

# Business Requirements Document

For

## AMR Meter Reading

### xoserve Project Nexus

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## **1. Introduction**

### **1.1 Document Purpose**

The purpose of this document is to ensure that the business requirements associated with the referenced change have been accurately captured, and to clearly specify these requirements to the Project Nexus AMR Workgroup and Project Nexus UNC Workgroup (PN UNC). Adequate information should be provided to enable the industry to approve the documented requirements for Cost Benefit Analysis at a later stage.

The contents refer to the business scope of the change, and provide descriptions of the business requirements.

This version of the document contains draft business rules for the different options identified by ICoSS around meter reading processes. These options have been documented for further discussion and clarification at the AMR Workgroup.

### **1.2 Related Documents**

Documents held on the Joint Office website under Project Nexus, in particular:

- AMR Workgroup 9 on the 20<sup>th</sup> July 2010
- AMR Workgroup 10 on 17<sup>th</sup> August 2010.
- AMR Workgroup 11 on 3<sup>rd</sup> September 2010
- AMR Workgroup 12 on 29<sup>th</sup> September 2010
- AMR Workgroup 13 on 15<sup>th</sup> October 2010
- AMR Workgroup 14 on 1<sup>st</sup> November 2010
- AMR Workgroup 15 on 16<sup>th</sup> November 2010
- AMR Workgroup 16 on 14<sup>th</sup> January 2011
- AMR Workgroup 17 on 2<sup>nd</sup> February 2011
- AMR Workgroup 18 on 22<sup>nd</sup> February 2011

<http://www.gasgovernance.co.uk/nexus/2010>

## 2. Executive Summary

### 2.1 Background

This document describes options for draft business rules for the suggested Meter Reading processes for Project Nexus future state AMR sites. The document has been based on presentations and discussions at the Project Nexus AMR Workgroup. It is intended to assist discussions in future meetings rather than be a conclusive statement of requirements at this stage.

All square brackets – [ ] – represent areas for clarification which must be resolved by the AMR Workgroup or by the Project Nexus [Workgroup](#) prior to the Business Rules being finalised.

### 2.2 Reads/volume

[Throughout this document, reference is made to “reads” or “readings”. This terminology is used as a working assumption only. In order to finalise this document, the Workgroup must determine whether meter readings, gas volumes or energy (kWh) are to be submitted.

It is not presently feasible for Shippers to submit gas energy values (kWh) in a timely manner since calorific value (CV) is not available until after close-out at D+5. It would therefore not be possible at present for Shippers to submit kWh to meet the deadlines specified in Processes 1. and 2. below. Whatever system solution is developed it should be flexible enough to cope eventually with provision of either a meter reading, a volume reading, or an energy value. However, there are potential cost implications relating to the level of system complexity. The final decision would be reviewed once the DCC design in this area is known.

### 2.3 Summary of the 4 AMR Meter Reading Processes

Note: all these processes will be available in the future solution; they are not alternative solutions.

Process – Description	Day Ahead Gas Nomination process	Process for initial Allocation	Process for Energy Balancing close-out	Read Submission timescales	Type of Read Submission
1 – Daily Balanced: Time Critical for Allocation purposes	Shipper nominates (singly or in aggregations)	Uses daily read	Uses daily read	By 10am on <a href="#">GFD+1</a>	All reads – daily on <a href="#">GFD+1</a>
2 - Daily Balanced: Not Time Critical	Shipper nominates (in aggregations)	Transporter estimate	Uses daily read	By end of <a href="#">GFD+1</a> (05.59 am)	All reads – daily by end of <a href="#">GFD+1</a>
3 – Daily Reconciled	Shipper nominates (in aggregations)	Transporter estimate	Transporter estimate	Periodic	All reads – in batches – to an agreed frequency
4 – Periodic Reconciliation	Shipper nominates (in aggregations)	Transporter estimate	Transporter estimate	Periodic	Periodic reads – to an agreed frequency

[GFD +1 is the Day following the Gas Flow Day](#)

Note:

- For Process 1; Daily Balanced Time Critical sites; these are DM Mandatory Supply Points as defined in UNC (G1.5) or; where the GT specifies the Supply Point is DM Mandatory for network operation activities or the Shipper nominates the site as 'critical' due to the impacts on Allocation and Energy Balancing.
- Treatment of gas nominations is as defined in the Project Nexus Allocations Principle. Shippers will nominate energy for all sites ahead of the day. This nomination will be in aggregate for many of these sites. Total Shipper gas nominations will be subject to a balancing correction to ensure that total gas nominations match forecast gas demand.
- All sites elected into one of the processes described within this document will not be included in Reconciliation by Difference (RbD) processes.
- All 'days' specified within this document refer to calendar days except where stated 'business days'.

## 2.3 Issues

At the AMR meeting on the 31<sup>st</sup> March 2010, the AMR Workgroup identified issues and constraints with the existing meter reading processes. The issues were based on the processes designed for the Daily Metered Elective (DME) regime. The following issues were raised:

- Calculation & provision of estimated reads
- Deadline for receipt of daily reads
- Replacement of reads (actual or estimated)
- Limits on volumes
- Backstop where no reading provided (estimated or actual)
- Transfer reading - Close out of an estimated reading where an actual is available

The following issues were raised during the Project Nexus Consultation (taken from the IRR):

- 4.1 Removal of volumes quotas
- 4.1 Ability to support half-hourly reads
- 4.2 Use of a data aggregator to reduce volume of data received by xserve
- 4.4 Allow more frequent reads from AMR to feature in daily reconciliation.
- 7.1 Submit volumes as an alternative to meter readings
- 13.9 Abolish or extend meter reading window

## 2.4 Benefits

[Benefits have not yet been identified for the proposed solution. Once identified these will need to be aligned with the Transporters relevant objectives.]

## 2.5 Scope

**In Scope:**

- Sites which have or which will have AMR equipment fitted, including:

- Current DM sites (DM Mandatory sites are subject to DM unbundling discussions)
- Current NDM sites
- Current Unique sites, both NTS and LDZ sites (those covered under DM Mandatory criteria will be subject to DM Unbundling discussions)
- iGT sites (subject to approval of the appropriate modifications and licence changes)

**Out of Scope:**

- Sites mandated to use DCC communication access to Smart metering services

## 2.6 UNC & Licence Impacts

- [Uniform Network Code Validation Rules](#)
- [UNC Section G](#)
  - [1.5 Daily Read Metering](#)
  - [2. Supply Point Registration](#)
- [UNC Section M](#)
  - [1.5 Validation](#)
  - [3. Meter Reading: Non Daily Read Supply Meters](#)
  - [4. Daily Read Supply Meters](#)
  - [5. Provision of Daily Read Meter Readings to Users](#)
  - [6. Provision of User Daily Read Meter Readings to Transporters](#)

## 2.7 UNC Process Impacts

A high level assessment has been carried out on the following processes;

- Demand Estimation is not impacted by any of the processes described in this document although a larger population of sites with the ability to submit daily reads may improve the size of the sample available for the Demand Estimation processes.

A full process assessment was not conducted. Other processes will be assessed as and when potential interactions are identified.

## 2.8 Interaction with Project Nexus High Level Principles

- The following draft business rules are not in alignment with the preferred option for Allocation as described in the Allocation Principles report, which envisages balancing based on daily reads for all 21m gas customers, whether Smart or AMR. Processes 3 and 4 are not consistent with this Principle.
- The requirement for regular daily estimation of site consumption, particularly those where only periodic readings are received, will probably necessitate the continuing use of an AQ, which is not in alignment with the outcome of the AQ Principles workgroup of a 'No AQ' regime.

### **3. Design Considerations**

#### **3.1 Implementation Timescales:**

- Implementation of the developed solution will be confirmed once all requirements are captured following the Project Nexus Requirements Definition Phase.

#### **3.2 Dependencies:**

- Details described in Process 1; Daily Balanced Time Critical sites, are dependent on the DM Unbundling discussions at the UNC Distribution Workgroup.
- Approval of the requirements by PN UNC.
- Approval by Ofgem following the appropriate UNC Modification process.

#### **3.3 Risks:**

- Any incorrect reads loaded into the system for processes 1 & 2 will have an impact on the existing Allocation regime. This is as per the current process however, with the potential increase of sites moving to a daily balancing regime the effects and impacts may be far greater on the energy allocated to NDM sites.
- A concern was raised by workgroup members regarding the D-7 estimate for Process 2 sites (Section 5.2.2). It was felt that the D-7 estimate may not be appropriate for smaller/weather sensitive I&C sites as it does not take into account any fluctuations in the weather.

#### **3.4 Constraints:**

- NDM Allocation processes commence at 1pm on the day following the Gas Day (GFD+1). Any new/amended processes identified in this document must co-ordinate with the existing NDM Allocation processes, at least for a transitional period until a fully Smart solution is in place.

#### **3.5 Assumptions:**

- NDM Allocation processes are unchanged during the transitional period.
- It is not currently feasible for Shippers to submit energy values (kWh) to the Gas Transporters within D+5 due to close-out constraints. Once clarity is gained from SMIP on DCC scope and services further consideration will need to be given on whether reads, volume or energy is submitted.
- Shippers will have the obligation to submit consumption data although the role could be fulfilled by other parties (e.g. DCC, consumer, AMR operators). This will need to be re-visited once clarity is gained from SMIP.
- Any additional Gas Transporters charges will be billed in line with User Pays principles
- "Must Reads" will continue to be a Gas Transporters responsibility. Processes for Must Reads are unchanged, except where specifically described.
- There will continue to be a requirement in the gas industry to have DM Mandatory sites for the following two scenarios;
  - System critical (for network operation activities)
  - Process critical (for energy balancing & allocation processes)

- The changes associated with the Allocation of Unidentified Gas Expert (AUGE) have been implemented which apply a share of unallocated energy to all sites
- For the transitional period, the arrangements described do not have any impact on the existing NDM regime for 'Dumb' meters.
- Reconciliation by Difference still operates for Smaller Supply Points until any alternative arrangements are implemented.
- The existing UNC requirements for a "Valid Meter Read" (M3.1.4) will continue to apply for the purposes of the Must Read requirement. A "Valid Meter Read" is where the following conditions are satisfied:
  - Meter Reading provided by a Meter Reader
  - Customer Reading
  - Meter Reading provided by means of a Remote Read
- A re-synchronisation is only required on certain types of metering equipment capable of transmitting daily reads (as opposed to those which allow derivation of daily reads).
- All meter readings submitted to the GT will be subject to 'logic checks'. Any readings that fail these checks will be notified to the Shipper along with those reads that have been successful, as per existing UNC rules (Section M). Validation of meter readings will remain the responsibility of the Shipper.
- Obligations on Shippers will need to continue to ensure that validation of the meter reading is carried out and only accurate reads are submitted to the GT.
  - The UNC Validation Rules document will need to be amended to reflect the changes.
  - The validation rules described under section 5.1.12, 5.10.1 & 5.10.2 are the minimum requirement of validation that must be undertaken.

### 3.6 Design Considerations

- A Shipper can elect for an AMR site to be treated as per one of the processes described in this document or to remain in the current NDM (SSP or LSP) regime.
- For Processes 1, 2 & 3 Shippers can either elect to provide their own estimates for a site or for the Gas Transporters to produce an estimate on their behalf. This would not apply to Process 4 sites as the 'Allocation' arrangements apply to missing reads.
- For Process 2 sites (daily balanced, not time critical), where a valid read is received before 10.00 am the read can be used for NDM Allocation purposes instead of the estimated energy calculated for the purposes of Allocation. The solution will need to consider if the NDM Allocation process should check for a read before estimating the allocation of energy for the site or check after the estimate has been calculated and override if a read from the Shipper has been loaded.

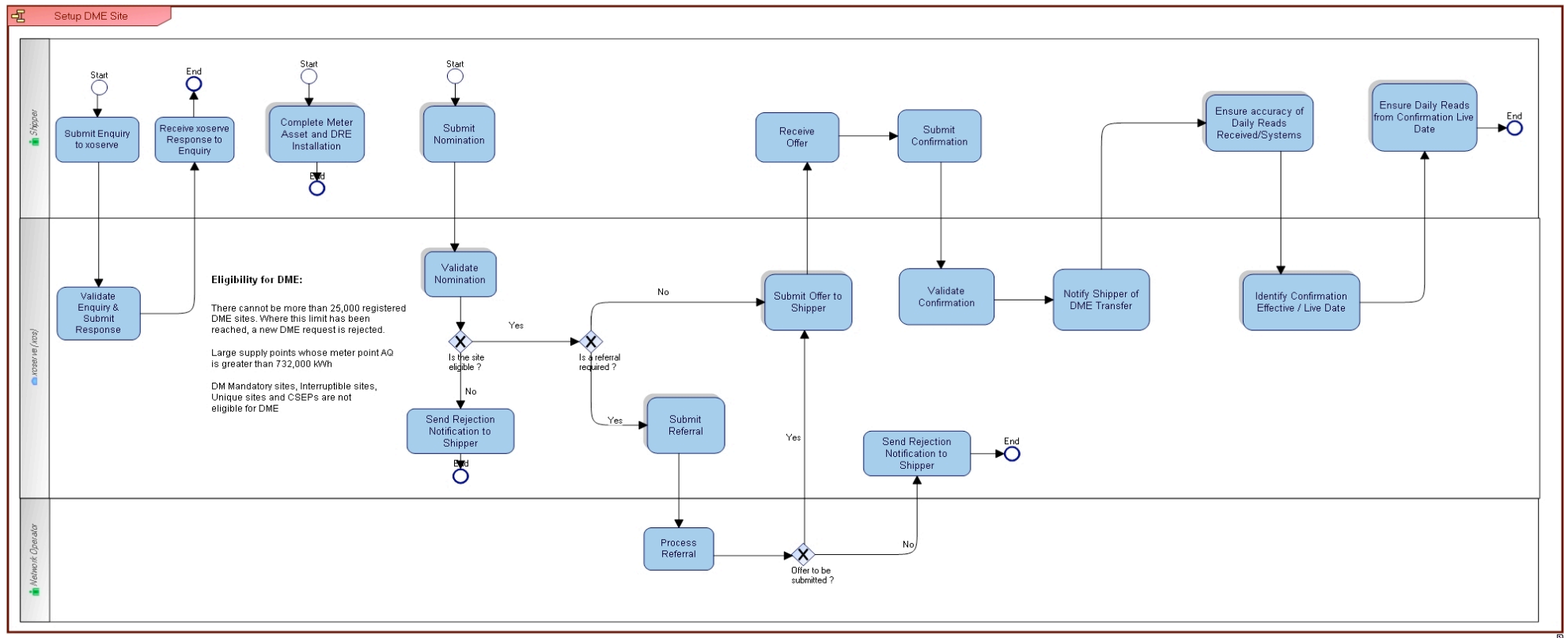
### 3.7 Volumes

### 3.8 Costing Options



## 4. Business Process

### 4.1 Current Process & Process Map



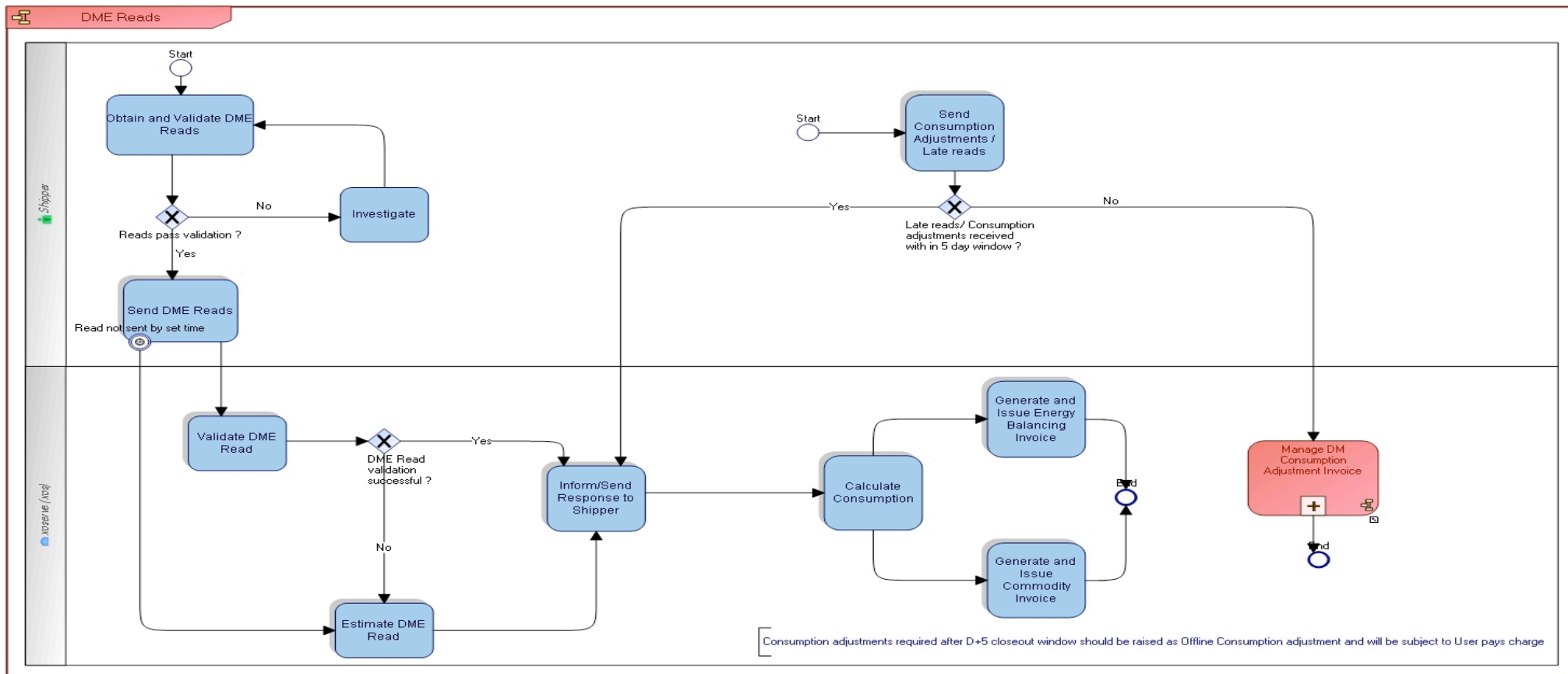
Supply Point Enquiry will provide information for shippers to check if the site is already set up as DME

DME related information will not be visible on IAD or provided to the incoming Shipper at transfer

Referral is required to the GT where, SOQ and/or SHQ has increased

GT is not required to keep or maintain records of the daily read equipment

Ratchets are applied after 12 month anniversary, however, if the site was previously a DM site, ratchets will apply



Reads to be submitted by a deadline. Any read submitted after the deadline will be processed the following day.

Validations carried out by xserve on the read is a sense check only: 1. Whether the shipper is the Registered User, 2. Whether the reading has the correct number of digits

Zero consumptions will not be subject to validation, will be accepted based on the Shipper completing the validation prior to submission

Existing DM read estimation process is used: D-7 or AQ/365

Estimated reads can be replaced with an Actual read upto D+5

Actual reads can not be replaced



## 4.2 To Be Process & Process Map

*To be documented.*

## 5. Business Requirements Definition

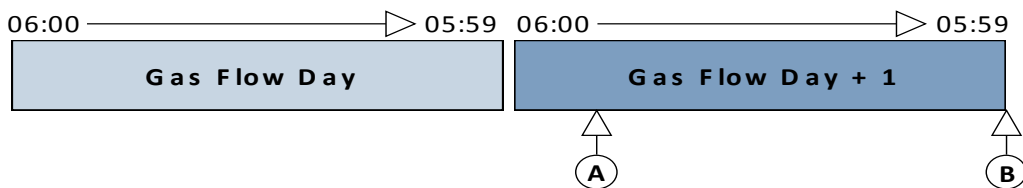
### 5.1 Process 1 – Daily Balanced Sites – Time Critical to NDM Allocation

- 5.1.1 This process applies to large sites where daily balancing is currently mandatory due to size/location or other factors. Timely receipt of reads is critical to the accuracy of the NDM Allocation process. This includes all Supply Points with an AQ >58.6m kWh or NTS sites. Other sites may be elected to use this service by the GT due to network operations or by the Shipper.
- 5.1.2 A reading must be submitted by the Shipper by 10am each day for the previous gas day (GFD+1).
- 5.1.3 The reading submitted may be an actual read (obtained from the AMR device) or an estimated read. The read notification must specify whether the reading is actual or estimated.
- 5.1.4 All estimated reads (calculated by the GT or the Shipper) will use a standard methodology under this process. This standard is described in 5.1.8.
- 5.1.5 Content of the read information exchange between the Shipper & GT is detailed under Section 5.9.
- 5.1.6 Notification will be issued by the GT to the Shipper detailing the meter readings that have failed and those that have passed 'logic checks'.
- 5.1.7 If a valid reading (actual or estimated) is not received by the GT by 10am on GFD+1, the GT will estimate a reading & notify the Shipper of the details.
- 5.1.8 The estimated reading will be calculated from the previous day's reading to produce an identical gas volume to the gas day 7 days earlier (a "D-7" estimate) or, if no previous consumption recorded for the site, the estimate will be calculated by AQ / 365.
- 5.1.9 An estimated read, GT or Shipper estimate, can be replaced with an actual reading by the Shipper before Close Out (D+5).
- 5.1.10 Any actual readings (including an actual which replaced an estimate) can be replaced before end of D+5 with a new actual or estimated reading
- 5.1.11 The closed-out energy balancing position will be based on the last valid reading supplied (or calculated) before end of D+5.
- 5.1.12 Shipper daily read validation is as per the UNC Validation Rules, Section 4, for sites with Daily Read Equipment and further GT validations are detailed under section 5.10.3 of this document.
- 5.1.13 Incentive arrangements are required to ensure that valid daily reads are submitted for 97.5% of sites in a timely manner in line with current DM processes (UNC M5.2). The reads can be actual or estimated. The 97.5% will be based on reads expected per day per Shipper portfolio.
- 5.1.14 The "Must Read" requirement will not be applicable for this process.
- 5.1.15 Replacement of reads after D+5 will be covered by the Retrospective Updates Business Rules.

### 5.2 Process 2 – Daily Balanced Sites – Not Time Critical to NDM Allocation

- 5.2.1 Sites for which Process 1 above is compulsory cannot use this process.
- 5.2.2 At 10am on **GFD+1** the GT will estimate a reading for interim use for the purposes of NDM Allocation. This reading will be calculated from the previous day's reading to produce an identical gas volume to the gas day 7 days earlier (a "D-7" estimate) or, if no previous consumption recorded, the estimate will be calculated by AQ / 365.
- 5.2.3 Where a valid read is loaded before 10.00 am on **GFD+1** by the Shipper the reading will be used for NDM Allocation, the estimate described in 5.2.2 will not be **used** for the purposes of Allocation.
- 5.2.4 If a reading has not been loaded by 10.00 am a reading must be submitted by the Shipper before the end of the day on **GFD+1** (05.59 am following the gas day **the meter reading relates to**) to replace the GT estimate.

**Timeline**



A = 10:00 Hrs - Estimated reading calculated  
 B = 05:59 Hrs - Deadline for Shipper read submission

- 5.2.5 The reading submitted by the Shipper may be an actual read (obtained from the AMR device) or an estimated read. The read notification must specify whether the reading is actual or estimated.
- 5.2.6 If a valid reading (actual or estimate) is not received by the GT by end of the gas day on **GFD+1** the GT will estimate the reading (this is the estimate calculated for Allocation purposes as described in 5.2.2) & notify the Shipper of the details. This estimate can be replaced with an actual reading before close out (D+5)
- 5.2.7 All estimated reads (calculated by the GT or the Shipper) will use a standard methodology under this process. The estimation methodology is described in 5.2.2
- 5.2.8** Content of the read information exchange between the Shipper & GT is detailed under Section 5.9.
- 5.2.9** Notification will be issued by the GT to the Shipper detailing the meter readings that have failed and those that have passed system checks.
- 5.2.10** If the first Shipper read submission is an estimate, it can be replaced with an actual reading, for example in the event of a faulty meter.
- 5.2.11** Any actual Shipper readings (including an actual which replaced an estimate) can be replaced with a new actual reading or estimated reading before end of D+5.
- 5.2.12** The closed-out energy balancing position will be based on the last reading supplied (or calculated) before end of D+5.
- 5.2.13** Read validation rules are described under section 5.10

5.2.14 Incentive arrangements are required to ensure that valid daily reads are submitted for 97.5% of sites in a timely manner (in line with the DME Regime [UNC Section M6.1.1, 6.1.3 & 6.1.4](#)). The reads can be actual or estimated. The 97% will be based on reads expected per day per Shipper portfolio.

5.2.15 Incentive arrangements are required to ensure a maximum number of consecutive estimates for a site. The “Must Read” requirement will apply where a “Valid Meter Read” is not received for 4 consecutive months as per UNC Section M3.6 for Monthly Read sites

5.2.16 Replacement of reads after D+5 will be covered by the Retrospective Updates Business Rules.

### 5.3 Process 3 – Daily Reconciled Sites

5.3.1 Sites for which Process 1.above is compulsory cannot use this process.

5.3.2 Daily readings are not routinely submitted within D+5 under this process.

5.3.3 Daily energy allocation for these sites will be calculated at [GFD+1](#) by the GT, based on the existing Allocation process (or replacement arrangements). Sites would be apportioned energy per day based on algorithms for allocation purposes.

5.3.4 The closed-out energy balancing position will be based on the estimate calculated by the GT as described in 5.3.3.

5.3.5 Readings for each gas day are submitted periodically in batches, to a pre-notified frequency. These frequencies are weekly, fortnightly or monthly.

5.3.6 The maximum planned interval between the end dates of read batches under this process is monthly. There is no specified deadline for submitting a batch of reads, except as described in 5.3.25 below.

5.3.7 Each reading submitted within a batch may be an actual read (obtained from the AMR device) or an estimated read. The read notification must specify whether the reading is actual or estimated.

5.3.8 All estimated reads calculated & submitted by the Shipper will use a standard methodology under this process. The standard is described in 5.3.9

**5.3.9 The standard methodology for the estimated reading to be determined during Reconciliation topic.**

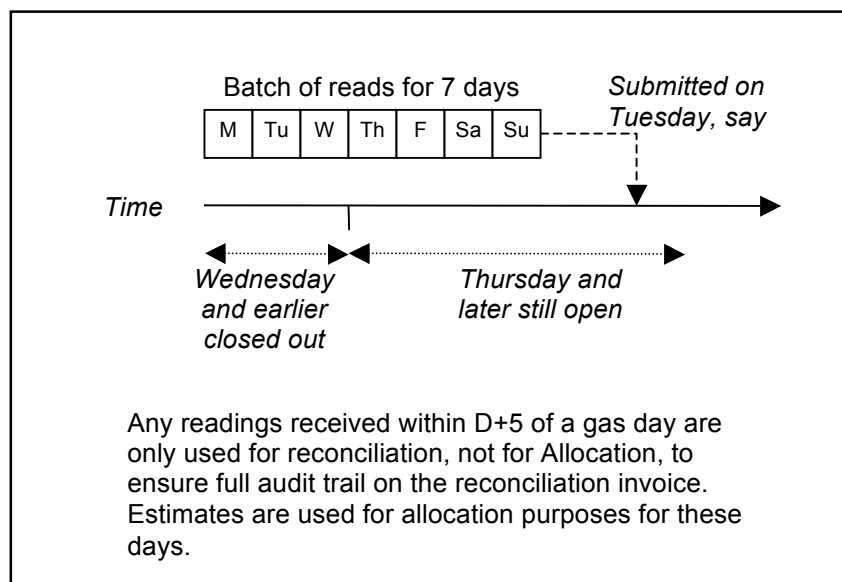
5.3.10 A read file can contain reads for a mix of MPRN's with different read frequencies, for example, file contains 5 days consecutive reads for site A, 30 days consecutive reads for site B etc.

5.3.11 Content of the read information exchange between the Shipper & GT is detailed under Section 5.9.

5.3.12 System ‘Logic checks’ will be carried out by the GT on the reads received from the Shipper. A ‘completeness’ check shall also be performed on receipt of the communication to ensure all reads expected (as per 5.3.11) have been received.

5.3.13 For an MPRN, if there is a gap between the last reading date of the previous batch and the first reading date of the new batch, energy will be apportioned across the missing days using existing NDM Reconciliation principles and processes.

- | [5.3.14](#) For an MPRN, if there is a gap of one or more days within the sequence of reads in a batch, energy will be apportioned across the missing days using existing NDM Reconciliation principles and processes.
- | [5.3.15](#) A notification will be sent to the Shipper by the GT detailing the accepted reads, rejected reads and any days where a read was missing within a read communication file.
- | [5.3.16](#) Where the GT has calculated energy for reconciliation purposes due to a missing read or rejected read, the energy will be converted to an estimated reading & issued to the Shipper.
- | [5.3.17](#) Shippers can submit meter reads for previously rejected reads or missing read days within D+? (to be discussed during Reconciliation).
- | [5.3.18](#) Replacement of readings **after D+5** will be covered by the Retrospective Updates Business Rules.
- | [5.3.19](#) Read validation rules [are described under section 5.10](#)
- | [5.3.20](#) On receipt of a batch of accepted reads the GT will perform individual daily reconciliations for each gas day up to and including the date of the last reading in the batch (see 5.3.13 and 5.3.14 above regarding filling in of gaps).
- | [5.3.21](#) These reconciliations will apply daily SAP prices and gas transportation rates to the daily reconciliation quantities.
- | [5.3.22](#) Reconciliation volume may be positive or negative. Energy and/or transportation charges may have the opposite sign to the volume, due to differential rates on different days.
- | [5.3.23](#) Note: under this approach some readings are received within D+5, however these are not used for daily balancing, see diagram below:



- | [5.3.24](#) Shippers will have an obligation to ensure that valid daily reads (actual or estimated) are submitted for 90% of 'Daily Reconciled sites' in the Shippers portfolio in any given calendar month (as per UNC Section M3.4.1).

- | [5.3.25](#) Incentive arrangements are required to ensure a maximum number of consecutive estimates for a site. The “Must Read” requirement will apply where a “Valid Meter Read” is not received for 4 consecutive months as per UNC Section M3.6 for Monthly Read sites
- | [5.3.26](#) Treatment of the resulting reconciliation will be to use a daily reconciliation factor to attribute reconciliation energy to each day in the period.
- | [5.3.27](#) Reconciliation quantities will be calculated as follows; calculate a Reconciliation Factor (RF) for the period as Actual Volume/ Allocated Volume. Calculate daily actual volume as RF x Allocated Volume. Daily Reconciliation volume = daily actual – daily allocated volume.

#### **5.4 Process 4 – Periodic Reconciliation Sites**

- 5.4.1 Sites for which Process 1. above is compulsory cannot use this process.
- 5.4.2 Daily readings are not submitted to the GT under this process, although the supplier and shipper may chose to receive these reads from the equipment.
- | 5.4.3 Daily energy allocation for these sites will be calculated on [GFD+1](#), based on the existing Allocation process (or replacement arrangements). Sites would be apportioned energy per day based on algorithms for allocation purposes.
- 5.4.4 The closed-out energy balancing position will be based on the estimate described in 5.4.3.
- 5.4.5 A single actual meter reading is submitted periodically, to a pre-notified frequency. The frequency can be weekly, monthly, quarterly, six-monthly or annually.
- 5.4.6 The maximum planned interval for submission of readings under this process is annual.
- 5.4.7 The reads that are submitted will be actual reads and not estimated reads.
- | [5.4.8](#) [Content of the read information exchange between the Shipper & GT is detailed under Section 5.9.](#)
- | [5.4.9](#) Notification will be issued by the GT to the Shipper detailing the meter readings that have failed and those that have passed ‘logic checks’.
- | [5.4.10](#) Replacement of readings after **D+5** will be covered by the Retrospective Updates Business Rules.
- | [5.4.11](#) Read validation rules [are described under section 5.10.](#)
- | [5.4.12](#) On receipt of a valid reading the GT will perform reconciliation for each gas day since the last read date up to and including the date of the current reading.
- | [5.4.13](#) Reconciliation quantities will be calculated as follows; calculate a Reconciliation Factor (RF) for the period as Actual Volume/ Allocated Volume. Calculate daily actual volume as RF x Allocated Volume. Daily Reconciliation volume = daily actual – daily allocated volume.
- | [5.4.14](#) Reconciliations will apply daily SAP prices and gas transportation rates to the daily reconciliation quantities.
- | [5.4.15](#) Reconciliation volume may be positive or negative.



**5.4.16** If no “Valid Meter Reads” have been received for four consecutive months for sites with a read frequency of weekly or monthly, and for 24 consecutive months for sites with a read frequency of quarterly, 6 monthly or annually, there will be a “Must Read” requirement as per UNC Section M3.6.

**5.4.17** Obligations will continue to be required within UNC (Section M3.4 & M3.5) to ensure that actual “Valid Meter Reads” are submitted in any period of 12 months for;

- 90% of sites of which the AQ is greater than 73,200 kWh
- 70% of sites of which the AQ is not greater than 73,200 kWh

## 5.5 Change of Shipper

5.5.1 A Proposing Shipper can submit a Supply Point Enquiry to identify the Balancing type (Process) and (for Processes 3 & 4) the Meter Reading Frequency the site is registered under.

5.5.2 The incoming Shipper to be notified of which Process currently applies and the current read frequency (where applicable) as well as the elected/proposed via the Nomination response and the Confirmation response

5.5.3 A Proposing Shipper will need to specify on the existing Nomination and Confirmation **communication** the election of which Balancing Type (Process) and, for Processes 3 & 4, the Meter Reading Frequency.

5.5.4 To ensure the relevant fields are populated the records submitted by the Shipper will be mandatory on the Nomination and Confirmation request; a default will not be applied.

## 5.6 Change of Shipper **Transfer Readings**

5.6.1 **The Outgoing** Shipper obtains and submits the **closing** transfer read.

5.6.2 For Process 1 & 2 the transfer read to be obtained on the transfer date and submitted on D+1.

5.6.3 For Process 3 & 4 the transfer read to be obtained **on the transfer date & submitted within close out (D+5)**.

5.6.4 The transfer read submitted by the **Outgoing** Shipper can be an actual or an estimated read.

5.6.5 A valid transfer read submitted by the **Outgoing** Shipper will be **issued** to the **Incoming** Shipper **as the Opening read** by the GT.

5.6.6 For sites under Processes 1 & 2, where a read is not submitted for the transfer date within D+5 the estimate calculated on D+1 by the GT will be used for the purposes of the Opening **& Closing** Meter Read

**5.6.7** For sites under Processes 3 & 4; where a transfer read is not submitted for the transfer date the GT will calculate an estimated read and submit to both the **Outgoing & Incoming Shipper on D+5**. The estimate to be calculated as per the **methodology for the relevant Process**

**5.6.8** **A transfer read (Shipper read or GT estimate) can be replaced if submitted & accepted within D+5.**

5.6.9 The Incoming or Outgoing Shipper can challenge the transfer read using the existing Shipper Agreed Read process (UNC M3.8).

5.6.10 It will be the Outgoing Shippers responsibility to submit the Shipper Agreed Read.

## **5.7 Election for type of balancing regime where there is no change in Shipper**

5.7.1 Change in read frequency: The GT needs to know 10 business days (as per existing requirement) before the gas day of the elected read frequency (Processes 3 & 4 only) for planning and estimation purposes. A change in Meter Reading Frequency can only be effective 2 months after the current Meter Reading Frequency effective date, except where;

- There has been a change of Shipper.
- There has been a meter exchange or change of AMR equipment

5.7.2 Change in balancing type: An election for a change of balancing type must be received and accepted by D-8 business days for a gas day using the existing Reconfirmation process as per UNC G2.2.5, 2.5.1 & 2.5.8. A change in balancing type can only be effective 2 months after the current balancing type effective date.

5.7.3 Only the Registered User or a Confirming User (with a confirmation about to become effective after D-7) can submit an election described in 5.7.1 or 5.7.2. If the requesting User will not be the Registered User on the day to which the election refers, the election will be rejected.

## **5.8 Site transfers to or from the NDM regime**

5.8.1 Request to transfer to or from the NDM regime where there is no change in Shipper is submitted via a re-confirmation providing 8 business days notice.

5.8.2 Request to transfer to or from the NDM regime where there is a change in Shipper to follow the existing Nomination & Confirmation process.

5.8.3 Meter reading obtained on the transfer date & used as the transfer read to close out the period prior to the transfer to the new regime.

5.8.4 The transfer read to be loaded within D+5 days of the transfer date.

5.8.5 Where a valid read, actual or estimate, is not loaded by the Shipper, the GT will estimate the transfer read on D+5 in line with the estimating methodology for the relevant process.

5.8.6 Where there is also a change in Shipper it will be the Outgoing Shippers responsibility to obtain & submit the transfer read as per section 5.6

## **5.9 Read Communication Content**

5.9.1 Information exchange from the Shipper to the GT;

- MPRN
- Confirmation Number
- Meter Serial Number

- AMR Serial Number
- Reading
- Date of Reading
- Reading Source (customer, transmitted, MRA)
- Through the Zero Count
- Actual or Estimated Reading
- Reading Units
- Metric or Imperial Indicator
- Reading Type (e.g. AMR)
- Read Reason Code (Opening Read, Replacement Reading)
- Converter Reading
- Start & End Date of Read Batch (Process 3 sites)
- Read Verified Indicator
- AMR Service Provider

#### 5.9.2 Information Exchange from the GT to the Shipper;

- At 'File' Level
  - Total Number of Reads Received
  - Total Number of Accepted Reads
  - Total Number of Rejected Reads
- At MPRN Level:
  - MPRN
  - Reading
  - Date of Reading
  - Accepted or Rejected Indicator
  - Rejected reason Code
- Estimated Read Notification:
  - Estimated Reading / Consumption
  - Date of Estimated Reading
  - Reason Code for Estimated Reading (e.g. read failed validation, no read received)

### 5.10 Read Validation

5.10.1 Shipper validation carried out for all sites where a daily read is received, either a read received daily or daily reads received at set intervals, excluding those sites in Process 1;

- A completeness check to ensure that all readings expected have been received.

- An instrument configuration test to ensure that the converter reading and the meter reading are received where a converter is fitted (is this the same as above?).
- Tolerance check to ensure the consumption derived from the reading is within the specified tolerance for the AQ band, as per the table below;

Lower AQ band	Upper AQ band	Tolerance
0	73,199	+ or – 100% of Meter Point SOQ
73,200	731,999	+ or – 80% of Meter Point SOQ
732,000	5,859,999	+ or – 70% of Meter Point SOQ
5,860,000	29,299,999	+ or – 60% of Meter Point SOQ
29,300,000	57,599,999	+ or – 50% of Meter Point SOQ

5.10.2 Shipper validation carried out for all sites where a periodic read is received;

- Tolerance check to ensure the consumption from the reading is within the specified tolerance for the AQ band, as per the table below;

Lower AQ band	Upper AQ band	Tolerance
0	73,199	+ or – 200% of Meter Point AQ/read period
73,200	731,999	+ or – 150% of Meter Point AQ/read period
732,000	5,859,999	+ or – 100% of Meter Point AQ/read period
5,860,000	29,299,999	+ or – 70% of Meter Point AQ/read period
29,300,000	57,599,999	+ or – 50% of Meter Point AQ/read period

5.10.3 GT validation carried out at read receipt of the Shipper readings, actual or estimated;

- For sites in Processes 1, 2 & 3, a completeness check to ensure that all readings expected have been received.
- For sites in Processes 1, 2 & 3, tolerance check at read receipt, reject if:
  - Read produces a negative consumption except after an estimated read.
  - Consumption is greater than or less than 2 x the Meter Point SOQ
- For all sites (Processes 1, 2, 3 & 4), a tolerance check based on the reconciliation energy calculated at read receipt against the AQ for the meter point, as per the table below;
  - Note: This check will only be required following a re-synch for processes 1, 2 & 3

Lower AQ band	Upper AQ band	Tolerance
0	73,199	Rec energy + or – Y% x AQ / read period
73,200	731,999	Rec energy + or – Y% x AQ / read period
732,000	5,859,999	Rec energy + or – Y% x AQ / read period
5,860,000	29,299,999	Rec energy + or – Y% x AQ / read period
29,300,000	57,599,999	Rec energy + or – Y% x AQ / read period

- Values to be determined following further analysis during Reconciliation discussions.
- Any reads that fail the GT tolerance check above will be rejected & a notification issued to the Shipper.
- A rejected read can be re-submitted if the Shipper confirms that the read is correct.

Note: The GT validations are aimed at protecting the industry & allocation processes and to significantly reduce the potential number of 'Filter Failure' rejections.

## 5.11 Check Read

5.11.1 Check Read obligations will continue to apply to detect any drift between the meter & AMR equipment. Check Read requirement will only apply to sites fitted with metering equipment that derive reads (opposed to those that transmit reads);

- Every 12 months for sites with an AQ greater than or equal to 29,300,000 kWh
- Every 24 months for sites with an AQ less than 29,300,000 kWh and greater than or equal to 293,000 kWh
- Every 36 months for sites with an AQ less than 293,000 kWh

5.11.2 Note: Where a site with AMR equipment is transferred to the existing NDM regime the Check Read obligation will cease to apply.

5.11.3 Note: Check Read obligations may need to be re-visited if the current 2 year 'Meter Inspection' obligations are amended

## 5.12 Treatment of AMR drift/resynchronisations

5.12.1 For sites in Processes 1 or 2;

- A Re-Synch will be notified to xserve & recorded. The treatment of any drift between the read derived via the AMR device for these sites will be Pro-rata from the last resynchronisation. The existing DM Resynch rules will be applied for these calculations.
- Where a Shipper transfer occurs during the period of the re-synch the relevant charges will be applied to the incoming Shipper in line with existing DM reconciliation rules.

### **5.13 Other requirements**

**5.13.1** Because third parties may also be submitting readings for the meter on behalf of the Shipper (see 3.5 above), an audit trail is required to identify which party submitted each reading and validation to ensure only authorised parties submit reads.

## **6. Appendices**

Transfer timelines for Change of Shipper & Change of Regime

(Add timeline presentation once agreed at workgroup)

## 7. Glossary

<b>Term / Acronym</b>	<b>Definition</b>
<u>Allocation</u>	<u>Determination of daily gas offtaken for all sites</u>
<u>D+5</u>	<u>Exit Close Out which is 5 calendar days after the Gas Flow Day</u>
<u>DM Mandatory</u>	<u>As defined in UNC Section G1.5. Daily Read requirement applies where the Supply Point AQ is greater than 58,600,000 kWh.</u>
<u>DM Unbundling</u>	<u>Current obligations are on the GT to provide daily read equipment &amp; daily reads to Shippers. 'Unbundling' is the term used for transferring the obligations from the GTs to the Shippers/Suppliers.</u>
<u>GFD</u>	<u>Gas Flow Day</u>
<u>Incoming Shipper</u>	<u>Newly appointed Shipper to take over ownership for the MPRN</u>
<u>NDM Allocation</u>	<u>Determination of daily gas offtaken for NDM sites by using standard profiles &amp; factors</u>
<u>NTS Sites</u>	<u>Those sites directly connected to the National Transmission System.</u>
<u>Outgoing Shipper</u>	<u>Shipper lost or about to loose ownership of the MPRN</u>

## 8. Document Control

### Version History

Version	Status	Date	Author(s)	Summary of Changes
0.2	Initial Draft	20/08/2010	xoserve	Amendments following internal review
0.3	Initial Draft	26/08/2010	xoserve	Conversion to Business Requirements Template
0.4	1 <sup>st</sup> Draft	03/09/2010	xoserve	To incorporate changes at AMR Workgroup
0.5	2 <sup>nd</sup> Draft	07/09/2010	xoserve	Updated as agreed in AMR Workgroup 11
0.6	3 <sup>rd</sup> Draft	29/09/2010	xoserve	Updated as agreed in AMR Workgroup 12
0.7	4 <sup>th</sup> Draft	15/10/2010	xoserve	Updated as agreed in AMR Workgroup 13
0.8	5 <sup>th</sup> Draft	01/11/2010	xoserve	Updated as agreed in AMR Workgroup 14
0.9	6 <sup>th</sup> Draft	16/11/2010	xoserve	Updated as agreed in AMR Workgroup 15
0.10	7 <sup>th</sup> Draft	14/01/2011	xoserve	Updated as agreed in AMR Workgroup 16
0.11	8 <sup>th</sup> Draft	02/02/2011	xoserve	Updated as agreed in AMR Workgroup 17
<u>0.12</u>	<u>9<sup>th</sup> Draft</u>	<u>22/02/2011</u>	<u>xoserve</u>	<u>Updated as agreed in AMR Workgroup 18</u>

### Reviewers

Name	Version	Date
AMR Workgroup attendees		

### Approval

Name	Role	Date
AMR Workgroup		
PN UNC		