly allocated to that LDZ System Entry Point. Where such network assets are provided or operated for the management of flows from more than one LDZ System Entry Point then the forecast operating costs will be appropriately allocated between each relevant LDZ System Entry Point in proportion to the estimated cost causality.
- (b) The unit rate will be determined as Forecast operating costs / Forecast entry gas flow, expressed as pence per kWh.
- (c) The unit rate will be re-determined periodically to take account of changes to the forecast operating costs and forecast gas entry flows. In the intervening period between such redeterminations, the unit rate may be determined for a period by reference to the previously determined unit rate and the application of an appropriate RPI inflation factor reflecting the change in RPI since the last determination.

7.2.2 DN Usage Credit

- (a) The DN Usage credit unit rate will be determined as the sum of the unit rates in

respect of:

(i) ECN Credit

- (A) The unit rate in respect of the ECN Credit for a LDZ System Entry Point will reflect the deemed saving in the cost of booked NTS Exit Capacity for the DN due to the forecast availability of gas flows at the LDZ System Entry Point leading to deemed lower levels of booked NTS Exit Capacity than otherwise.
- (B) The unit rate is based on the average LDZ ECN charge for the whole DN multiplied by a Dependability Factor and then converted into a commodity equivalent charge. The Dependability Factor is set at a level which is equivalent to the load factor for the LDZ System Entry Point so that in the practice these figures cancel each other out in the calculation of the unit rate credit.
- (C) The average LDZ ECN charge for the DN is calculated as:

$$\text{Average LDZ ECN} = \frac{\sum_{all\ z} [ECN_z \times SOQ_z]}{\sum_{all\ z} [SOQ_z]}$$

where:

ECN_z is the LDZ ECN charge in zone z;

SOQ_z is the forecast Supply Point capacity in zone z; and
means the sum across all NTS Exit Zones z within the DN.

- (D) From this the unit rate credit, expressed as p/kWh, in respect of ECN Credit is equivalent to the numerical value of the average LDZ ECN charge, expressed as p/pdkWh/day and is independent of the flow characteristics at each LDZ System Entry Point, i.e. an average LDZ ECN charge of X p/pdkWh/day will lead to a unit rate in respect of ECN Credit of X p/kWh for each LDZ System Entry Point within that DN.

(ii) LDZ System Credit

- (A) The unit rate credit in respect of LDZ system usage reflects the notional typical reduced usage of the LDZ System tiers by gas delivered into the LDZ System from the LDZ System Entry Point relative to that for gas delivered into the LDZ System from NTS/LDZ Offtakes. The credit is calculated individually for each LDZ System Entry Point and is dependent on the Highest Utilisation Tier for gas from the LDZ System Entry Point.
- (B) The Highest Utilisation Tier is defined as the higher (in terms of pressure) of:

- (1) the tier at which gas enter into the LDZ from the LDZ System Entry Point;
 - (2) the tier which gas from the LDZ System Entry Point is, via within-network compression, moved to (this is not applicable for gas which is not subject to within-network compression).
- (C) The tiers which are considered for the purposes of paragraph 7.2.2(a)(ii)(B) are (in descending order of pressure):
- (1) Local Transmission System (LTS);
 - (2) Intermediate Pressure System (IPS);
 - (3) Medium Pressure System (MPS);
 - (4) Low Pressure System (LPS).
- (D) The unit rate credit in respect of LDZ System usage is then determined as the sum of the Utilisation Rates for the tiers having higher pressure than the applicable Highest Utilisation Tier, as follows:

<u>Highest Utilisation Tier</u>	<u>Unit Rate Credit</u>
LTS	Zero
IPS	LTS Utilisation Rate
MPS	IPS Utilisation Rate plus LTS Utilisation Rate
LPS	MPS Utilisation Rate plus IPS Utilisation Rate plus LTS Utilisation Rate

- (E) The Utilisation Rate for each of the tiers is determined from the analysis of LDZ System utilisation used to determine the Standard LDZ System commodity charging functions, as set out in the methodology for determining the Standard LDZ System Charges. The Utilisation Rate for a tier is calculated as:

$$\text{Utilisation Rate} = 20 \times \text{Unit Commodity Cost for tier}$$

where:

the Unit Commodity Cost is the Commodity Cost of utilising the tier based upon the LDZ System commodity charges being targeted to recover 5% of the LDZ System charge revenue and where the Commodity Costs are scaled by a constant multiplicative factor such that the sum of the Commodity Costs for the four tiers referred to in paragraph 7.2.2(a)(ii)(C) is equal to the LDZ System commodity charge rate for the 0 to 73.2 MWh/a charging band referred to in paragraph 4.7.1.

- (F) In this manner the unit rates in respect of the LDZ System credits should always be consistent with the Standard LDZ System commodity charges applicable for the same period.

7.3 The overall LDZ System Entry commodity charge may be positive (a charge) or negative (a credit) depending on the relative magnitude of the unit rates in respect of Opex Costs and DN Usage Credit.

8. Customer Charges

8.1 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.

8.2 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.

8.3 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.

8.4 For Supply Points up to 73.2 MWh/a, the Customer charge is a fixed unit capacity charge.

8.5 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.

8.6 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).

9. LDZ Exit Capacity NTS (ECN) Charges

9.1 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.

9.2 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. The target revenue for setting the level of the LDZ ECN charges is the initial allowance set out in the Transporter's Licence (defined as AExt) and adjusted to the outturn money value, using the appropriate inflation factor for the relevant year, plus any true-up for the difference between initial set allowance and the actual exit capacity costs for the Formula Year two years previously plus or minus the ECNK.

9.3 The ECNK is managed separately from the overall K for the purposes of setting the levels of the LDZ Exit Capacity NTS charges. For Formula Year 2015/16 onwards, 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 Formula Year two years previously, plus or minus any ECNK from the period two years previously. ECNK for 2014/15 is defined to be zero.

- 9.4 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.

10. Administration Charges

- 10.1 There are specific administration charges for some services which are required by some Shipper Users but not by all. These administration charges are:

10.1.1 Charges for the administration processes required to manage the daily operations and invoicing associated with CSEPs;

10.1.2 Charges for the administration of allocation arrangements at Shared Supply Meter Points.

- 10.2 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.