

# Business Requirements Definition

for

## Project Nexus

submitted to

## Project Nexus Workgroup Annual Quantity

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## 1. Glossary

Term / Acronym	Definition
Site	Supply Meter Point level

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## 2. 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 AQ 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 and the relevant existing and future process maps.

This version of the document contains draft business rules for the different options identified by the AQ Workgroup regarding AQ processes. These options have been documented for further discussion and clarification at the Workgroup.

### 2.1. Intended Audience

- Gas Shippers/Suppliers
- Gas Transporters
- Xoserve
- Customer Representative

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### 3. Executive Summary

#### 3.1 Introduction to the change

This document defines the timescales and processes associated with the calculation of the Annual Quantity for all directly connected gas meter points.

The document has been based on presentations and discussions at the Project Nexus AQ Workgroup and considering the high level principles agreed at the AQ Principle Workgroup in April 2010. The options have been documented for further discussion and clarification. All areas within the document are yet to be agreed and finalised.

All square brackets [] indicates values that can be parameterised for the purposes of the BRD although will require confirming for system design or system design or system development. The highlighted text represents areas for clarification which must be resolved by the Workgroup prior to the business rules being finalised.

#### 3.2 Implementation Timescales

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

#### 3.3 Change Drivers and Business Goals

##### 3.3.1 Drivers

The drivers detailed below are those identified by the AQ Workgroup for the derivation of the Annual Quantity (AQ);

- AQ to accurately reflect site consumption
- To utilise the reads obtained from remotely read meters in the calculation of the AQ
- To simplify the process wherever possible without affecting the accuracy of the AQ
- To systemise processes
- To smooth out workloads throughout the year
- Provide an incentive to Shippers to submit accurate a timely reads
- Provide transparency throughout the AQ review process and via industry reports

##### 3.3.2 Business Goals

To develop a robust regime for the derivation of a site's annual consumption (AQ) that is utilised in downstream processes. The AQ to be as accurate as possible using historic meter reads.

### 3.4 Change Background

The changes have been identified as a result of Xoserve's Project Nexus consultation for the replacement of UKLink systems and following DECC's consultation on Smart metering and Supplier licence obligation for the installation of advanced meters.

The changes are also as a result of Modification 0209 which was allocated to the Project Nexus Workgroup in May 2009 and more recently Modification 0380 which is a replacement for Mod 0209.

#### 3.4.1 Areas Identified in the Initial Requirements Register (IRR)

- Introduction of a rolling AQ is a core services required to ensure energy is accurately allocated
- Rolling AQ will reduce the risk to RbD shippers and their costs associated with reconciliation
- Increased energy consumption data should feed into an updated AQ rather than waiting for the annual review
- Rolling AQ being developed by Mod 0209 workgroup & should feature in Project Nexus
- Review of the SOQ for DM & NDM sites throughout the year as currently it can be up to 12 months out of date

#### 3.4.2 Business process Issues raised during the Workgroups

- Changes in consumption are not immediately reflected in the AQ
- Current AQ is based on historic consumption data, the AQ does not accurately reflect current consumption
- Unable to appeal SSP AQ's
- Manually labour intensive during the summer months for all parties
- Impacts on other processes during the processing and updating of the AQ
- Current process does not provide an incentive to submit reads more frequently

#### 3.4.3 UNC and Licence Impacts

#### 3.4.4 UNC Process Impacts

#### 3.4.5 Interaction with Project Nexus High Level Principles

In April 2010 the following high level principles for an AQ review were agreed at the Project Nexus Principle Workgroup;

- Preference for a ‘No AQ’ regime. This regime is only possible where daily allocations are performed based on actual reads.
  - However, it was recognised that an AQ will continue to be required for UNC processes, industry processes and licence obligations. GTs would also require an AQ for network operations.
- Transitional arrangements in a ‘No AQ’ regime would use a ‘Rolling AQ’ principle.
- ‘Rolling AQ’ was the preferred option where allocations were not performed daily using actual reads.
- Fallback position was an improved Annual AQ review.

### 3.5 Related Documents

Document Title	Location
Modification 0209: Rolling AQ	Joint Office Website
Modification 0380: Periodic AQ Calculation	Joint Office Website
AQ Principles Workgroup Report (19/05/2010)	Joint Office Website
Meter Read Submission and Processing and Settlement Arrangements BRD	Joint Office Website

## 4. Benefits

### 4.1 Industry Benefits

The following benefits will need to be aligned with the Transporter relevant objectives;

- Site AQ will accurately reflect site consumption
- Utilising the reads received from remotely read meters
- More accurate allocations

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## 5. **Change Scope**

### 5.1 In Scope

**Function:**

- Calculation of a sites AQ
- Timing of the calculation
- Validation of the AQ
- Submission of the AQ to Shippers
- Challenges to the AQ
- Updating the AQ
- SOQ, SHQ & BSSOQ calculation and timing of the calculation

**Market Sector:**

- All directly connected gas meter points
- Daily Metered CSEP sites
- NTS sites
- Prime and Sub sites

### 5.2 Out of Scope

**Function:**

- Any process not described above as In Scope

**Market Sector:**

- NDM CSEPs

# Detailed Requirements Analysis

## 6. Assumptions and Concerns

### 6.1 Assumptions

- The business rules will need to be appropriate for dumb metered sites as well as remotely read sites
- The processes described in the Settlement Workgroups are approved
- The proposed validations carried out by the GT at read receipt will ensure that any significant erroneous reads are rejected and not used for AQ calculation. However, if the read is 'flagged' by the Shipper as correct the read will bypass tolerance check validations and will be used for reviewing and updating the AQ.
- Only the latest replaced valid read at the time the AQ is calculated will be used.
- Ratchets will continue as an incentive regime where Shippers nominate the SOQ and SHQ.
- There will not be a requirement to retrospectively update the AQ.
- If 'Monthly Rolling AQ Review' is implemented pre the 4 Processes determined in the Settlement Workgroup the current UNC read limits would continue to apply.
- An AQ will not be calculated if the validations on the read have failed due to asset data
- Only estimates for Processes 1 & 2 will be used for deriving the AQ. Ofgem have concerns for an estimate is used for calculating AQ's.
- Sub deduct arrangements will continue and the Prime and Sub-deduct meter(s) will have an AQ (currently the AQ for the Sub-deduct meter is deducted from the Prime meter).
- A 'Leap Year' does not impact the calculation of the AQ

### 6.2 Dependencies

- The processes described within the Settlement Workgroup are unchanged.
- The GT read validations described under the 'Settlement BRD' would need to be implemented before the rules described in this document are implemented.
- Approval of the requirements by PN UNC
- Approval by Ofgem following the appropriate UNC Modification process.

### 6.3 Risks

- Not all Shippers/Suppliers attend the workgroups or a represented therefore there may be opposition to any potential Modifications raised.

### 6.4 Issues

- If the monthly AQ regime were implemented before the read validations described under the Settlement regime, interim/transitional arrangements may need to be applied to ensure erroneous AQ's are not implemented as a result of an invalid read being loaded.
- Impacts on allocation will continue if the AQ is not calculated due to incorrect asset data held on the Supply Point Register as a new AQ will not be calculated.

## 6.5 Constraints

## 6.6 Design Considerations

- For process 1 and 2 sites it is not essential for the AQ to be reviewed monthly as the AQ is not used for critical processes e.g. allocations and energy balancing. A monthly AQ review for these sites was agreed by the workgroup for consistency reasons; all sites receive a monthly AQ review.

## 6.7 Concerns

- Ofgem have raised concerns regarding the submission of estimates by Shippers as this can provide an opportunity for gaming, for example by submitting over or understated estimated reads depending on the SAP rates. However, agreed by the Workgroup that all estimated reads will be calculated using a standard methodology.

**7. Overview of Business Processes**

**7.1 Current Processes and Process Maps**

**7.2 To-Be Processes and Process Maps**

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## 8. Business Requirements

Throughout this section reference is made to four new processes designed in the Project Nexus Settlement Workgroup for the submission and processing of meter readings and settlement arrangements. These four future state processes are summarised below;

- Process 1, 'Daily Metered Time Critical'
  - Daily reads obtained and submitted to the GT daily before 10.00 am.
  - Actual or estimated reads may be submitted by the Shipper
  - The latest read loaded will be used for allocation and energy balancing purposes.
  
- Process 2, 'Daily Metered Not Time Critical'
  - Daily reads obtained and submitted to the GT daily.
  - If the reads are submitted before 10.00 am they will be used for allocation purposes otherwise a read must be received before end of the GFD+1.
  - Actual or estimated reads may be submitted by the Shipper
  - The latest read loaded will be used for final allocation and energy balancing purposes.
  
- Process 3, 'Batched Daily Readings'
  - Daily readings are obtained for each day but are not submitted daily
  - The daily reads are received in batches to a pre-notified frequency
  - Actual or estimated reads may be submitted within the batch by the Shipper
  - Reconciliation will be carried out daily based on the reads received
  - Allocation and energy balancing is based on the estimate calculated by the GT.
  
- Process 4; 'Periodic Readings'
  - An actual meter reading is submitted periodically.
  - Reconciliation is carried out using the methodology determined within the Reconciliation Workgroup
  - Allocation and energy balancing is based on the estimate calculated by the GT.

Figure 1 provides a summary of the AQ processes by Settlement Process;

Figure 1: Summary of the 4 meter reading processes and related AQ processes

Process Description	Read Used for Allocation	Read used for Energy Balancing	Shipper Read Submission	Timing of AQ calculation	Reads used for AQ calculation	Read Type used for the AQ calculation	SOQ Calculation	Industry Reports
1: Daily Metered Time Critical Readings	Daily Read	Daily Read	Daily by 10 am on GFD+1	Monthly	Daily Reads (last 365)	Actual & Shipper Estimate	Shipper Nominates	
2: Daily Metered not Time Critical Readings	GT Estimate	Daily Read	Daily by end of GFD+1	Monthly	Daily Reads (last 365)	Actual & Shipper Estimate	GT Derives	
3: Batched Daily Readings	GT Estimate	GT Estimate	Daily Reads in Batches	Monthly	2 reads a minimum of [12] months apart	Actual & Shipper Estimate	GT Derives	
4: Periodic Readings	GT Estimate	GT Estimate	Periodically	Monthly	2 reads a minimum of [12] months apart	Actual	GT Derives	

## 8.1 Meter Reads

- 8.1.1 All valid meter readings will be considered for use in the AQ review.
- 8.1.2 ~~For Actual and Shipper estimated meter readings will be considered for use in the AQ review except for Process 1 and 24 sites actual and estimated meter readings will be considered for use in the AQ review~~
- 8.1.3 ~~For Process 3 and 4 sites only actual meter readings will be considered where only actual meter readings are received periodically. Estimates generated by the GT will not be used for AQ calculation for AQ calculations.~~
- 8.1.4 The latest valid read loaded at AQ Close out will be used for the AQ calculation.

## 8.2 Monthly Process

- 8.2.1 The AQ review will take place monthly for all sites where a read has been loaded by the [10<sup>th</sup>] business day of the month (AQ Close Out). Where a valid read has not been loaded the current AQ will continue until a valid read is loaded.
- 8.2.2 The AQ calculation will use;
- 8.2.3 Sites within Processes 1 or 2; the latest read and the previous 364 daily reads.
- 8.2.4 Sites within Processes 3 or 4; the latest read and an end reading optimum read obtained from a minimum period of [9] calendar months previous and a maximum period of [X] months.
- 8.2.5 The Shipper will be notified of the revised AQ 5 business days prior to the end of the month.
- 8.2.6 The AQ will become effective on the 1<sup>st</sup> day of the month following the AQ notification day.

## 8.3 Consumption Periods

- 8.3.1 For Processes 1 and 2 sites the AQ will be calculated from the latest meter reading and the previous 364 days daily meter readings.
- 8.3.2 For Processes 3 and 4 sites the AQ will be calculated using a consumption period of:
- At least [9] months from the start meter reading to the end meter reading
  - Maximum of [3] years to the end meter reading

8.3.3 For processes 3 and 4, the optimum consumption period from the valid meter readings available is:

- For Weekly, fortnightly or Monthly read sites: [50] weeks
- For Quarterly, 6 Monthly or Annually read sites: [42] weeks

8.3.4 If the Meter Point has been isolated during the Consumption Period the AQ will:

- Option 1: still be calculated based on the criteria set out above in 8.3.1, 8.3.2 and 8.3.3.
- Option 2: The current AQ will be rolled over.

## 8.4 Validation

8.4.1 ~~Except for the checks described under section 8.4.4 and 8.4.5 t~~The GT will not perform complex validation of the AQ before submission to the Shipper. Meter reads will be validated by the GT on receipt of the read~~ing~~, this is described in the 'Submission and Processing of Meter Readings and Settlement Arrangements' BRD.

8.4.2 Where an incorrect AQ is calculated as a result of a read being loaded the Shipper can submit a new read within the timescales described under Section 8.2 and a new ~~AQread~~ will be calculated and effective, subject to validation, for the 1<sup>st</sup> of the following month.

8.4.3 There will not be a retrospective adjustment to energy or transportation charges where the AQ calculated is incorrect~~ly~~.

8.4.4 Before notification to the Shipper the GT will carry out a check to ensure that a Revised AQ calculation does not exceed [x%+ or -] of the current AQ (or use a tolerance table based on EUC band). Where the AQ does exceed the tolerance the revised AQ will not go live and the Shipper will be notified. If the revised AQ is actually correct the Shipper will need to raise an 'AQ Correction' described under Section 8.6 to correct the AQ.

- Exception to this rule is where the current AQ = 1.

8.4.5 The AQ will not be calculated and the current AQ will be carried over in the event of the following:

- From the meter readings available, a Consumption Period of less than or equal to [3] years can not be established
- From the meter readings available, a Consumption period of greater than [9] months can not be established
-



## 8.5 Validation Override Flag

- 8.5.1 On the read submission communication a field will be included for the Shipper to notify the GT that the read for the MPRN will fail the read validations but confirms that the read is correct and has been validated and should be accepted and processed by the GT.
- 8.5.2 The validation Override Flag is a request by the Shipper for the GT to bypass the read tolerance checks (as described in the Settlement BRD) only.
- 8.5.3 Checks will be carried out on the asset data and where the data provided by the Shipper does not match the data held on the Supply Point Register the read will be rejected and not used for AQ calculation.
- 8.5.4 If the checks on the asset data are correct the read will be used to calculate the AQ as per the timescales described under Section 8.2.

## 8.6 AppealsAQ Correction

- 8.6.1 ~~Appeal process~~ can only be used for sites where the Shippers reasonable estimate of the AQ is a decrease of [50%] or an increase of [200%] of the current AQ or for one of theAQ has changed significantly [ $<$  than or = to 60%], following reasons; for example due to a manifest change in usage or the site has been 'moth-balled'.
- on the basis of substantial evidence as to the actual consumption of gas
  - because of a change in the Consumer's Plant which results in a change in the basis on which gas is consumed
  - the site has been 'moth-balled'
  - where there has been a confirmed theft of gas incident
  - for previously failed AQ calculations (Section 8.4.4)
- 8.6.2 An AQ ~~appeal~~ Correction can be raised at any time during the year and for any site subject to 8.6.1.
- 8.6.3 Shipper notifies the GT of the revised AQ, actual reading within the last [40] days and the reason for the change in AQ.
- 8.6.4 GT will validate the information and notify the Shipper within [X] business days of the outcome of the validation.

8.6.5 Where the aAppeal is valid, the AQ will be included in the monthly process timescales described under Section 8.2.

## 8.7 Thresholds

8.7.1 Where the Revised AQ of a Meter Point is greater than 58,600,000 kWh for [3] consecutive calculations of the AQ or [6] months, but is not already classified as a DM mandatory site and within Process 1, the Daily Read Requirement will apply from the AQ effective date as per UNC Section G1.5.2 with effect from [6] months after the Effective date when the AQ first reached the DM Mandatory threshold.

## 8.8 Supply Point Offtake Quantity (SOQ)

8.8.1 The Shipper will continue to nominate the site SOQ and SHQ for Process 1 sites only. The existing process for the GT deriving the SOQ will continue for Processes 2, 3 & 4 sites.

8.8.2 The SOQ will be calculated annually by the GT and reviewed as per current timescales.

## 8.9 WAR Bands and EUC's

8.9.1 The WAR bands and applicable EUC's will be updated in line with the AQ.

8.9.2 The AQ will reflect any Meter Supply Meter Point cross-over in WAR bands from the 1<sup>st</sup> day of the month following the AQ Notification day. at the first Notification Day following the update in WAR.

## 8.10 Annual Other Parameter Changes

8.10.1 Following a revision to the Seasonal Normal Composite Weather Variables, the AQ and SOQs will be revised at the first Notification Day following the update in Weighted Average Annual Load Profile.

## 8.11 Bottom Stop SOQ (BSSOQ)

8.11.1 The existing arrangements will apply for the application and calculation of the BSSOQ annually.

8.11.2 BSSOQ will apply to Process 1 sites.

## 8.12 AQ Communication

8.12.1 A notification will be issued to the Shipper of all Revised AQ's. The communication will include:

- MPRN
- Current AQ
- Current EUC
- Current WAR band
- Revised AQ
- Revised EUC
- Revised WAR Band
- Effective date
- Start Meter Reading & Date
- End Meter Reading & Date
- Prorated Winter Consumption (Prorated WC over the optimum winter period, potentially used to derive EUC)
- Percentage AQ Change
- BSSOQ (when & where applicable)

8.12.2 A notification will be issued to the Shipper of all AQ's that have not been calculated or have failed the AQ validation. The communication will include:

- MPRN
- Revised AQ (if applicable)
- Rejection Reason (if applicable)
- Reason why a revised AQ was not calculated (if applicable)
- Current AQ value rolled over

8.12.3 The above notifications will be issued on separately.

## 8.13 Publication of Information

**9. Transitional Rules**

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## 10. Non-Functional Business Requirements

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**11. Appendices**

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## 12. Document Control

### Version History

Version	Status	Date	Author(s)	Summary of Changes
0.1	Initial Draft	05/07/2011	Xoserve	First draft
<u>0.2</u>	<u>Draft</u>	<u>19/07/2011</u>	<u>Xoserve</u>	<u>Updated following PN UNC Workgroup meeting on 18/07/2011</u>

### Reviewers

Name	Version	Date
AMR Workgroup attendees		

### Approval

Name	Role	Date
AMR Workgroup		
PN UNC		