

# **Offtake Code Business Rules**

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## Offtake Code Business Rules

### Introduction

The operation of the interface between the NTS and each Distribution Network (DN) at each offtake is currently managed through Transco's internal operating procedures. The separate ownership of DNs will require the creation of contractual relationships across this interface. NGT has proposed that an Offtake Code be established to define and govern the operational and commercial relationships between Transco, as the owner of the NTS, and each independent DN owner. The Offtake Code would also apply between NTS and the DNs retained by Transco to ensure there is no undue preference or discrimination. A key objective of the Offtake Code is to facilitate the development and operation of NTS and DN assets in a safe, economic, efficient and coordinated manner.

Key areas to be addressed in the Offtake Code include:

- **Connection facilities:** details of facilities at each of the offtakes conveying gas from the NTS to the DN
- **Safety and emergency:** the roles and responsibilities of NTS and DNs in developing, testing, and implementing emergency procedures
- **Measurement:** the arrangements relating to offtake meters and gas flow measurement including meter performance provisions and error correction
- **Telemetry:** the obligations for the transfer of telemetered data between parties
- **Maintenance:** the arrangements by which NTS and DNs will coordinate planned asset maintenance and conduct works in a safe manner
- **Offtake Rights Planning:** the arrangements for the medium and long term planning processes addressing development of, and required investment in NTS and DNs, addressing offtake rights to flow gas, pressures, and diurnal storage
- **Operational Flows:** the processes for dealing with daily gas flows through the offtakes, using gas flow notifications. Flows will be in accordance with the planning parameters and there will be flexibility for both DNs and NTS to vary flow rates in specific circumstances. Failure to adhere to the flow provisions is also addressed
- **Gas Quality:** the quality requirements of gas flowing at offtakes, and the consequences where there is non-compliant gas
- **Charges:** the arrangements by which services provided under the agreement may be charged for
- **Liabilities:** the general liability provisions
- **Exchange of Information:** the information that needs to be exchanged between the parties for both Network Code and operational purposes
- **Annexes:** these comprise templates showing the form in which DN specific information will be recorded

NGT proposes that the GT licence of Transco (as NTS owner) be modified to incorporate an obligation to prepare and maintain an Offtake Code and administer the modification process. It is envisaged that Ofgem will play a role in establishing the terms and conditions within the initial Offtake Code, and in the modifications process.

Under NGT's proposals, each DN would be required, as a GT licence condition, to be bound by the Offtake Code as supplemented completed annex templates specific to the offtakes at which gas flows from the NTS to the DN.

It is envisaged that the Offtake Code modification process will involve:

- Transco (as NTS owner) administering the modification process
- parties to the Offtake Code having a right to propose modifications
- an industry-wide consultative process for modifications
- a role for Ofgem in the process

Completion of the annex templates with DN specific information, and any changes to that information, will not constitute Offtake Code modifications, but will take place in accordance with processes set out in the Offtake Code.

It also is envisaged that the safety cases for both Transco and DNs will reference the new relationships established under the Offtake Code and state that operations will be conducted in accordance with the Offtake Code.

## **Offtake Code Business Rules**

### **1 Parties and Definitions**

#### **1.1 Parties**

The parties to the agreement are:

- (1) "NTSCo" (where NTSCo is Transco acting in the capacity of NTS owner) and
- (2) "DNCo" (where DNCo is a DN owner, including Transco acting in the capacity of DN owner)

#### **1.2 Key Definitions**

- **NTS** has the meaning given to it in the Network Code
- **LDZ** has the meaning given to it in the Network Code
- **DN** is a Distribution Network and comprises one or more LDZs

## **Offtake Code Business Rules**

### **2 Connection Facilities**

This section describes the Connection Facilities located at or near the point of offtake from the NTS to the DN. It sets out the ownership of the land, equipment and buildings, the technical specification of equipment, and the rights and responsibilities of the parties in relation to the Connection Facilities. At each Offtake Site, the relevant DNCo or NTSCo is the designated Site Owner (in most cases this is DNCo), and the other party has rights to have its equipment located on the Site Owner's land. The detailed rules cover inter alia:

- Rights granted by the Site Owner to the other party to:
  - retain, replace, remove and relocate its equipment and buildings
  - install new equipment and buildings
  - gain access to its equipment and buildings
- Ensuring equipment of both parties remains compatible
- Utility services provided by Site Owner to the other party
- Site security and safety rules

#### **2.1 Definitions**

- Offtake is the agreed point at the inlet to DNCo's Connection Facilities (marked for each Offtake Site in the information recorded in the form specified in Annex 1) where gas passes from the NTS to a DN and at which Offtake Rights (as defined in section 8) apply.
- Connection Facilities are the facilities installed and operated by NTSCo and/or DNCo, located at or near an Offtake including equipment, land and buildings.
- Offtake Site is a location where Connection Facilities are located.
- Site Owner is the party designated as such in respect of an Offtake Site.

#### **2.2 Description of Connection Facilities**

- Specific information relating to Connection Facilities at each Offtake Site shall be recorded in the form set out in Annex 1.

#### **2.3 Rights to retain existing Connection Facilities**

- The Site Owner grants to the other party the right to retain Connection Facilities on the Site Owner's land in such places as they are located at the date of this agreement.

#### **2.4 Obligation to maintain shelter and support for Connection Facilities**

- Each Site Owner shall maintain any shelter and support provided in respect of the other party's Connection Facilities at the date of this Agreement or, if later, when relocated on the Site Owner's land.

#### **2.5 Compatibility of Connection Facilities**

- DNCo and NTSCo each warrant that its Connection Facilities are and will remain (subject to the modification process below) technically and operationally compatible with the other party's Connection Facilities.
- A party's Connection Facilities shall be deemed incompatible if modified so that the other party is required to operate its Connection Facilities in a different way involving additional cost, or is required to modify its own Connection Facilities.
- If a party breaches the compatibility warranty, it shall immediately notify the other party.
- Each party shall retain the right to disconnect the other party's system in the event of a material breach of the compatibility warranty.
- Either party shall be entitled upon reasonable notice to inspect the other party's Connection Facilities for the purposes of determining whether the Connection Facilities remain technically and operationally compatible.

#### **2.6 Modification of Connection Facilities**

- Should either party wish to modify its Connection Facilities, such that they become incompatible with the other party's Connection Facilities, then the party requiring the modification shall seek the written consent of the other party and shall bear the reasonable costs of both parties' modification works.

- Where the modification is made in order to comply with any legal requirement, then each party shall make all necessary changes and shall bear its own costs.
- Each party shall be responsible for the undertaking of any modification to its own Connection Facilities.
- Both parties shall co-operate with each other so that such modifications may be made in a timely manner.

## **2.7 Rights to replace or alter Connection Facilities**

- The party that is not the Site Owner shall retain the right to replace or alter its Connection Facilities subject to the compatibility warranty, provided that the Site Owner will not be required to provide additional space or facilities.
- The reasonable costs incurred by the Site Owner in accommodating the replacement / alteration will be funded by the other party.
- The party that is not the Site Owner will give due consideration as to whether any replacement or alteration could reasonably be effected by locating Connection Facilities on its own property.

## **2.8 Relocation of Connection Facilities**

- Where a Site Owner wishes the other party to relocate its Connection Facilities to another location which may be on the Site Owner's land, or the other party's land, or on a third party's land, then the Site Owner shall obtain the consent of the other party and shall bear all associated costs of such relocation.

## **2.9 NTSCo telemetry**

- Where NTSCo is not the Site Owner, then it shall have the right to install, retain and use (at its own expense) at each Offtake Site referred to in Annex 1 at the date this agreement first applied to the Site Owner, a telemetry kiosk and associated equipment.
- DNCo shall provide a land area (not within the hazardous area of the Offtake Site) to accommodate a 3 metre x 3 metre Glass Reinforced Plastic kiosk on a suitable concrete base with 1 metre wide path around and vehicular access to a point as close as reasonably practicable to the land area provided, together with cabling routes and connection points with DNCo telemetry equipment and with any NTSCo valve control equipment.
- The telemetry arrangements are specified in more detail in Section 5 and Annex 4.
- Any capital costs necessarily incurred by DNCo so that utility services associated with NTSCo telemetry equipment can be provided under section 2.10 will be reimbursed by NTSCo, but NTSCo shall thereafter receive the utility services free of charge.

## **2.10 Utility services provided by the Site Owner to the other party**

- The Site Owner shall provide the other party free of charge with the utility services reasonably required for the operation and maintenance of the other party's Connection Facilities within each Offtake Site.
- The utility services provided at each Offtake Site shall be recorded in the form set out in Annex 2.

## **2.11 Rights of access**

- The Site Owner grants to the other party a right of access free of charge at all times for the purpose of the maintenance, inspection, testing, removal, operation, modification, replacement, installation or repair of any of the other party's Connection Facilities.

## **2.12 Site security and safety rules**

- The Site Owner shall maintain and provide site security in relation to the other party's Connection Facilities within the Offtake Site to the same standard as the Site Owner provides in relation to its own Connection Facilities at that Offtake Site.
- Each Site Owner will develop site safety rules for its Offtake Sites in consultation with the other party.
- Each party shall abide by the site safety rules.
- Security breaches will be promptly reported by the Site Owner to the other party.

**2.13 Non-interference**

- Subject to the right of disconnection under section 2.5, each party agrees that it will not interfere in any way with the other party's Connection Facilities without consent, such consent being deemed given in emergency circumstances.

**2.14 New Offtakes and other changes**

- Any revisions to the information recorded in the form set out in Annex 1 or Annex 2 to accommodate the construction of new Offtakes, modifications, relocations, removals or alterations shall be made prior to the offtake of gas or change of mode of operation.
- The terms of this Agreement shall apply to each new Offtake from the date of commissioning of such Offtake.

[Note. If the DNCo wishes to have a new connection to the NTS, then this shall be treated by NTSCo in accordance with policies and processes established for NTS Supply Points and Connected System Exit Points as outlined in the latest Ten Year Statement or Licence Condition 4B Statement]

**2.15 Decommissioning**

- If the Site Owner wishes to cease use of an Offtake Site on a permanent basis, then the provisions of section 2.8 will apply with regard to the relocation of the other party's Connection Facilities.

## Offtake Code Business Rules

### 3 Safety and Emergency

The Gas Safety (Management) Regulations 1996 place a requirement on each gas transporter to prepare a Safety Case addressing inter alia the measures necessary for dealing with emergency situations. There is also a duty on gas industry participants to cooperate with gas transporters and the Network Emergency Coordinator. Gas transporters must set out in their Safety Cases the arrangements that enable them to comply with these duties of cooperation.

Transco fulfils these obligations currently through preparation of its Safety Case and a suite of underpinning Emergency Procedures. The procedures currently developed, tested and implemented by Transco are:

- Network Gas Supply Emergencies Procedure (E1) covering circumstances involving loss of pressure in the primary system (the NTS) which may impact on secondary systems (the DNs). All industry participants, both upstream and downstream of the NTS, are involved when the procedures are implemented.
- Transco Local Gas Supply Emergencies Procedure (E2) covering loss of pressure in a DN system. This involves Transco, shippers, and operators of systems connected to DNs.
- Internal procedures (E3) setting out how each function within Transco will comply with the requirements of E1 and E2

The procedures contain details of planned emergency steps to be taken to address emergency circumstances. The procedures are maintained and updated by Transco, and tested through industry-wide emergency exercises.

The purpose of this section is to ensure that the existing emergency procedures remain operative and that there is a formal process in which NTSCo and DNCos participate for development, testing and application of consistent industry-wide emergency procedures.

#### 3.1 Obligation to develop emergency procedures

- NTSCo shall be responsible for the development and maintenance of:
  - a single set of procedures (E1) to be followed in the case of a Network Gas Supply Emergency
  - the format of procedures (E3) to be followed by any party in the event of any Gas Supply Emergency
- DNCos collectively shall be responsible, through a formal process, for the development and maintenance of a single set of procedures (E2) to be followed in the case of a Local Gas Supply Emergency
- NTSCo and DNCos shall together participate in a formal review process to ensure consistency of emergency procedures E1, E2 and the format of E3

#### 3.2 Obligation to participate in emergency exercises

- NTSCo and DNCos shall participate in emergency exercises and other testing of emergency procedures in accordance with plans developed by NTSCo.

#### 3.3 Obligation to comply with emergency procedures

- NTSCo and DNCos will comply with the provisions of emergency procedures E1 and E2
- NTSCo and DNCos shall each be responsible for completing its own set of emergency procedures (E3) in the format established above detailing how each shall comply with E1 and E2 procedures. These will be circulated to all other parties.

#### 3.4 Offtake Profile Notice Revisions

- On the declaration of a National Gas Supply Emergency the Offtake Profile Notices submitted by DNCos in accordance with section 9 shall be revised to conform to flows specified by NTSCo or the Network Emergency Coordinator.

### **3.5 Emergency Avoidance**

- Where on any day DNCo reasonably believes that its rights to vary the flows at Offtakes in accordance with Section 9 are insufficient to prevent the occurrence of a Local Gas Supply Emergency on that day, then it shall inform NTSCo and the parties will cooperate to ensure the flows at Offtakes will as far as possible avert such an Emergency to the extent that this can be achieved without compromising the safe operation of the NTS.
  
- Where on any day NTSCo reasonably believes that its rights to vary the flows at Offtakes in accordance with Section 9 are insufficient to prevent the occurrence of a Potential Network Gas Supply Emergency on that day, then it shall inform DNCo and the parties will cooperate to ensure the flows at Offtakes will as far as possible avert such an Emergency to the extent that this can be achieved without compromising the safe operation of the DNCo system.

## Offtake Code Business Rules

### 4 Measurement

The measurement provisions ensure that gas flowing from the NTS is measured by the relevant DNCo using equipment complying with specified technical standards to determine:

- Volume (on an instantaneous and integrated basis)
- CV (on an instantaneous basis and as an average for a gas day)
- Energy (on an instantaneous and integrated basis)
- Other gas quality parameters (Nitrogen, Carbon Dioxide, Wobbe Index etc...) where required

The measurements are used for several purposes under the Network Code, including allocation of quantities offtaken by shippers and the determination of both NTS and LDZ throughput and shrinkage quantities.

The purpose of this section is to ensure accurate measurement and timely correction of errors. The detailed rules cover inter alia:

- Validation procedures, whereby the accuracy of measurement equipment is tested and if necessary the equipment is corrected to read accurately. This includes routine validation performed at set frequencies by the DNCo as well as rights for NTSCo to request exceptional validation at short notice;
- Corrections to be applied to previous readings where measurement equipment is found to be reading in error, and estimates to be made where readings are unavailable. These corrections and estimates feed into the Network Code calculations;
- A process for dealing with disputes regarding measurement.

#### 4.1 Definition

- Measurement Equipment includes all equipment used to determine the volume, energy and quality of the gas flowing from the NTS at the Offtake.

#### 4.2 Responsibility for Measurement Equipment

- DNCo shall install, operate and maintain in proper working order Measurement Equipment for registering the instantaneous and integrated volume, the instantaneous and integrated energy, and gas quality parameters for all gas flowing from the NTS at each Offtake
- The gas characteristics to be measured and the standards to which the Measurement Equipment shall perform at each Offtake Site shall be recorded in the form set out in Annex 3.
- DNCo shall be responsible for carrying out all validation and maintenance activities for the Measurement Equipment.

#### 4.3 Technical specification

- The Measurement Equipment shall be operated and maintained to measure all flows from the NTS at the Offtake in accordance with all applicable national, international and/or industry standards, as appropriate and in force at the date of installation of the Measurement Equipment. In particular, but without limitation, the Measurement Equipment shall comply with the following regulatory requirements:
  - Gas Act 1986
  - Gas Safety (Management) Regulations 1996
  - Gas (Calculation of Thermal Energy) Regulations 1996

and the following best practice recommendations and standards:

- IGE Meter Recommendations (IGE/GM/1 and IGE/GM/4)
- BS EN 1776; "Gas supply. Natural gas measuring stations. Functional requirement"
- ISO 5168 "Measurement of fluid flow. Evaluation of uncertainties"
- BS 1042 "Measurement of Fluid Flow in Closed Conduits"
- For orifice plate metering systems, BS EN ISO 5167 "Measurement of fluid flow by means of pressure differential devices inserted in circular cross section conduits running full"
- For turbine metering systems, BS 7834 (ISO 9951) "Specification for turbine meters used for the measurement of gas flow in closed conduits"

- For ultrasonic metering systems:
    - BS 7965 “The selection, installation, operation and calibration of diagonal path transit time flowmeters for industrial gas applications”
    - BS ISO/TR 12765 “Measurement of fluid flow in closed circuits. Methods using transit time ultrasonic flowmeters”
    - AGA 9 “Measurement of Gas by Multipath Ultrasonic Meters”
    - ISO 10723 (1995) “Natural gas. Performance evaluation for on-line analytical systems”
  - ISO 6976 (1995) “Natural gas. Calculation of calorific values, density, relative density and Wobbe index from composition”
  - For any other measurement system, such standards/guidelines as may be agreed between the parties.
- The version or date of the standard to be complied with shall be that pertaining at the date the Offtake Code came into force, or as otherwise agreed between the parties.
  - All Measurement Equipment shall be set to read without bias; the uncertainty of parameters determined by the Measurement Equipment at each Offtake shall be better than the values recorded in respect of that Measurement Equipment in the form set out in Annex 3.
  - All measured parameters shall be corrected to UK metric Standard Temperature and Standard Pressure conditions.
  - Where standards referenced in this Agreement are updated or replaced, then NTSCo may by notice require that the updated or replacement standards shall be applied to all Measurement Equipment installed after the date of coming into force of the updated or replaced standard.
  - Measurement Equipment installed at the date of this Agreement that does not comply with the relevant requirements (as set out above) shall be made by the DNCo to comply with the relevant requirements as and when the Measurement Equipment is substantially modified or replaced.
  - All equipment and materials used in the validation of the Measurement Equipment shall be traceable to national or international standards as appropriate.

#### **4.4 Measurement Equipment maintenance schedule**

- The provisions relating to Measurement Equipment maintenance are specified in section 7.3

#### **4.5 Routine Validation**

- DNCo shall validate Measurement Equipment at least once in each twelve-month period.
- Where new Measurement Equipment is brought into commission, or where Measurement Equipment has been modified, the relevant Measurement Equipment shall be validated prior to allowing any gas to be monitored by it.
- Validation in accordance with this Section 4.5 is termed Routine Validation.
- DNCo shall bear the costs and expenses of Routine Validation and any adjustment or replacement of the components of the Measurement Equipment made as a result thereof.

#### **4.6 Exceptional Validation**

- NTSCo may request Exceptional Validation of Measurement Equipment.
- Where such a request is made DNCo shall validate the Measurement Equipment by the end of the following day. If DNCo agrees to cease flows through the Offtake monitored by such Measurement Equipment until the validation is completed, the time period for completion of the validation shall be extended to 10 working days.
- The costs and expenses of Exceptional Validation, and any adjustment or replacement of the components of the Measurement Equipment made as a result thereof shall, if the Measurement Equipment is found to read without discernable bias and within the Permitted Ranges recorded in respect of that Measurement Equipment in the form set out in Annex 3, be paid by NTSCo and in any other case by DNCo.

#### **4.7 Conducting Validation**

- DNCo shall give 10 working days advance notice of Routine Validation to NTSCo.
- DNCo shall give notice to NTSCo of Exceptional Validation not more than 4 hours following NTSCo requesting the validation.
- NTSCo shall be entitled to be present at any validation of the Measurement Equipment.

- All validations shall be conducted by DNCo.
- The processes for validation shall be T/PR/ME2 part 3. The processes for validation shall not be amended without the prior consent of NTSCo.
- Immediately following any validation, the individual components of the Measurement Equipment shall be adjusted or replaced as necessary so that the Measurement Equipment reads without bias and within the Permitted Range and each individual component of the Measurement Equipment shall read within its recommended tolerance. Where such adjustment or replacement cannot be carried out immediately, then the rules for measurement equipment rectification under section 4.10 will apply.

#### **4.8 Validation Report**

- DNCo shall provide a Validation Report to NTSCo within 14 days of any Routine Validation and within 12 hours of any Exceptional Validation.

#### **4.9 Correction of readings**

- Where the Measurement Equipment is found when validated to read with a discernable bias, regardless of whether it is within the Permitted Range, then:
  - If the period over which the Measurement Equipment has read with bias and the size of the bias at all times during such period can be determined with reasonable accuracy then the quantities read as flowing from the NTS shall be adjusted to account for the bias during such period.
  - If the period over which the Measurement Equipment has read with bias can be determined with reasonable accuracy but the size of the bias at all times during such period can not be so determined then the Measurement Equipment shall be assumed to have read with half of the bias determined at validation during the whole of such period and the quantities read as flowing from the NTS shall be adjusted accordingly
  - If neither the period over which the Measurement Equipment has read with bias nor the size of the bias at all times during such period can be determined with reasonable accuracy then the Measurement Equipment shall be assumed to have read with half of the bias determined at validation during the whole of the period since it was last adjusted to read without bias and the quantities read as flowing from the NTS shall be adjusted accordingly
- Where the Measurement Equipment is found when validated to read without bias but outside the Permitted Range then the quantities read as flowing from the NTS during the period since the Measurement Equipment was last adjusted to read within the Permitted Range shall be accepted without adjustment.

#### **4.10 Measurement Equipment rectification**

- In the event of failure of the Measurement Equipment or it reading in error (i.e. the Permitted Range is breached):
  - DNCo shall notify NTSCo within 1 hour of identifying the failure or error.
  - If requested by NTSCo, DNCo shall rectify any fault within 24 hours of it being identified. In situations where it is not practicable for DNCo, acting as a Reasonable and Prudent Operator, to rectify such failure within 24 hours, DNCo shall submit proposals for initiating rectification of any such fault within 24 hours of the fault being identified and shall rectify such failure as soon as reasonably practicable.
  - If requested by NTSCo, DNCo shall cease, or where this is not possible for safety reasons, minimise the flow of gas through the relevant Offtake whilst the failure or error exists.
  - If requested by NTSCo, DNCo shall take all reasonable steps to record and store volume / energy measurements at intervals not exceeding 30 minutes for a period of 6 months or since the last validation whichever is the longer for reconciliation purposes such that the effect of the failure of a single component can be calculated.

#### **4.11 Estimation of readings**

- Where Measurement Equipment, or any element of it, fails such that it does not provide measurements in the usual way for any period, then the DNCo shall wherever possible obtain the measurements from the working components of the measurement equipment (e.g. the turbine meter and/or flow computer) and estimate the required measurement using this data.
- Where no information can be obtained, then the flows shall be estimated by reference to recent flows through the Offtake in question under similar operating conditions.
- DNCo shall provide NTSCo with information relating to the basis on which any estimates are made.

#### **4.12 Disputes**

- The results of any validation as given in the Validation Report shall be binding on the parties unless NTSCo shall within fourteen (14) days after receiving the Validation Report, give notice to DNCo that it disputes the accuracy of such validation. NTSCo shall not be entitled to dispute the accuracy of the validation solely on the grounds that it did not attend such validation.
- Any estimate made pursuant to section 4.11 shall be binding on the parties unless NTSCo shall within fourteen (14) days after receiving such estimate and the supporting information, give notice to DNCo that it disputes the accuracy of such estimate.
- At the request of either party, the parties shall meet and discuss and endeavour to settle any dispute or failure to agree arising from the application of the provisions of this paragraph and if within thirty (30) days after such request they have been unable to agree the matter may be referred (at the request of either Party) to an Expert for determination.

#### **4.13 Inspection rights**

- NTSCo shall have the right, upon giving five (5) working days notice to DNCo to inspect the Measurement Equipment and the charts and other measurements or test data of DNCo relating to measurements made in the previous 12 month period but the reading calibration and adjustment of such and the changing of any charts shall be carried out only by DNCo
- DNCo shall preserve all original test data, charts and other similar records for a period of seven (7) years and shall at no cost to NTSCo make a copy thereof available to NTSCo upon request as soon as reasonably practicable.

#### **4.14 Records**

- DNCo shall, for the purposes of facilitating any data reconciliation or the resolution of any dispute, preserve all measurement data, charts and other similar records relating to Measurement Equipment for a period of seven (7) years and shall at no cost to NTSCo make a copy thereof available to NTSCo upon request as soon as reasonably practicable.
- DNCo shall maintain auditable logs relating to Measurement Equipment that shall include but not be limited to:
  - System alarms contributing to flow measurement system fault alarm and to any equipment within the measurement system;
  - Configuration of flow computers and programmable devices within the measurement system; and
  - Tests or validations of the measurement system.

## Offtake Code Business Rules

### 5 Telemetry

This section sets out details relating to the exchange of the telemetered electronic information between DNCos and NTSCo in real time.

Access to real-time data relating to gas flowing at each Offtake is required by NTSCo to operate the NTS in a safe and efficient manner. Elements of this data may also be used for Network Code purposes. The measurements at each Offtake Site are made by DNCo.

If a System Operation Managed Service Agreement (SOMSA) between Transco and the DNCo is in place the DNCo will send the information to NTSCo via satellite link.

On the expiry of the SOMSA NTSCo will have its own telemetry facilities at each Offtake Site and:

- data will be provided by DNCo via direct hard-wired links to the proposed NTSCo telemetry equipment within the Offtake Site and
- NTSCo will have the capability to operate NTSCo owned block valves within the Offtake Site and, under certain circumstances, to take override control of the DNCos pressure/ flow management equipment;

This section sets out the equipment to be installed, the data to be transmitted, and the arrangements in the event of equipment failure.

#### 5.1 Measurements to be made and data to be transmitted

- The measurements to be made and data to be transmitted in respect of each Offtake Site will be recorded in the form set out in Annex 4.

#### 5.2 Communication interface for duration of SOMSA

- For so long as a System Operation Managed Service Agreement (SOMSA) between NTSCo and DNCo is in force DNCo shall provide the data signals recorded in the form set out Annex4 via satellite link in a form specified by NTSCo.
- DNCo will provide suitable equipment to transmit the data to NTSCo's satellite link for onward transmission to NTSCo's control system, with appropriate back up arrangements.

#### 5.3 Installation and commissioning of new NTSCo telemetry equipment

- DNCo grants NTSCo the right to make connections at NTSCo's expense between NTSCo telemetry equipment and any NTSCo valve control equipment, and between NTSCo telemetry equipment and DNCo telemetry equipment by the installation of cables laid in ducts within the Offtake Site.
- At NTSCo's request DNCo shall at its own expense provide a module within DNCos telemetry unit to facilitate override control of flow and pressure control valves by NTSCo in accordance with section 9.3
- The parties shall cooperate in the commissioning of NTSCo telemetry equipment
- At NTSCo's request, the parties will meet, discuss and agree details relating to the installation and commissioning of NTSCo telemetry equipment and the associated connections

#### 5.4 Communication interface following expiry of SOMSA

- DNCo shall provide site signals to NTSCo of type, quality and quantity as recorded in the form set out in Annex 4 via an Ethernet or serial (RS232) data link utilising standard Modbus protocol.
- Telecommunications for the transfer of telemetry data to NTSCo control centres will normally be via NTSCo satellite equipment. DNCo will provide a back up ISDN circuit and [240 volt 16 Amp 50 Hz A/C] electrical supply as specified sections 2.9 and 2.10

#### **5.4 General obligations relating to telemetry**

- DNCo shall maintain all existing DNCo owned measurement and telemetry facilities at each Offtake Site such that they provide the means of conveying the electronic data signals recorded in the form set out in Annex 4 on a continuous basis.
- Where discrete inputs are necessary for analogues and states (e.g. on/off) these are to be presented as 4 – 20mA and volt free contact respectively.

#### **5.5 Resilience of telemetry equipment**

- The availability of DNCo telemetry equipment will be better than 99.95% per year on average, and the mean time between failure shall not be less than 80505 Hrs.

#### **5.6 Failure of telemetry equipment**

- In the event that either party suspects the failure of telemetry equipment at an Offtake Site:
  - The party shall notify the other party immediately;
  - DNCo shall immediately check the proper working order of its telemetry equipment
  - DNCo shall rectify any identified faults with its telemetry equipment as soon as reasonably practicable. In situations where it is not practicable for DNCo, acting as a Reasonable and Prudent Operator, to rectify such failure within 24 hours of the fault being identified, DNCo shall submit its plans to NTSCo for rectifying the fault within the next 24 hours;
  - DNCo shall cease, or where this is not possible for safety reasons, minimise the flow of gas through the relevant Offtake whilst the failure or error exists.
  - Where NTSCo informs DNCo that the safe operation of the NTS is compromised whilst telemetry is not properly functioning, DNCo shall cease flow through the Offtake.

## Offtake Code Business Rules

### 6 Calorific Values

This section describes the methodology by which the daily Calorific Value (CV) is to be determined and the roles and responsibilities of NTSCo and each DNCo in its determination.

In accordance with arrangements set out under the Gas (Calculation of Thermal Energy) Regulations, each DNCo must determine the daily CV for each declared charging area. Currently Network Code LDZs are the declared charging areas for all DNCos. The Regulations permit the application of the "daily CV" (also known as the flow weighted average calorific value (FWACV) or the area CV) for a charging area, determined using the daily average CV and volume for each relevant input to, and output from, the charging area.

It is proposed that for an interim period of until the end of the current formula period NTSCo will calculate the daily CV using data provided by DNCos.

Under Network Code, the daily CV is applied to determine the quantity of gas supplied to each charging area for the purposes of energy balancing. Energy losses associated with application of the daily CV are currently borne by NTSCo under its SO incentive arrangements.

#### 6.1 Obligations

- Each DNCo is obliged to determine the daily CV of gas conveyed to LDZ Supply Points in each defined charging area within its Licenced area(s) in accordance with the Gas (Calculation of Thermal Energy) Regulations.
- For the period from commencement of this agreement to 31 March 2007, NTSCo shall determine the daily CV on behalf of each DNCo in accordance with the provisions set out in sections 6.2 and 6.3.

#### 6.2 Determination of the daily CV for each charging area

- Each DNCo will provide NTSCo with the daily average CV and daily volume for each Offtake in accordance with section 15 and to the accuracy specified in section 4.
- Where a DNCo is unable to determine CV within the required accuracy at any Offtake for a continuous period exceeding 8 hours in any gas day or days such that the daily average CV for that Offtake can not be utilised (in accordance with the Regulations), NTSCo shall apply available CV measurements from any "alternative place" (as defined in the Regulations)
- NTSCo will apply the CV and volume data provided by the DNCo, and if required, attributed CV data from an alternative place, to determine the daily CV for each charging area for each gas day in accordance with the Regulations.
- NTSCo will publish the daily CV for each charging area on the Transco website.

#### 6.3 Changes to the determination of the daily CV

- DNCo shall inform and discuss with NTSCo any changes it intends to make to the process by which the daily average CV for its charging area is determined including (inter alia):
  - electing under The Gas (Calculation of Thermal Energy) Regulations to apply a different methodology from the "area CV" or change to the definition of a charging area; or
  - increasing or decreasing the number of relevant input and/or output points for a charging area; or
  - changing the configuration of CV measurement equipment
- The DNCo shall pay the reasonable additional costs of NTSCo incurred in accommodating changes to the CV determination process.

#### **6.4 CV Shrinkage**

- CV Shrinkage is the contribution to NTS shrinkage arising from the application of the daily CV rather than the measured CV
- DNCo shall co-operate with NTSCo with the objective of minimising the CV Shrinkage for each gas day.
- A DNCo shall reimburse to NTSCo any additional CV Shrinkage cost that arises as a result of failure of CV and/ or volume measurement equipment that could have been reasonably foreseen and avoided.

## Offtake Code Business Rules

### 7 Maintenance

This section covers maintenance works by either NTSCo or DNCos that affects (or could affect) the other party. Its purpose is to ensure that:

- all maintenance is conducted safely in accordance with set procedures
- maintenance by the parties is planned and coordinated in a way which enables them to meet their respective obligations and to enjoy the relief afforded under the Network Code in respect of maintenance affected supply points
- the parties cooperate where particular flows are required, e.g. for on-line inspection of pipelines, pressure testing, pipeline commissioning etc.
- there is transparency of the maintenance requirements and programme for measurement equipment
- urgent maintenance can be conducted when necessary

The NTSCo maintenance plan prepared under the Network Code is a driving factor. It is expected that DNCos will fit their maintenance around this to ensure they gain maximum benefit from the relief afforded under the Network Code from their obligations to make gas available at Supply Points. Under the Offtake Code, NTSCo obtains relief from its obligations to make gas available at Offtakes for a set number of days of planned summer maintenance.

#### 7.1 Relevant Maintenance

- Relevant Maintenance shall mean any routine or non routine works conducted by any party that, in order to be conducted safely, requires that another party is aware of such works and that the works are conducted in accordance with the Safe Control of Operations Procedures (the SCO Procedures)
- Relevant Maintenance shall be carried out in accordance with the SCO Procedures
- A formal process will be developed for making revisions to the SCO Procedures
- Notice is to be given prior to commencement of Relevant Maintenance in accordance with SCO Procedures.

#### 7.2 Flow Maintenance

- Flow Maintenance is a type of Relevant Maintenance that:
  - When conducted by NTSCo has a material effect on the ability to flow gas at Offtakes in accordance with the Offtake Rights Values defined in section 8
  - When conducted by DNCos has a material effect on the ability to flow gas at Offtakes up to the levels specified by the Offtake Rights Values
- Flow Maintenance will be specifically identified in the Maintenance Programmes drawn up under section 7.4
- For Flow Maintenance conducted by NTSCo revised Offtake Rights Values specified by NTSCo will apply for the duration of the works. Provided that:
  - Revised parameters may only be applied in the months of April to October inclusive
  - The maximum number of days in any Supply Year on which revised Offtake Parameters as above may be applied in aggregate at Offtakes associated with an LDZ will not exceed [x] multiplied by the number of such Offtakes.
  - The aggregate Maximum Daily Quantity for all Offtakes for all Demand Ranges for the LDZ will remain unaffected

#### 7.3 Measurement Equipment Maintenance

- Measurement Equipment Maintenance is a type of Relevant Maintenance and will be specifically identified in the Maintenance Programmes drawn up under Section 7.4
- Not later than the last day of each month, DNCos shall provide NTSCo with a report detailing the Measurement Equipment maintenance carried out in the preceding month.

#### 7.4 Planning of Maintenance

- NTSCo and each DNCo will provide its Maintenance Programme covering the works (including inspections) each intends to conduct in accordance with the following table:

Date due	Programme type	Period covered	Party providing	Party receiving
30 November	Draft	24 months from next 1 April	NTSCo	DNCos
31 December	Draft	24 months from next 1 April	DNCos	NTSCo
1 February	Draft	24 months from next 1 April	NTSCo	DNCos
15 March	Final	24 months from next 1 April	NTSCo	DNCos
			DNCos	NTSCo
30 June	Draft update	6 months from next 1 October	NTSCo	DNCos
			DNCos	NTSCo
15 September	Final update	6 months from next 1 October	NTSCo	DNCos
			DNCos	NTSCo

- The draft programmes provided by NTSCo shall be reviewed by the DNCos and at the request of either NTSCo or any DNCo any maintenance works included in the programme may be deemed Relevant Maintenance
- The draft programmes provided by a DNCo shall be reviewed by NTSCo and at the request of either the DNCo or NTSCo any maintenance works included in the programme may be deemed Relevant Maintenance
- Only Relevant Maintenance will be included in the final programmes.

#### 7.5 Revision of Maintenance Programmes

- DNCos and NTSCo may revise their respective final Maintenance Programmes by notice given not less than 5 days ahead of the works commencing or such lesser period as the parties may agree.
- The notice will specify the nature of the works and the dates on which it will be carried out.
- Only Relevant Maintenance will be included in such revised final Maintenance Programme

#### 7.6 Postponement of maintenance

- Either party has the right to postpone Relevant Maintenance to be conducted by the other party if the works would compromise the safe operation of the postponing party's system
- The party postponing the works will pay to the other the reasonable abortive costs associated with postponement

#### 7.7 Maintenance Cooperation

- There are types of Relevant Maintenance that require the cooperation of the other party so as to ensure certain rates of gas flow at Offtakes to allow the maintenance to take place.
- A party when requested by the other to cooperate will do so, so as to facilitate the maintenance taking place.

- The maintenance will take place in accordance with detailed arrangements agreed between the parties.
- These types of maintenance will be treated as Flow Maintenance and the Offtake Rights Values revised only in the case of such maintenance conducted by NTSCo which affects its ability to make gas available at Offtakes in accordance with the Offtake Rights Values

#### **7.8 Urgent Maintenance**

- Urgent Maintenance is a form of Relevant Maintenance required to be conducted urgently in order to ensure the continued safe operation of either party's system and which cannot await revision to the final Maintenance Programmes under section 7.5
- The requirement for Urgent Maintenance works will be notified by the initiating party to the other and the parties will, acting reasonably and taking account of the urgency of the circumstances, agree to any timing conditions before works commence.

#### **7.9 Notification of Maintenance Works.**

- Each party will be responsible for notifying Shippers of any maintenance affecting the availability of gas for offtake at Supply Points connected to its system, in accordance with Network Code Section L 4.2.

## Offtake Code Business Rules

### 8 Offtake Rights Planning

The purpose of this section is to establish an offtake rights planning process that enables both NTSCo and DNCos to fulfil their respective statutory obligations to provide transportation capacity. Demand information and offtake rights requests are provided by DNCos so that NTSCo can determine its statutory obligations to provide capacity in the NTS and prepare its Ten Year Statement accordingly. NTSCo then allocates offtake rights for the following 5 years consistent with these obligations. Primary offtake rights relate to the maximum daily quantity provided at offtakes in accordance with NTSCo's statutory obligation. Secondary offtake rights relate to diurnal storage and pressure commitments made by NTSCo. Secondary rights are made available to the extent the NTS is capable of providing the rights in a given year, but NTSCo does not invest or incur additional operating costs in providing these rights. The detailed allocation mechanism places constraints on the extent to which NTSCo may reduce secondary rights from year to year, providing DNCos with certainty against which to plan their diurnal storage requirements. The constraints are an interim measure, as it is expected that a charging mechanism will be developed to provide both NTSCo and DNCos with appropriate incentives relating to diurnal storage.

In the light of the offtake rights allocations established, DNCos are able to plan to meet their statutory obligations to provide capacity in the DN systems.

The values for Offtake Parameters established under the planning process are used to define the rights and obligations of the parties with regard to gas flows at the Offtakes.

#### 8.1 Offtake Parameters

- Offtake Parameters relate to the gas flows through each of the Offtakes associated with an LDZ, for each of a number of Demand Conditions in a particular Gas Supply Year.
- Offtake Rights Values are values allocated to the Offtake Parameters defining the rights and obligations of the parties with regard to the flow of gas at Offtakes
- Demand Conditions are ranges of demand conditions forecast in the relevant Supply Year, as specified by NTSCo in the Offtake Rights Request template
- The Offtake Parameters for an LDZ in any Supply Year are, for each Offtake at each of the Demand Conditions, the following:
  - The **Maximum Daily Quantity** established through the planning process, is the maximum daily quantity that may be notified under section 9
  - The **Maximum Diurnal Storage Quantity** to be provided from the NTS, established through the planning process, is the difference between the maximum positive variance between the cumulative hourly flow quantity and the cumulative average hourly flow quantity across the gas day and the maximum negative variance between the cumulative hourly flow quantity and the cumulative average flow quantity across the gas day.

This function is mathematically represented as:

$$Max_{h=1}^{24} \left( \sum_{j=1}^h SHQ_j - \left( \frac{SOQ}{24} \cdot h \right) \right) - Min_{h=1}^{24} \left( \sum_{j=1}^h SHQ_j - \left( \frac{SOQ}{24} \cdot h \right) \right)$$

where:

- SHQ is the actual hourly flow
- SOQ is the actual daily flow
- h is the number of hours elapsed in the gas day

- The Maximum Diurnal Storage Quantity has an associated **Diurnal Storage Profile**, setting out the rates at which gas may be notified for Offtake under section 9 such that the Maximum Diurnal Storage Quantity may be taken
- The **Maximum Rate**, established through the planning process, is the maximum rate that may be notified under section 9 for any time of day, and shall be defined by the Diurnal Storage Profile and if the profile is flat shall be the Maximum Daily Quantity divided by 24
- The **Minimum Rate**, established through from the information recorded in the form set out in Annex 3, is the minimum rate that may be notified under section 9
- The **Maximum Rate of Change** of the flow rate which may be notified under section 9 shall be 50 MW/min
- The **High Pressure**, established through the planning process, is the minimum pressure at the Offtake at the time of day (the **High Pressure Time**) at which the extremity point of the distribution system downstream of that Offtake is at its maximum pressure
- The **Low Pressure**, established through the planning process, is the minimum pressure at the Offtake at the time of day at which the extremity point of the distribution system downstream of the Offtake is at its minimum pressure
- **Primary Offtake Rights** are the Offtake Rights Values for the Maximum Daily Quantities for an LDZ allocated in accordance with section 8.6.1
- **Secondary Offtake Rights** are the Offtake Rights Values for the Maximum Diurnal Storage Quantity and the associated Diurnal Storage Profile, the Maximum Rate, the High Pressure, and the Low Pressure for an LDZ allocated in accordance with section 8.6.2

## 8.2 Offtake Rights Planning Overview

- A Gas Supply Year shall run from 1 October to 30 September.
- NTSCo shall conduct and DNCos shall participate in the Offtake Rights planning process which shall take place in each Gas Supply Year.
- DNCos will provide information on the forecast demand for gas in each LDZ to enable NTSCo to prepare the Ten Year Statement. DNCos will request Offtake Rights consistent with their demand forecasts.
- NTSCo will determine its statutory obligations to provide capacity and will prepare the Ten Year Statement accordingly. NTSCo will then, consistent with the Ten Year Statement, allocate Offtake Rights to each LDZ in respect of each of the next five Gas Supply Years
- Offtake Rights are requested and allocated for a Gas Supply Year by specifying Offtake Rights Values for those Offtake Parameters for which values are established through the planning process
- The Offtake Rights planning process will be structured such that planning information can be expressed in both energy and volume units through use of appropriate calorific value assumptions

## 8.3 Offtake Rights Request

- In each Gas Supply Year DNCo shall submit no later than 1 January, 1 April, 1 July and 1 September for each LDZ an Offtake Rights Request (unless there are no changes to the previous Offtake Rights Request)

- The Offtake Rights Request shall:
  - Comprise DNCo's forecast of demand for the LDZ over the following ten Gas Supply Years
  - Comprise a request for Offtake Rights (in the form of requested Offtake Rights Values) in the following five Gas Supply Years that DNCo reasonably believes it will require to provide in accordance with its licence obligation to provide capacity, and indications of the capacity it may request for years 6 to 10
  - Be in the form set out in Annex 5. NTSCo may revise the template and guidance notes and provide these to DNCo no later than 1 month prior to the submission date for the Offtake Rights Request and these shall be used by DNCo until further revisions are made.
  - Be completed using the Planning Procedures described in Annex 5 and the guidance notes provided by NTSCo
  - Include a commentary on the sensitivity of the Offtake Rights Values requested
- In addition to the Offtake Rights Requests DNCo will during the course of each Supply Year provide the demand information in accordance with Annex 5. NTSCo shall be entitled to make public the demand information provided by DNCo in aggregate form such that the confidentiality of demand information relating to individual loads is maintained.
- On request from NTSCo, DNCo will provide any additional information reasonably required by NTSCo to fulfil its obligations under Section O of the Network Code.

#### **8.4 Ten Year Statement**

- NTSCo will determine its statutory obligations to provide capacity and will prepare the Ten Year Statement accordingly using the demand information available to it, including that provided by DNCo's under this agreement.

#### **8.5 Offtake Rights Allocation**

- NTSCo will provide DNCo with an Offtake Rights Allocation no later than twelve weeks following the latest submission date for the Offtake Rights Request
- The Offtake Rights Allocation will be an allocation of Offtake Rights (in the form of allocated Offtake Rights Values) for the following five Gas Supply Years, made in accordance with the Offtake Rights allocation process
- The form of the Offtake Rights Allocation and the Offtake Rights Allocated to DNCo at the date of this Agreement are set out in Annex 6

#### **8.6 Offtake Rights Allocation Process**

Offtake Rights will be allocated in respect of each of the next five Gas Supply Years in accordance with the following Offtake Rights allocation process:

##### **8.6.1 Primary Offtake Rights**

- NTSCo will, consistent with the Ten Year Statement (and taking account of any further information received regarding supply or demand that was not taken into account in the preparation of the existing statement), for each LDZ and for each of the next five Gas Supply Years allocate Offtake Rights Values for the Maximum Daily Quantity at Offtakes under all Demand Conditions which, when taken together with all other Offtake Rights Values set out in the immediately preceding Offtake Rights Allocation, in NTSCo's reasonable judgement, fulfil NTSCo's statutory obligation to provide capacity

### **8.6.2 Secondary Offtake Rights**

- For each Offtake, NTSCo will provide indications of the future availability of Offtake Rights by specifying Offtake Rights Values for the Maximum Diurnal Storage Quantity and the associated Diurnal Storage Profile, the Maximum Rate, the High Pressure, and the Low Pressure (together Secondary Offtake Rights) based on:
  - 100% probability of availability
  - 50% probability of availability
  - 20% probability of availability
- For each Offtake, NTSCo shall allocate Offtake Rights Values for Secondary Offtake Rights up to DNCo's requested Offtake Rights Values to the extent that:
  - (based on the Primary Offtake Rights Allocations made under section 8.6.2 and 100% probability of availability of Secondary Offtake Rights) the Secondary Offtake Rights can be made available from the NTS without compromising the safe and efficient operation of the NTS and without requiring additional capital expenditure or operating expenditure to be incurred by NTSCo; and
  - no other DNCo has requested use of the same Secondary Offtake Rights.
- Where two or more DNCos request use of the same Secondary Offtake Rights, the Secondary Offtake Rights that can be made available as aforesaid will be allocated in proportion to the Offtake Rights Values applicable to the relevant Offtake Parameter and Gas Supply Year in the immediately preceding Offtake Rights Allocation
- Where in accordance with the above in respect of Secondary Offtake Rights, NTSCo is unable to allocate a requested Offtake Rights Value:
  - in respect of the Gas Supply Year ("Year 3") commencing more than two years but less than three years from the submission date for the Offtake Rights Request (as specified in section 8.3) in which the Offtake Rights Value was requested, the Offtake Rights Value allocated by NTSCo shall not be less than 90% of the Offtake Rights Value allocated to the relevant Offtake Parameter for the Gas Supply Year immediately preceding Year 3; provided that this provision will only apply where Year 3 is a Gas Supply Year commencing in or before 2009.
  - in respect of any Gas Supply Year, the Offtake Rights Value allocated by NTSCo shall not be less than the Offtake Rights Value allocated to the relevant Offtake Parameter for the same Gas Supply Year in the immediately preceding Offtake Rights Allocation

### **8.7 Offtake Rights Discussions**

- Either party will if requested by the other meet and discuss the Offtake Rights Allocation as soon as reasonably practicable after its issue
- Should discussions lead to agreed changes to Offtake Rights Allocation that remain consistent with the Offtake Rights allocation process then a revised Offtake Rights Allocation will be issued by NTSCo as soon as reasonably practicable

### **8.8 Offtake Rights Publication**

- Following completion of each Offtake Rights allocation process NTSCo will make available to gas industry participants the Offtake Rights Allocation for all DNCos

[Note: In addition, NTSCo expects convene a meeting of all DNCos to discuss the most recently conducted Offtake Rights Allocation Process, probably in November in each year]

### **8.9 Exchange of Planning Information**

- Planning information will be exchanged electronically in a format specified by NTSCo

### **8.10 Interruptible to firm switching**

- Any Interruptible Supply Point shall not be redesignated by DNCo as Firm under section G of the Network Code unless NTSCo has confirmed that the redesignation may take place.

## Offtake Code Business Rules

### 9 Operational Flows

The purpose of this section is to establish the arrangements by which each DNCo gives Offtake Profile Notices, setting out the intended flow rates at each Offtake throughout the day. The rates notified must conform to the Offtake Rights established in the Offtake Rights Planning section. There are provisions to enable DNCo and NTSCo to vary the prevailing notified rates so that both parties have the flexibility needed to manage their systems operationally. DNCo is obliged to control flows to the notified rates, and NTSCo is obliged to make gas available at notified rates. The consequences of breaching these obligations are set out.

#### 9.1 Definitions

##### Units

- The Operational flows section will be structured such that flow information can be expressed in both energy and volume units through use of appropriate calorific value assumptions

##### Offtake Groups

- An NTS Offtake Group is a number of Offtakes associated with an LDZ, grouped on the basis that the flow through any Offtake within the group has a similar effect on the NTS as the flow through any other within the group
- NTS Offtake Groups will be specified by NTSCo in the template for the Offtake Rights Request
- An LDZ Offtake Group is a number of Offtakes associated with an LDZ, grouped on the basis that the flow through any Offtake within the group has a similar effect on the LDZ as the flow through any other within the group
- LDZ Offtake Groups will be specified by DNCo in the Offtake Rights Request

##### High Demand Days

- NTSCo may give notice of:
  - A National High Demand Day when national demand exceeds [85%] of peak day demand
  - A Local High Demand Day in respect of an LDZ when demand for that LDZ exceeds [75%] of peak day demand
- The notice periods and associated maximum rate changes are different on these days

##### Overtake and Undertake Quantities

- An Overtake Quantity at any time in respect of any day is the amount, consistent with the Planned Overtake Quantity (referred to in Annex 5), by which the highest daily quantity that could safely be accommodated in the LDZ on that day exceeds the aggregate daily quantities notified for that day
- An Undertake Quantity at any time in respect of any day is the amount, consistent with the Planned Undertake Quantity (referred to in Annex 5), by which the lowest daily quantity that could safely be accommodated in the LDZ on that day is less than the aggregate daily quantities notified for that day

##### Prevailing Flow Rate

- At any time on the gas flow day the "Prevailing Flow Rate" is the rate of flow set out in respect of such time in the Offtake Profile Notice (as from time to time modified)

## 9.2 Control

- Gas flows through the Offtakes will be notified and controlled by DNCo (subject to section 9.3)

## 9.3 Override Control

- NTSCo may take override control of flow control equipment and remotely controlled pressure control equipment at Offtakes:
  - In accordance with instructions of the Network Emergency Coordinator
  - Where there is a breach of the terms of this agreement relating to the flows at Offtakes and the safe control and operation of the NTS is compromised, in which case NTSCo will control flows in accordance with the terms of this agreement

## 9.4 Offtake Profile Notices

- Offtake Profile Notices set out the rates of flow throughout the day (or when provided within day, throughout the remainder of the day) at each Offtake
- "rate of flow" means the instantaneous rate (expressed in MW) of flow of gas from the NTS through an Offtake (and references to the rate of flow include a rate of zero where gas does not flow, and references to a change in rate of flow shall be construed accordingly).
- Offtake Profile Notices and any revisions thereto will comply with the following:
  - The notified daily quantity will not exceed the relevant Maximum Daily Quantity
  - The rates of flow notified will at no time exceed the relevant Maximum Rate
  - The rates of flow notified will at no time be less than the relevant Minimum Rate.
  - The rates of flow notified before the day will be at uniform hourly rates or in accordance with the relevant Diurnal Storage Profile
  - Where a change to the notified daily quantity necessitates notification of a rate change within day the rates of flow notified following the rate change will be at uniform hourly rates or in accordance with the relevant Diurnal Storage Profile
  - The rates of change of rates of flow will not exceed the relevant Maximum Rate of Change
  - The diurnal storage to be provided through the rates of flow notified will not exceed the relevant Maximum Diurnal Storage Quantity
  - Any restrictions to the above parameters arising through Flow Maintenance in accordance with section 7

Where:

- "relevant" means the limit applicable to the Offtake at the Demand Condition applicable to the day in respect of which the Offtake Profile Notice is given and
- the Demand Condition applicable to that day shall be established by reference to the daily quantity notified for that day
- The quantity notified for the day shall, taking account of stock changes within the LDZ and inter-LDZ transfers, be consistent with the demand forecast information generated by DNCo and provided to shippers

## 9.5 Provision of Offtake Profiles Notices

- Not later than 13:00 hrs on each day DNCo will provide Offtake Profile Notices in respect of flows at each Offtake in an LDZ on the following day, together with Overtake and Undertake Quantities
- These notifications and any revisions thereto are to be transferred electronically from DNCo to NTSCo by the Offtake Profiler system.

## 9.6 Revised Overtake and Undertake Quantities

- Revised Overtake and Undertake Quantities may be notified by DNCo at any time

## 9.7 Revised Offtake Profiles Notices

- On one occasion in any hour, one or more Offtake Profile Notices may be revised, as to the rate of flow from and after any time, by notice given before that time in accordance with the following:

### Offtakes not within NTS Offtake Groups

- For an Offtake not within an NTS Offtake Group DNCo will give notice as follows (by submission of a revised Offtake Profile Notice) of changes in the rates of flow which deviate from those set out in the prevailing Offtake Profile Notice:
  - (in respect of any National High Demand Day or any Local High Demand Day) for any change of up to [5]% of the Prevailing Flow Rate, not less than [2] hours
  - (in respect of any other day) for a change, of up to [10]% of the Prevailing Flow Rate, not less than [1] hour
  - (in respect of any day) for any change of less than the tolerance [x% of the Prevailing Flow Rate], as soon as reasonably practicable

### Offtakes within NTS Offtake Groups

- For Offtakes within NTS Offtake Groups DNCo will give notice as follows (by submission of revised Offtake Profile Notices) of changes in the aggregate rates of flow for the NTS Offtake Group which deviate from those set out in the prevailing Offtake Profile Notices:
  - (in respect of any National High Demand Day or Local High Demand Day) for any change of up to [5]% of the aggregate Prevailing Flow Rate, not less than [2] hours
  - (in respect of any other day) for a change of up to [10]% of the aggregate Prevailing Flow Rate, not less than [1] hour
  - (in respect of any day) for any change of less than the tolerance [x% of the aggregate Prevailing Flow Rate], as soon as reasonably practicable

### Overall LDZ Rate Change Limits

- Notwithstanding the above in the months of October to March inclusive the change notified by DNCo in the aggregate rates of flow for the LDZ in any [two] hour period shall not exceed [5]% of the aggregate Prevailing Flow Rate at the start of the [two] hour period

## 9.8 NTSCo Requests for Revised Offtake Profiles

- NTSCo may request that Offtake Profile Notices be revised, and if the following conditions are met DNCo will submit revised Offtake Profiles Notices in accordance with the request:

### Flow Swap within LDZ Offtake Group

- Provided that the aggregate Prevailing Flow Rate of flow through an LDZ Offtake Group remains unchanged, NTSCo may request changes to the rate of flow at Offtakes within the same LDZ Offtake Group, as follows:
  - (in respect of any National High Demand Day or Local High Demand Day) at any Offtake by up to [5]% of the aggregate Prevailing Flow Rate for the LDZ Offtake Group, provided that such a request can not be made subsequently for a period of [2] hours
  - (in respect of any other Day) at any Offtake by up to [10]% of the aggregate Prevailing Flow Rate for the LDZ Offtake Group, provided that such a request can not be made subsequently for a period of [1] hour

### Overtake Request

- NTSCo may request that the aggregate daily quantities notified for the LDZ for that day be increased by an amount up to the notified Overtake Quantity

**Undertake Request**

- NTSCo may request that the aggregate daily quantities notified for the LDZ for that day be reduced by an amount up to the notified Undertake Quantity

**Flow Restriction Request**

- Where NTSCo is or will be temporarily unable to flow gas at the Prevailing Flow Rate and expects to be able to accommodate higher rates at a later time or at another Offtake such that over a period of no longer than six hours the quantity of gas flowing into the LDZ remains as per the Prevailing Flow Rate then it shall inform DNCo and the Offtake Profile Notices will be revised accordingly to the extent the change in profile can be safely accommodated

**9.9 Interruption**

- Where a right of interruption arises under the Network Code then NTSCo may exercise the right to interrupt flows to Supply Points connected to the DNCo system
- In exercising rights of interruption in accordance with the above NTSCo shall, taking account of the circumstances affecting different parts of the NTS, endeavour to be equitable in achieving the necessary load reduction.
- NTSCo shall inform DNCo of the load reduction associated with its exercise of interruption rights relating to Supply Points connected to the DNCo system
- Where a right of interruption arises under the Network Code due to circumstances affecting a DN, DNCo will inform NTSCo of the sites within the DN to be interrupted and NTSCo will exercise the right of interruption on behalf of DNCo
- Following exercise of any interruption rights by either NTSCo or DNCo, DNCo shall submit revised Offtake Profile Notices reflecting the change in rates of flow
- Where in relation to a Supply Point connected to the DNCo system there has been a failure to interrupt in accordance with section G6.9.2 of the Network Code then DNCo will if requested by NTSCo isolate the Supply Point.

**9.10 Reduced Restriction Offtake Profiles**

- Where, upon a request to that effect from a party, the other party determines that the relaxation of one or more of the Restrictions on the rates of flow that may be notified via the Offtake Profile Notice can be safely accommodated without appreciable increase in operating cost, then the Offtake Profile Notice will be modified in accordance with such request.
- The Restrictions referred to above are:
  - The notice periods and associated maximum change in rate of flow
  - The notified daily quantity will not exceed the relevant Maximum Daily Quantity
  - The rates of flow notified will at no time exceed the relevant Maximum Rate
  - The rates of flow notified will at no time be less than the relevant Minimum Rate.
  - The rates of flow notified before the day will be at uniform hourly rates or in accordance with the relevant Diurnal Storage Profile
  - Where a change to the notified daily quantity necessitates notification of a rate change within day the rates of flow notified following the rate change will be at uniform hourly rates or in accordance with the relevant Diurnal Storage Profile
  - The rates of change of rates of flow will not exceed the relevant Maximum Rate of Change
  - The diurnal storage to be provided through the rates of flow notified will not exceed the relevant Maximum Diurnal Storage Quantity

- Where either party determines that, due to changed circumstances, relaxation as above can no longer be safely accommodated or will give rise to appreciable increased operating cost then that party may require reapplication of any of the Restrictions and the Offtake Profile Notice will be modified in accordance with such request forthwith.
- Where a party determines that the relaxation of one or more of the Restrictions on the rates of flow cannot be accommodated safely or without appreciable increase in operating cost the other party may request that the party making the determination furnishes evidence to show the basis on which the determination was made

#### **9.11 DNCo Flow Obligations**

- DNCo shall ensure that gas does not flow from the NTS at an Offtake at any time on any day at a rate of flow that exceeds or is less than the Prevailing Flow Rate by more than [the tolerance [x]% of the Prevailing Flow Rate]
- At any time on the gas flow day at which there is a change (pursuant to the Offtake Profile Notice) in the Prevailing Flow Rate, DNCo shall ensure that the rate of change of the rate of flow shall not exceed the Maximum Rate of Change
- Where DNCo is in breach of its obligations under this section 9.11 and as a result of the breach NTSCo, acting and having acted as a Reasonable and Prudent Operator, fails to make gas available for offtake at Supply Points or DNs directly connected to its system, then DNCo shall be liable to pay the costs incurred by NTSCo as a consequence of the breach:
  - in making payments to shippers in respect of gas not made available for offtake under section J of the Network Code; and
  - in making payments to other DNCos in respect of gas flows at Offtakes under section 9.12 of the Offtake Code

#### **9.12 NTSCo Flow and Pressure Obligations**

- NTSCo shall ensure that gas may flow from the NTS to the DN at an Offtake at any time on any day at the Prevailing Flow Rate
- NTSCo will not be required to ensure gas may flow from the NTS to the DN at an Offtake at any time on any day at a rate of flow that exceeds the Prevailing Flow Rate.
- NTSCo will not be required to ensure gas may flow from the NTS to the DN at an Offtake at any time on any day at a changing rate, the rate of change of which exceeds the Maximum Rate of Change
- Gas flowing at each Offtake shall at the High Pressure Time be at a pressure not less than the relevant High Pressure and at all other times of day be at a pressure not less than the relevant Low Pressure
- NTSCo will not be in breach of its obligations under this section 9.12 if for any reason the pressure of gas immediately downstream of the Offtake at the High Pressure Time exceeds the relevant High Pressure or at any other time of day exceeds the relevant Low Pressure.

- Where NTSCo is in breach of its obligations:
  - under this section 9.12 or
  - its obligations under section 10.2 and DNCo has declined to take non-compliant gas

and as a result of a the breach DNCo, acting and having acted as a Reasonable and Prudent Operator, fails to make gas available for offtake at Supply Points directly connected to its system, then NTSCo shall be liable to pay the costs incurred by DNCo as a consequence of the breach:

- in making payments to shippers in respect of gas not made available for offtake under section J of the Network Code; and
- in making Guaranteed and Overall Standards of Service compensation payments to consumers in respect of gas not made available for offtake in accordance with its licence

## **Offtake Code Business Rules**

### **10 Gas Quality**

The purpose of this section is to establish the gas quality characteristics with which gas flowing from the NTS to DNs at Offtakes will comply, and the consequences where gas is non-compliant.

#### **10.1 Definitions**

- Applicable Liability Price for any gas day is the arithmetic mean of the prices in the most recently published issue of the DTI's Energy Trends document set out in the table entitled "Prices of fuels purchase by manufacturing industry in Great Britain" as "GAS – all consumers-average" for the most recent 4 consecutive quarters.

#### **10.2 Gas Quality Specification**

- Gas flowing at each Offtake shall:
  - be compliant with any statutory requirements (including without limitation the Gas Safety (Management) Regulations 1996) and
  - not contain any artificially added odorants (but may contain naturally occurring odorants)

#### **10.3 Non-compliant gas**

- Where gas flowing at an Offtake is not compliant with the quality requirements, DNCo may acting as a Reasonable and Prudent Operator either:
  - take or continue to take such gas, in which case section 10.4 shall apply; or
  - decline to take such gas, in which case section 9.12 shall apply.

#### **10.4 Payment in respect of non-compliant gas**

- In the event that gas flowing at an Offtake is non-compliant and DNCo, acting and having acted as a Reasonable and Prudent Operator continues to take the non-compliant gas, then NTSCo shall pay DNCo the reasonable costs and expenses incurred by DNCo in consequence of taking the non-compliant gas:
  - in cleaning or clearing any materially affected part of its system
  - in making liabilities payments to shippers under section J 3.4.1 of the Network Code
- The amount payable by NTSCo shall not exceed 10% of the total quantity of non-compliant gas flowing from the NTS at the Offtake on the relevant gas day multiplied by the Applicable Liability Gas Price.
- NTSCo shall not be liable for costs incurred by DNCo that could have prevented by the use of appropriately maintained and operated equipment at the Offtake Site including (inter alia):
  - pre-heating equipment
  - filtration equipment
- Where any amount has become payable, the DNCo shall inform NTSCo of:
  - The relevant Offtake and day(s) on which non-compliant gas was offtaken
  - The total quantity of non-compliant offtaken, and reasonable details as to why the gas was non-compliant.
  - Reasonable details of costs and expenses incurred and purposes for which they were incurred.

#### **10.5 Gas Quality Information**

- NTSCo will provide DNCo from time to time with the information it has available to it, based on measurements of gas quality for gas entering the NTS, regarding the quality of gas flowing at Offtakes
- Where either party becomes aware that non-compliant gas is flowing at any Offtake, the party will notify the other party as soon as reasonably practicable

## **Offtake Code Business Rules**

### **11 Charges**

The purpose of this section is to establish the charges that may apply under this agreement. It is envisaged that the prices will be set out in the Exit Code Statement and that they will initially be set at zero. It is expected that charges will be introduced when compatibility of charging with other aspects of the transportation regime (for example the formulae for Distribution Networks) is established. NTSCo expects to provide an indication of the future level of charges before their introduction. A variety of charges is contemplated to encourage safe, efficient and coordinated operation of and investment in the NTS and DN systems, and adherence to the terms and conditions of the Offtake Code

#### **11.1 Prices**

The prices to be used in calculating charges under this agreement will be those set out in the Exit Code Statement published by NTSCo in accordance with condition[ ] of its Licence.  
[It is envisaged that prices will initially be set to zero.]

#### **11.2 Charge Types**

- It is envisaged that charges could be made in respect of the following:

**Diurnal Storage** provided by NTSCo to DNCos

**Overtake and Undertake Quantities** provided by the DNCos to NTSCo

##### **Forecast Accuracy Incentives**

- Daily demand forecasting by DNCos
- Long term Offtake Rights forecasting by NTSCo
- Long term demand forecasting by DNCos

##### **Prevailing Offtake Rate Incentive**

- The degree to which DNCos deviate from their notified flows

##### **Reduced Restriction Offtake Profile Requests**

- The extent to which either party uses the provisions of section 9.10

- This list of charge types is not intended to be exhaustive and it may be appropriate to include other charge types

## **Offtake Code Business Rules**

### **12 Liabilities**

- Except where otherwise stated neither party is liable for economic loss (direct, indirect, consequential or increased cost of working)
- Each party bears its own loss for physical damage caused by failure in operation or works
- Liability of either party for death or personal injury is not excluded

## **Offtake Code Business Rules**

### **13 Daily Demand Forecasting**

The purpose of this section is to assign Network Code responsibilities for daily demand forecasting to NTSCo and DNCos. DNCos generate demand forecasts as required by the Network Code and pass the data to NTSCo. NTSCo then informs shippers. The section also deals with demand forecasts required for operational (rather than Network Code) purposes

#### **13.1 Daily Demand Forecast Generation**

- DNCos will generate daily demand forecasts for each LDZ in accordance with Section H5 of the Network Code, and pass to NTSCo in the manner and at the times specified in section 15.

#### **13.2 NDM Nominations**

- NTSCo will send out NDM nominations to shippers in accordance with Section C of the Network Code

#### **13.3 Operational Requirements**

- DNCos will generate and pass updated demand forecasts to NTSCo:
  - When requested by NTSCo; or
  - When demand changes by more than [x]%

## **Offtake Agreement Business Rules**

### **14 Invoicing and Credit**

The purpose of this section is to establish the arrangements by which all amounts payable under the Offtake Code will be invoiced and paid.

#### **14.1 Invoicing**

- A billing period is a calendar month.
- Each invoicing party will submit to each paying party invoice documents in respect of each billing period in accordance with the other provisions of this section 14.
- An invoice document may contain an adjustment by way of credit in respect of an invoice amount in another invoice document.
- An invoice document shall take effect as a separate invoice in respect of each invoice item.
- No delay by an invoicing party in submitting an invoice document shall prejudice the liability of any party.
- Separate invoice documents will be submitted to each paying party in respect of amounts payable under different provisions of the Offtake Code.
- Each invoice document shall specify:
  - The identity of the party
  - The billing period to which the invoice document relates
  - The invoice type
  - The invoice amount
  - A unique number by which the invoice document may be identified, and a reference item for each invoice type
  - The amount of VAT payable in respect of each invoice item.
- An invoice document which contains an invoice credit will also identify the invoice document and invoice item to which the invoice credit relates and the amount of the invoice credit.
- Invoice documents will be issued on the dates specified in section 11.

#### **14.2 Value Added Tax**

- All amounts are exclusive of Value Added Tax and accordingly, where applicable, Value Added Tax shall be paid by the paying party.

#### **14.3 Termination**

- An invoicing party may, at any time after submitting a [Termination Notice], submit invoice documents and all amounts payable by the paying party shall be immediately payable.

#### **14.4 Invoice adjustment**

- Subject to [fraud provisions], where it appears to the invoicing party that any invoice amount has been incorrectly stated in an invoice document, the invoice amount may be adjusted by an adjustment invoice or as the case may be an ad-hoc invoice submitted by the invoicing party.
- An adjustment representing an increase in an invoice amount shall be a new invoice amount in respect of which the invoice due date will be the invoice due date of the relevant adjustment invoice or ad-hoc invoice.

- In the absence of fraud, after the expiry of 18 months after the invoice due date in respect of any invoice document, no adjustment may be made unless the invoicing party had given prior notice of, or submitted an invoice query before the expiry of the period.

#### **14.5 Contingencies**

- In the event that, as a result of a contingency, any invoicing party is unable to produce or submit any invoice documents within 7 days after the expected date of submission, the invoicing party may prepare and submit an invoice document containing estimated invoice amounts. Such an invoice document will be a valid invoice document and the supporting data to be provided with the invoice document will be an explanation of the basis of estimation.
- Where the paying party believes that the invoicing party's estimate or basis of estimation is materially inaccurate, the paying party shall as soon as reasonably practicable after receiving the invoice document (and in any event before the invoice payment due date) contact the invoicing party and discuss the estimate or basis of estimation with a view to agreeing upon a more accurate estimate.
- Where the paying party raises an invoice query, the contingency rules shall apply on the basis of the detail provided of the basis of estimation and the paying party shall specify the amount by which the invoicing party reasonably believes the paying party's estimate to be under or over-stated.

#### **14.6 Invoice due date**

- The invoice amounts under each invoice document shall be paid on or before the invoice due date.
- The "invoice due date" in respect of an invoice document is the day ending at 24:00 hours on the later of the 12th day after the day on which the invoice document was deemed to be received, and the 20th day after the last day of the billing period to which the invoice document relates.

#### **14.7 Payment**

- Payment shall be made in pounds sterling in same day funds to the account of the payee at a bank in the United Kingdom.
- Each invoicing party shall notify the account name and number, and the name, address and sort code of the account bank, to which payments are to be made, within 5 business days after the date of signature of the Offtake Code, and of any change in such details not less than 30 days before such change occurs.
- Each payment and credit payment will be accompanied by a remittance advice.

#### **14.8 Deductions, withholdings and tax**

- Amounts payable shall be paid free and clear of any restriction, reservation or condition, and except to the extent required by law, without deduction or withholding in respect of tax.
- If, in respect of a payment to be made, any deduction or withholding is required to be made by the law of any country other than a country of the United Kingdom, the paying party shall ensure that the amount of such withholding or deduction does not exceed the minimum so required, pay such additional amounts as will ensure that the net amount received by the invoicing party will be equal to that which would have been received had no deduction or withholding been made; and pay the amount withheld or deducted to the relevant authority in accordance with the relevant requirement of law, and provide a receipt in respect of such payment.

#### **14.9 Remittance advice**

- The paying party shall complete and submit to the invoicing party the invoice remittance advice not later than the day on which payment is made.
- The completed invoice remittance advice shall specify the date when payment is to be made, the amounts, by reference to each invoice item specified in the invoice document, in respect of which the payment is to be made, and the total amount to be paid, and any amount or amounts, by reference to each invoice item, in respect of which payment is not being made.
- Where a paying party makes payment, the invoicing party will not later than the date on which payment is made notify the paying party of details equivalent to those to be specified in an invoice remittance advice.
- No inability of the paying party to do so shall affect its obligation to make payment.
- Where a paying party makes payment under more than one invoice document on the same day, it shall secure that a separate remittance is made in respect of each invoice document.
- Where the invoice document number is not quoted with any remittance made by or on behalf of a paying party, and no invoice remittance advice corresponding to the remittance is submitted, the invoicing party will endeavour to obtain the paying party's instructions (by telephone or facsimile); but if it has not obtained such instructions, the invoicing party will apply the amount remitted to or towards invoice amount(s) in order of invoice due date (the earliest first) and proportionately as between invoice amounts with the same invoice due date, but applying such amount last to any invoice amounts which are subject to an invoice query.

#### **14.10 Late payment**

- Where any amount payable under an invoice is not paid on or before the invoice due date, the paying party shall pay interest, after as well as before judgment, at the applicable interest rate, on the unpaid amount from the invoice due date until the day on which payment is made.

#### **14.11 Interest**

- Where interest is payable by a paying party, such interest shall accrue on a daily basis and on the basis of a 365 day year.
- Interest payable will be compounded.
- The applicable interest rate shall be the base rate for the time being of Barclays Bank plc plus three (3) percentage points per annum;

#### **14.12 Statement of account**

- Each invoicing party will provide to each paying party each month a statement of account showing, the amounts shown in the preceding statement of account as payable, the amounts shown as payable under invoice documents submitted since the date of the preceding statement of account, including any amount for which the invoice due date is after the date of the statement of account for the current month and the amounts paid since the date of the preceding statement of account.
- Each statement shall state that it is not a tax invoice for Value Added Tax purposes.
- No payment obligation of any party shall be affected by any delay or failure by an invoicing party in producing a statement of account.

#### **14.13 Credit**

- Each invoicing party will determine and assign to each paying party a credit limit, and will keep each paying party informed of its credit limit.
- A paying party's credit limit may be reviewed and revised on notice of not less than 30 days at intervals of approximately 12 months, at the paying party's request, where any published credit rating of the paying party is revised downwards, where any instrument of surety or security expires or is determined or at an invoicing party's request where at any time the invoicing party has reasonable grounds to believe that the effect of the review will be to reduce the paying party's credit limit.

## Offtake Code Business Rules

### 15 Exchange of Information

The purpose of this section is to establish the information to be exchanged between NTSCo and DNCos and NTSCo, and the means by and frequency at which the exchange will take place:

- to enable the Network Code to operate. Some information will be provided via telemetry or other direct means, and some will be provided via the Agency.
- to enable the parties to operate their respective pipeline systems

The obligations of both NTSCo and DNCos with regard to data transfer will be clearly specified.

#### 15.1 Example of Network Code Information to be provided

A range of information relating to forecast and actual volume and energy flows and CV will be required including information relating to the following:

- Offtakes
- Embedded LDZ entry points
  - LNG boil off and reject gas
  - Onshore fields
  - Onshore storage
  - Inter LDZ transfer points
- Major LDZ Exit Points
  - With CV measurement equipment
  - VLDMCs
  - Inter LDZ transfer points
  - CSEPs
  - Onshore storage
- LDZ stocks
- Datalogger reads
  - DM dataloggers
  - NDM dataloggers
- Interruption forecasts
- Demand forecasts by LDZ

#### 15.2 Operational Information

[To be completed]

## **Offtake Code Business Rules**

### **16 Connections between LDZs**

This section deals with interconnections between LDZs. Measurements of gas flowing at these points form are used in the Network Code energy balancing calculations. The section ensures that that all such connections are identified and that a methodology is in place to establish the daily quantities and CV of gas flowing at these points.

#### **16.1 Existing Connections**

- Annex 7 contains information relating to connections between LDZs including:
  - The location of the connection point
  - The LDZs connected
  - The direction(s) of flow
  - The methodology used to establish the daily quantities and CV of gas

#### **16.2 New Connections**

- DNCo will inform NTSCo of any new connection to another LDZ and the new connection will be included in Annex 7 before any gas flows at the connection point

## Offtake Code Business Rules

### 17 LDZ Direct Input Points

Under its licence and the Network Code, Transco is required to auction capacity at existing direct input points to the LDZ, and to buy back capacity if there is a constraint. Commercially, gas input at these points gains access to the NBP whilst physically the gas flows into the LDZ. It is not intended to alter these arrangements in the short term, although this is likely to be an issue for consideration at the next price control review. Therefore, as an interim arrangement, it is proposed that for existing LDZ direct input points NTSCo auctions capacity. New LDZ direct input points are not addressed by the licence, and could be dealt with as the situation arises.

This section establishes the rules between NTSCo and DNCos in relation to the accommodation of gas flows at existing LDZ direct input points.

#### 17.1 LDZ Direct Input Points

- Annex 8 contains information relating to LDZ direct input points existing at the date of this agreement (LDZ Direct Input Points) including the location of the direct input point

#### 17.2 Capacity Auctions

- NTSCo will auction entry capacity at LDZ Direct Input Points and release baseline capacity in accordance with its licence and the Network Code
- Release of obligated incremental capacity will be in accordance with the Incremental Entry Capacity Release Statement
- Non-obligated incremental capacity will not be released without the agreement of DNCos

#### 17.3 Accommodation of gas flows

- DNCos will accommodate the flows at LDZ Direct Input Points in accordance with nominations made and capacity held by shippers under the Network Code
- Where DNCos is unable to so accommodate such flows:
  - DNCos may request NTSCo to buy back capacity in accordance with the Procurement Guidelines and System Management Principles in which case DNCos will reimburse NTSCo its cost of doing so; and
  - DNCos will repay NTSCo any liability incurred by NTSCo under section I of the Network Code arising from the failure to accommodate such flows

#### 17.4 Shared Entry Capacity

- Where the Entry Capacity auctioned by NTSCo relates to an LDZ Direct Input Point and an NTS Entry Point (for example at some LNG facilities) there will be an exchange of information regarding flows at both points. This will be used to determine the respective obligations of NTSCo and DNCos with regard to accommodating the flows.

#### 17.5 New LDZ direct input points

- DNCos will inform NTSCo of any new LDZ direct input points and the information to be exchanged in relation to this point will be set out in accordance with section 15 before any gas flows at that point
- The provisions of this section will only apply to any new LDZ direct input point as if it were an LDZ Direct Input Point to the extent that NTSCo is obliged to auction entry capacity in respect of such point under the terms of its licence.

## **Offtake Code Business Rules**

### **18 Other Provisions**

#### **Definitions**

Specific defined terms used in this agreement will be captured within an interpretation section that will in addition include details regarding both general and technical interpretation. Network Code defined terms used in this Offtake Code will unless indicated otherwise have the same meaning.

#### **Force Majeure**

Force Majeure provisions similar to those contained in Network Code will apply to the respective parties and their obligations within this document.

#### **Notices/Communications**

Provisions detailing the form, timing, and contents of specific notices required for the purposes of the document will be set out. Where electronic communications are being used formats and protocols may be specified either in the Offtake Code or in an ancillary document analogous to UK Link manual.

#### **Termination**

The general rule is that the Offtake Code endures from day to day, year to year. Termination provisions therefore will set out the circumstances in which a party might withdraw from the Offtake Code (based on the assumption that there will be a regulatory requirement for Uniform Network Code Gas Transporters to be a party to the Offtake Code). Circumstances where a participant will be subject to compulsory termination from the Offtake Code (e.g. loss of GT licence) will also need to be addressed.

#### **Dispute Resolution**

It may be appropriate to include dispute escalation provisions whereby the parties attempt to resolve any dispute through escalation within their respective organizations. Provisions similar in form to those in the Network Code (i.e. contractual dispute resolution) may also be included, setting set out the circumstances in which Ofgem has a role in arbitrating disputes and when recourse to the Courts is appropriate.

#### **Expert**

For technical issues involving disputes regarding equipment (e.g. Measurement Equipment) it may be appropriate for the parties to have recourse to an expert.

#### **Confidentiality**

This section will be structured similarly to the Network Code confidentiality provisions, on the basis that a duty of confidentiality exists as between NTSCo and DNCos, with exceptions (e.g. transparency of demand information and Offtake Rights) explicitly identified.

#### **Standing Committees**

This section will establish the structure for ongoing consideration of issues relevant to the Offtake Code between the signatories (e.g. an Offtake Code Panel).

#### **Insurance**

Reference may be made to the parties maintaining appropriate insurance policies.

**Assignment**

There will be a general prohibition on assignment without consent of the other party but with consent not required from parties within the same class or group (i.e. a DNCo would need to obtain consent from NTSCo but not other DNCos). There will also be additional provisos that need to apply (e.g. each party must have a GT licence and assignment must be to a party who holds a similar licence).

**Governing Law**

As per Network Code, that of England and Wales

**Operator Agents**

Provisions to deal with the appointment and use of agents by the parties to the Offtake Code for specified purposes will be required.

**Performance**

Defined standard of performance of parties to the Offtake Code may be included, similar to V14.3 of Network Code.

**Other**

Provisions to deal with waiver, severance, entire agreement, jurisdiction etc.

## Offtake Code Business Rules

### Annex 1 Connection Facilities

This annex will comprise a template setting out the Connection Facilities details to be recorded in respect of each Offtake Site (specimen based on the [xxx] Offtake Site):

Name of the Offtake Site	[xxxx]
Postal address of the Offtake Site	[xxxx]
Ordnance Survey location of the Offtake Site	[xxxx]
Owner of the site (the Site Owner)	DNCo
Third parties with interests in the Offtake Site	[xxxx]
Maximum throughput of NTS bypasses during maintenance (if applicable)	N/A
DN system safe operating limits - pressure	8.4 barg
DN system safe operating limits - temperature	as per normal Transco standards
NTS safe operating limits - pressure	77 barg
NTS Maximum Permissible Operating Pressure	70 barg

**Description of the facilities in the ownership of the DNCo, including where appropriate, design details, technical standards and specifications used in design and construction:**

Filtration	3 streams of filtration
Pressure reduction	2 streams of pressure reduction including slamshuts
Preheating	3 streams of pre-heaters
Instrumentation housing	1 instrument house
Fences and gates	fence with security gate, personal gate and emergency gate
Measurement equipment	2 streams of turbine metering, in-line with the pressure reduction streams
Flow computers	Omni Flow Computer
Calorimetry equipment	Tracker installation (E6 meter)
Odourisation equipment	odorant injection plant
Telemetry interface	[to be specified - Currently Transmission with Rev 7 software]
Cathodic protection and insulation joints	inlet insulation joint on 80mm pipe upstream of filters, sacrificial anode Cathodic Protection system Outlet IJ fitted downstream of station outlet isolation valve 175920

**Description of the facilities in the ownership of NTSCo, including where appropriate, design details, technical standards and specifications used in design and construction:**

NTS pipeline number	Feeder [xx]
NTS pipeline classification	Class 600
NTS design specification	IGE Communication 674 (precursor to IGE/TD1)
Valves and bypasses	1 x 900mm NTS Feeder [xx] block valve no 175901 2 x 200mm valves nos 175902 and 175903 3 x 200mm valves nos 175904, 175905 and 175906 2 x 100mm valves nos 175921 and 175922
Instrumentation housing	1 instrument house [to be constructed]
Telemetry interface	[to be specified]
Cathodic protection and insulation joints	no insulation joint, no CP on site
[any other NTSCo equipment]	

**Site safety and access arrangements**

Details of any special health and safety arrangements	None
Details of any special locks or other access arrangements	Access is through a 5-bar gate off the A[xxx] fitted with padlock and down a track running parallel with the road. Site is visible from the main road.

**Attachments**

Map showing ownership, boundaries and rights of access and the Offtake	[to be provided]
A pressure systems regulations responsibility boundary plan	[to be provided]

## **Offtake Code Business Rules**

### **Annex 2      Utility Services**

This annex will comprise a template setting out the details of utility services (including the standards of service) provided by the Site Owner, to be recorded in respect of each Offtake Site.

#### **Where DNCo is the Site Owner**

- DNCo shall provide a [240] volt [16] Amp [50] Hz A/C electrical supply for each NTSCo telemetry unit and back up power.
- DNCo shall provide a back up ISDN circuit for each NTSCo telemetry unit.
- 440V valve actuation supply
- Drainage
- Water supply
- Standby power
- UPS system
- [Other]

#### **Where NTSCo is the Site Owner**

- [to be completed]

## Offtake Code Business Rules

### Annex 3 Measurement Equipment Permitted Ranges

This annex will comprise a template setting out the details of the gas characteristics to be measured and Permitted Range requirements for Measurement Equipment, to be recorded in respect of each Offtake Site. The Permitted Range consists of the allowed range of a flow property, and the uncertainty that the measurement of a property must be less than or equal to.

The gas characteristics to be measured and Permitted Range requirements recorded at the date of this agreement will reflect the capability of Measurement Equipment installed at that time.

In the event that an Offtake has more than one device that measures a property the recorded details will specify which device is the Primary Measurement Equipment.

**Table A3.1. Example Permitted Ranges (for Primary Measurement Equipment)**

Characteristic	Unit	Specified Range	Uncertainty
Volume Flow Rate	MSCM/day	[ ]	±[1]% of flow within [30%-100%] of the maximum ±[2]% of flow within [20%-30%] of the maximum
Energy Flow Rate	TJ/day	[ ]	±[1.1]% of flow within [30%-100%] of the maximum ±[2.1]% of flow within [20%-30%] of the maximum
Gas Pressure	Barg	[0 – 85]	±[0.5] barg
Gas Temperature	°C	[0 – 40]	±[1] °C
[Carbon Dioxide]	Mole%	[0 – 5]	±[0.1] of measurement
[Nitrogen]	Mole%	[0 – 10]	±[0.1] of measurement
CV	MJ/m <sup>3</sup>	[35 – 44]	±[0.4]% of measurement
Relative Density		[0.5 – 0.8]	±[0.01] of measurement
[Wobbe]	MJ/m <sup>3</sup>	[45 – 55]	±[0.1] MJ/m <sup>3</sup>

#### Notes:

- The gas characteristics to be measured and the figures indicated for the specified ranges and uncertainties are typical values. The characteristics to be measured and values to be recorded under these provisions will be specific to the Measurement Equipment installed.
- The minimum volume and energy value within the specified range is the Minimum Rate to be applied under section 9.

**Offtake Code Business Rules**

**Annex 4 Telemetry Specifications**

This annex will comprise a template setting out the telemetry details to be recorded in respect of each Offtake site.

**Telemetry signals required by NTSCo – template for site specific schedules**

[Requirements to be reviewed on a site by site basis.]

**General Analogues**

Point	Minimum Requirements	Site Specific Options	Comments
Feeder Pressure(s)	Yes		
Outlet Pressure(s)	Yes		
Outlet Temperature(s)		Yes	If pre heating on site
Orifice DP(s)	Yes		Standby only
FCV position(s)		Yes	If fitted
Flow Setpoint(s)		Yes	If fitted
Low Pressure Override Setpoints		Yes	If remote volumetric control fitted
High Pressure Override Setpoints		Yes	If remote volumetric control fitted

**FWACV Analogues - Sites with a flow greater than 1 million m<sup>3</sup>/day**

Point	Minimum Requirements	Site Specific Options	Comments
Calorific Value	Yes		
Relative Density	Yes		
Nitrogen	Yes		
Carbon Dioxide	Yes		
Wobbe	Yes		
24 Hour Average CV	Yes		
24 Hour Average RD	Yes		
Inst. Volume Flow(s)	Yes		Corrected STP
Inst. Energy Flow(s)	Yes		Corrected STP

**FWACV Analogues - Sites with a flow less than 1 million m<sup>3</sup>/day**

<b>Point</b>	<b>Minimum Requirements</b>	<b>Site Specific Options</b>	<b>Comments</b>
CV Tracker	Yes		
RD Tracker	Yes		
24 Hour Average CV	Yes		
24 Hour Average RD	Yes		
Inst. Volume Flow(s)	Yes		Corrected STP
Inst. Energy Flow(s)	Yes		Corrected STP

**States**

<b>Point</b>	<b>Minimum Requirements</b>	<b>Site Specific Options</b>	<b>Comments</b>
Filter	Yes		Common alarm
Slam Shut	Yes		Common alarm
Maintenance key	Yes		
Intruder alarm	Yes		
System alarm(s)	Yes		CV or tracker monitoring alarms
Instrument Gas Fail	Yes		
Override		Yes	If remote volumetric control
Generator running/locked out		Yes	If fitted
Metering alarm	Yes		
CV or tracker UPS alarm	Yes		CV or tracker UPS supply
CV Not Valid		Yes	Flow > 1 Million m <sup>3</sup> /Day
CV Not Attributable		Yes	Flow > 1 Million m <sup>3</sup> /Day
Status Local/Remote		Yes	If remote control fitted
FCV Selected		Yes	If more than one control valve
FCV Parallel		Yes	If more than one control valve
Mode SPC/DVC		Yes	If remote control fitted
Override in DVC		Yes	If remote control fitted
Volume integrators	Yes		
Boiler integrators	Yes		
Energy integrators		Yes	Flow > 1 Million m <sup>3</sup> /Day
Local Valve indications	Yes		
Pump A common alarm	Yes		Local Gas treatment
Pump B common alarm	Yes		Local Gas treatment
Tank low level	Yes		Local Gas treatment
Power Supply	Yes		Local Gas treatment
Pump A flow integrator	Yes		Local Gas treatment
Pump B flow integrator	Yes		Local Gas treatment

### Controls

Point	Minimum Requirements	Site Specific Options	Comments
Remote Flow Control Valves	Yes		
FCV Select		Yes	If more than one control valve
SPC/DVC Select		Yes	If remote control fitted
Override in DVC		Yes	If remote control fitted
FCV Parallel		Yes	If remote control fitted
Flow Setpoint		Yes	If remote control fitted
DVC Control		Yes	If remote control fitted
Low Press override		Yes	If remote control fitted
High Press override		Yes	If remote control fitted

## Offtake Code Business Rules

### Annex 5 Offtake Rights Request Template

- The Offtake Rights Request template at the date of this agreement together with guidance notes and planning procedures will be included in this Annex.
- DNCo will complete the template for each Offtake within an LDZ specifying requested Offtake Rights for inter alia:
  - The Maximum Daily Quantity
  - The Maximum Diurnal Storage Quantity and the associated Diurnal Storage Profile
  - The High Pressure and the associated time of day
  - The Low Pressure and the associated time of day
- If requested by NTSCo, DNCo shall provide the profile (on a hourly basis) of expected flow for particular Offtakes in a format specified by NTSCo.
- DNCo will specify the Planned Overtake Quantity, being the planned amount at each Demand Condition by which the highest daily quantity that could safely be accommodated in the LDZ on a day exceeds the LDZ demand on that day
- DNCo will specify the Planned Undertake Quantity, being the planned amount at each Demand Condition by which the lowest daily quantity that could safely be accommodated in the LDZ on a day is less than the LDZ demand on that day
- DNCo will specify for each LDZ the LDZ Offtake Groups
- Template will specify for each LDZ the NTSCo Offtake Groups
- DNCo will specify supply quantities for the LDZ from sources other than the NTS at each Demand Condition

### Demand Information to be provided by DNCo

Pre-forecast and forecast information will be provided by DNCo at specific points during the annual cycle as set out below:

#### Pre-forecast data will include:

- A trace and narrative against the previous DNCo demand forecast;
- Numbers of actual new connections and new supply points;
- Details of any supply type change requests (i.e. interruptible to firm transfer requests);
- Details of all loads consuming >60GWh per annum that have been connected in the preceding year or are expected to connect in the forecast period, plus associated load details and market intelligence narrative for each; and
- Relevant market intelligence relating to existing loads consuming >60GWh per annum.

NTSCo shall provide the DNCo with a specification of the pre-forecast data required by end November. The pre-forecast data provision process shall be conducted within the timescales set out in the following table:

Date Due	Action	Party Providing	Party Receiving
End November	Publication of the specification of data requirements	NTSCo	DNCo
End January	Provision of actual supply point and new connections data from the preceding year	DNCo	NTSCo
End February	Deadline for submission of supporting information to NTSCo	DNCo	NTSCo

**Forecast Information**

DNCo shall provide NTSCo with forecast information relating to:

- Volume of gas that it expects to pass through its system; and
- Connections activities (supply points and new connections).

Forecast information, as specified by the following table, shall be received by NTSCo before the end of April each year:

Forecast Item	Data Elements	Basis of Weather Correction to be Applied
Peak Day Demand	NDM Firm DM Firm Firm Shrinkage Interruptible Interruptible Shrinkage	1 in 20
Annual Demand	NDM Firm 0 to 73.2MWh p.a. NDM Firm 73.2 to 732MWh p.a. NDM Firm >732MWh p.a. DM Firm Firm Shrinkage Interruptible Interruptible Shrinkage	Severe 1 in 50 Average, 71 Year Seasonal Normal Temperature (SNT)
Load Duration Curve	NDM Firm 0 to 73.2MWh p.a. NDM Firm 73.2 to 732MWh p.a. NDM Firm >732MWh p.a. DM Firm Firm Shrinkage Interruptible Interruptible Shrinkage	Severe 1 in 50 Average, 71 Year Seasonal Normal Temperature (SNT)
Seasonal Demand Profiles	NDM Firm DM Firm Firm Shrinkage Interruptible Interruptible Shrinkage	Average, 71 Year Seasonal Normal Temperature (SNT) 1 in 20 Cold 1 in 20 Warm
Supply Points and New Connections	Supply Points: - 0 to 73.2MWh p.a. - >732MWh p.a. Connections: - New Housing - Existing Housing - Non-Domestic	Not Applicable

Each forecast shall cover a ten year period commencing with the current gas supply year, i.e. from the 1<sup>st</sup> October prior to the date of submission. Forecast data shall refer to Network Code LDZs. The basis of weather correction applied to each forecast item will be subject to periodic review in keeping with the NTSCo’s Network Code obligations.

Pre-forecast and forecast information shall be provided electronically in a format specified by NTSCo. All data relating to demand, both pre-forecast and forecast, shall be presented in the following terms:

Forecast Data	Units
Peak Day & Daily Demands	MWh per day
Annual Demand	GWh per year

DNCo shall provide details of all CV assumptions applied during the conversion of demand from volume to energy terms with its forecast information submission.

**Offtake Code Business Rules**

**Annex 6      Offtake Rights Allocation at the date of this Agreement**

[template to be provided]

**Offtake Code Business Rules**

**Annex 7      Connections between LDZs**

[template to be provided]

**Offtake Code Business Rules**

**Annex 8 LDZ Direct Input Points**

[template to be provided]

## Offtake Code Business Rules

### Related Agreements

**1. Framework Agreement**

This is a short form document by which NTSCo and DNCos will accede to the Offtake Code. The Framework Agreement may also provide for the accession of additional transporters to the agreement beyond the commencement date.

**2. Admission Agreement**

This is a short form document whereby additional transporters may accede to the Offtake Code after the commencement date.

**3. Modification Rules**

It is assumed NTSCo will have a licence obligation to prepare and revise the Offtake Code. The modification rules will provide for the amendment of the Offtake Code.

It is proposed that any of the signatories to the Offtake Code may raise an amendment to the Offtake Code. Modifications will be made if, following appropriate consultation with interested the industry, NTSCo is supportive and Ofgem does not veto the proposal within 28 days of being notified of the proposed change.

Additional provisions will deal with the need to keep the Offtake Code consistent with Network Code.

**4. LDZ Connection Agreements**

It is recognised that the physical relationship between DNCos having connections between LDZs will need to be set out contractually and that it will be for the parties to decide the terms and conditions.

Initially it is intended to put in place agreements taking the form of the Offtake Code, modified to apply to connections between LDZs. There would be no Offtake Rights Planning rules and instead a schedule specifying the Offtake Rights. The parties to the agreement would at any time be free to amend the terms and conditions by mutual consent.

**5. System Operation Managed Service Agreement (SOMSA)**

Under this agreement Transco will for an interim period provide system operation services to DNCo, until such time as DNCo has developed its own SO capability and obtained the necessary safety case change approvals. The services provided will comprise the activities currently conducted from Transco's Area Control Centres.