

Project Nexus

Executive Summary of Business Requirements

Prepared for
Project Nexus UNC Workgroup

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1 Background

1.1 *Purpose of the Document*

This document summarises the Business Requirements defined at the Project Nexus UNC Workgroup (PN UNC). The intention is to summarise the detailed proposed changes at a high level, sufficient for the reader to develop an understanding of their key features and their external and mutual dependencies.

In combination with the detailed requirements, this document should provide a common basis for a high level assessment of the impacts of the proposals on their business and inform the financial and non-financial impacts of the Project Nexus proposals by all affected parties.

This document assumes a reasonable working knowledge of current industry processes, by highlighting key proposed changes from the current arrangements.

1.2 *Background to Project Nexus*

At the time of the last Gas Distribution Price Control Review Xoserve anticipated the need for a major IT systems investment programme. Stakeholder consultation was initiated, under the banner of 'Project Nexus' to inform the scope and nature of Xoserve's future services that IT systems would need to support – the detailed Business Requirement Documents that support this document from a key input to the design of that investment programme.

The initial phase of Project Nexus was a Consultation exercise, in which interested parties were asked for their views on the long-term strategic requirements for Xoserve's services. The consultation also developed a preferred approach to further definition of stakeholder requirements.

Following the Consultation Phase of Project Nexus, an Initial Requirements Register (IRR) was compiled, identifying all the topics that respondents to the Consultation had raised.

Topics were grouped into three broad categories:

- UNC changes
- Independent Gas Transporter (iGT) services
- Data management

A UNC Workstream was established to consider the UNC topics and develop requirements.

Following an initial industry meeting regarding the generic 'data management' topics, it was agreed to suspend further discussion in this area, pending greater clarity regarding the scope of the then-anticipated smart metering programme.

Given that there were ongoing discussions under different governance around iGT services, this area was not progressed as part of the Project Nexus requirements definition work, although an iGT representative has maintained engagement with Project Nexus and developments associated with iGT

services have been closely monitored by Project Nexus. iGT services came to the fore towards the end of 2011 following the raising of an iGT UNC Modification (Mod 039) and the more active engagement of iGTs with Xoserve. iGT representatives support the concept of a single central supply point register and work commenced in early 2012 to gather industry requirements for this additional service.

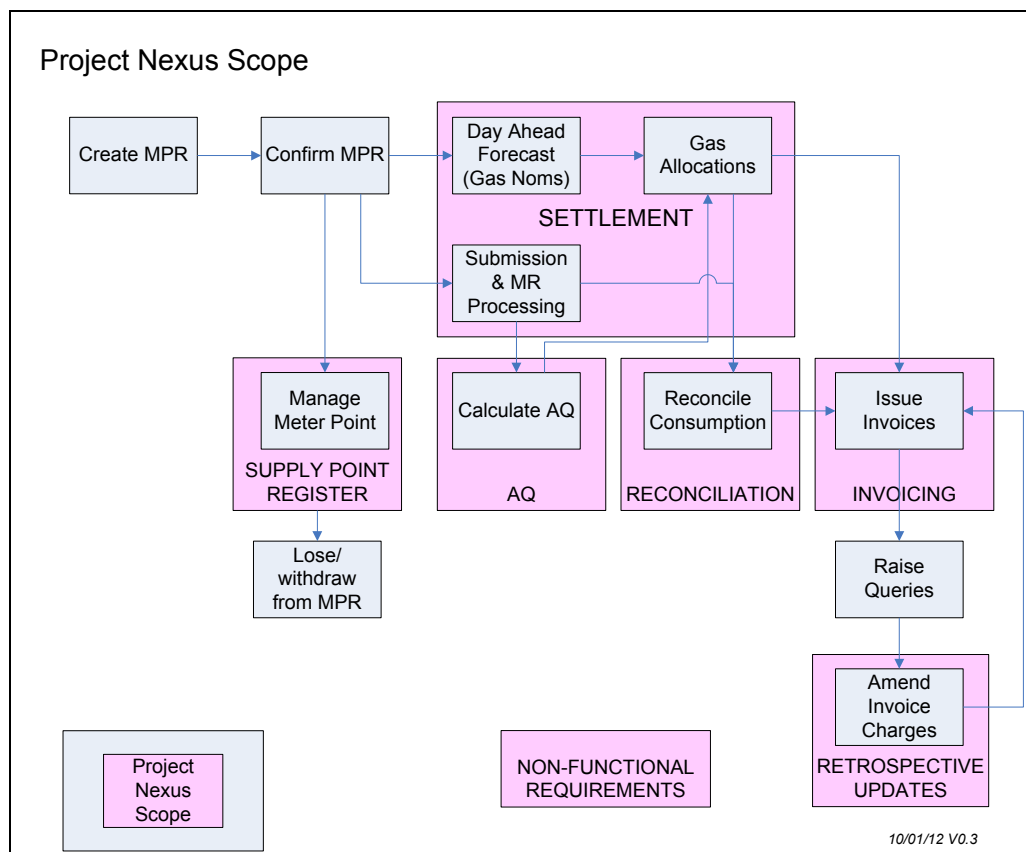
The Project Nexus Advisory Group (PNAG) was also established to provide advice and support on the most effective manner in which Xoserve should define future service requirements with full stakeholder engagement.

1.3 Development of Requirements

In 2009 the Uniform Network Code (UNC) Modification Panel agreed a Workstream (later renamed Workgroup) should be set up to define industry requirements for the development/enhancement of the UNC in areas that are relevant to Xoserve's services. The Initial Requirements Register (IRR) formed the basis of the discussions. Consultation responses were grouped into related topics and relevant as-is process models were reviewed and agreed. The Project Nexus Workgroup discussed the consultation responses and reached a consensus on whether to carry forward or close the requirement. The outputs from the Workgroup Topic meetings were baselined Business Requirements Documents and To-Be process models (i.e. future state processes).

1.4 Areas of Requirements Development

The following diagram shows the approximate relationship between the seven topic areas:



1.5 Overview of Business Requirements

The original comments in the IRR were grouped into a number of topics, loosely based on existing industry process areas. These topics were tackled in sequential order, to minimise the amount of re-work. The 8 topic areas covered under Project Nexus UNC (PN UNC) Workgroup discussions were:

- Settlement (i.e. submission of Meter Readings and use in Daily Allocation)
- Annual Quantity
- Reconciliation
- Invoicing
- Supply Point Register
- Retrospective Updates
- Non-Functional requirements
- iGT Agency Services

Business requirements documents (BRDs) have been documented for each of these topics and have been reviewed by stakeholders. Sections 2 to 9 of this summary document set out the key features of each of these BRDs.

1.6 Source Documents

This document is a summary of the BRDs for the seven topics referred to above. The individual sub-sections in sections 2 to 9 below are cross-referenced to the relevant sections of the underlying BRDs. The intention of this document is to summarise those BRDs, so where there is any apparent conflict between this document and the individual BRD, then the individual BRD should be treated as the authoritative document.

This document is based on the latest published versions of the BRDs

| Document Name | Location |
|---|--|
| Business Requirements Document for Meter Read Submission and Processing and Settlement Arrangements (" Settlement BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Requirements Definition for Reconciliation (" Reconciliation BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Requirements Definition for Annual Quantity (" AQ BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Requirements Definition for Retrospective Updates (" Retro Updates BRD ") | www.gasgovernance.co.uk/nexus/070212 |
| Business Principles for Supply Point Register (" Supply Point BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Principles For Invoicing (" Invoicing BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Principles for Non-functional Requirements (" Non-Functional BRD ") | www.gasgovernance.co.uk/nexus/brd |
| Business Requirements Definition for iGT Agency | www.gasgovernance.co.uk/nexus/brd |

| Document Name | Location |
|--------------------------------------|-----------------|
| Services ("iGT Agency Services BRD") | uk/nexus/brd |

1.7 Status of BRDs

The BRDs set out the requirements developed through PN UNC discussions. They have not been subject to a cost/benefit assessment. They will form the basis of UNC Business Rules to support a UNC Modification. The BRDs have been updated as requirements have changed during the PN UNC Workgroups but will need to be baselined at the time the Modifications are submitted for approval.

1.8 Dependencies / Interdependencies of BRDs

The BRDs have been developed sequentially, where relevant as far as possible taking into consideration outputs of earlier BRDs in developing rules for the next topic.

The BRDs have been developed during a period when DECC's Smart Metering Implementation Programme (SMIP) has been running in parallel. To some extent it is expected that the full take-up of some elements of the BRDs will only be achieved as smart metering rolls out (e.g. Settlement Product 3). However it is important to understand that there is no hard dependency of any of the BRDs on the rollout of smart metering. Nor has the SMIP identified any dependency on the Project Nexus requirements.

Although the BRDs have been developed sequentially, it is Xserve's view that in some cases elements of one BRD logically should not be delivered as 'stand alone', i.e. there are some process changes within individual BRDs that are dependent on process changes proposed in other BRDs. This gives rise to a view of which BRDs / elements of BRDs should logically be considered to be delivered together and in what order. In conducting an industry impact assessment these interdependencies must be agreed and work progressed with these groupings and sequencing in mind.

Xserve's view of related BRD elements is set out below, with reference to the appropriate section of this document.

This does not represent an implementation plan, but is a suggested grouping of sub-topics, which should ensure that interdependencies are properly considered.

| <i>Topic Grouping</i> | <i>Group A</i> | <i>Group B</i> | <i>Group C</i> | <i>Group D</i> |
|-----------------------|--------------------------------|---|--|----------------|
| Settlement | Meter Reading Validation (2.7) | Introduce Product 2 and Product 3 for LSP (2.2) | Enhanced NDM Allocation and Gas Nomination | |

| | | | | |
|------------------------------------|----------------------------|--|---|--|
| | | | arrangements (2.5, 2.9) | |
| <i>Reconciliation</i> | | NDM Resynchs, Product 3 one-day recs (3.5) | Universal meter point rec Remove RbD, replace with LDZ-wide smearing (3.2, 3.4) | |
| <i>AQ</i> | Monthly AQ Calculation (4) | | | |
| <i>Retrospective Updates</i> | | Replace any meter reading (5.3) | | Retrospective asset updates (5.2) |
| <i>Supply Point Register</i> | | | | Supply Point Register enhancements (6) |
| <i>Invoicing</i> | | | | Invoicing (7) |
| <i>Non-Functional Requirements</i> | As appropriate | As appropriate | As appropriate | As appropriate |

Notes

- A. The recommendation is that monthly AQ calculation is implemented at least 9 months after the new read validation as described.
- B. Group B packages together offers new services for Larger Supply Points which take advantage of the roll-out of improved meter reading technology prior to the mass roll-out in the SSP sector. These products are alternatives to the current DM Voluntary and Elective services.
- C. It is not feasible to move to universal individual meter point reconciliation without removing Reconciliation by Difference (RbD) and replacing it with a new smearing arrangement. Unless NDM Allocation arrangements are changed at the same time, the allocation process could introduce new cross-subsidies which would only be corrected by reconciliation.
- D. The enhancements to the Supply Point Register have been grouped together.

2 “Settlement” (Submission of Meter Readings and Use in Daily Allocation)

2.1 Key Proposals

- Shippers continue to be responsible for obtaining, validating and submitting meter readings
- Gas Transporters’ agent performs validations on the read against data held on the GTs’ supply point register
- Choice of four future services for attribution/allocation of daily gas off-taken
- Shippers will have access to a daily settlement service for all meter points – if desired
- Introduction of an industry-wide “smear” for Unidentified Gas and any other gas not accounted for through initial measurements or allocations

2.2 Overview of the 4 Products

The Business Requirements include proposals for 4 “Products” or “Class”, which will all be available to all meter points (with the exception of daily metered mandatory meter points (DM Mandatory – see 2.2.1 below). All these Products are intended to be available in the future regime, and as such do not represent a range of design options. Rather, they represent customer choice in attribution/allocation and reconciliation arrangements (considered in more detail in the Reconciliation section below).

Each Product is described below in turn. The key features are compared in 2.3 below.

2.2.1 Product 1 – Time Critical DM (Settlement BRD 5.5)

A mandatory service for meter points with an AQ of over 58.6m kWh, NTS meter points, meter points with GT telemetry equipment fitted or where an interruptible contract exists.

Meter readings are provided by the GTs DMSP and must be submitted by 11am on GFD+1 for these meter points, in order to support allocation processes for non-daily metered meter points and submission of the reads to Shippers. Where no readings are received in time, the GT agent will calculate an estimate based on the recorded consumption from 7 days earlier (a “D-7” estimate). GT estimated readings can be replaced up to D+5, at which point the latest accepted reading will be used for Energy Balancing and Commodity billing purposes.

2.2.2 Product 2 – Non-Time Critical DM (Settlement BRD 5.6)

An elective service available to any meter point except for which Product 1 above is compulsory cannot use this process. Shippers may elect to use this service for even the smallest meter point.

Meter readings must be submitted within 24 hours of the end of the gas day for these meter points, i.e. by 05:59 the following morning. In order to support allocation processes for non-daily metered meter points, the GT agent will use a “D-7” estimate in any allocation runs, until an actual reading is received.

Where no actual meter readings are received by D+5, the D-7 estimate will prevail. GT estimated readings can be replaced up to D+5, at which point the latest accepted reading will be used for Energy Balancing and Commodity billing purposes.

Products 1 and 2 are very similar, with the key differences being mandatory application of Product 1 to the largest meter points, and a longer read submission window for Product 2.

2.2.3 Product 3 – Batched Daily Readings (Settlement BRD 5.7)

A voluntary service available to any meter point except for which Product 1 above is compulsory cannot use this process.

The meter point is subject to non-daily metered allocation each day based on its AQ and an allocation algorithm. Gas usage is subsequently reconciled for each day’s individual consumption, by the Shipper submitting a batch of actual daily readings. The proposed read frequencies for batch submission are weekly, fortnightly and monthly.

2.2.4 Product 4 – Periodic Readings (Settlement BRD 5.8)

A voluntary service available to any meter point except for which Product 1 above is compulsory cannot use this process.

The meter point is subject to non-daily metered allocation based on its AQ and an allocation algorithm. Gas usage is subsequently reconciled when the Shipper submits a periodic meter reading, which must be an actual reading. The reconciliation quantities and values are derived using the original allocation profile.

2.3 Key features of the four Products (Summary of Settlement BRD 5.5 – 5.8)

| Process Description | Basis of energy Allocation | Basis of Energy Balancing | Shipper Read Submission | Missing read arrangements for energy allocation |
|---|-----------------------------------|----------------------------------|---|--|
| Product 1: Daily Metered Time Critical Readings | Daily Read | Daily Read | Daily by 11 am on GFD+1 | D-7 estimate |
| Product 2: Daily Metered not Time Critical Readings | Daily Read | Daily Read | Daily by end of GFD+1 | D-7 estimate |
| Product 3: Batched Daily Readings | Allocation Profiles | Allocation Profiles | Periodically in batches of daily readings | Not applicable – not used in allocation |
| Product 4: Periodic Readings | Allocation Profiles | Allocation Profiles | Periodically | Not applicable – not used in allocation |

2.4 Mapping of the future Products to current services

The four proposed products can be mapped approximately to the existing services as shown below. However, please see the individual descriptions for further details.

| Current services | Future “Product” | |
|------------------------------|------------------------------------|-----|
| DM Mandatory | Product 1 – Time Critical DM | DM |
| DM Voluntary/ DM Elective | Product 2 – Non-Time Critical DM | |
| Non-Daily Metered | Product 3 – Batched Daily Readings | NDM |
| | Product 4 – Periodic Readings | |

2.5 Treatment of “Unidentified Gas” (Settlement BRD 5.4)

An initial estimate of unidentified gas will be calculated each day as part of the daily gas allocation process.

Step 1

Daily reads are received from Products 1 and 2. (Note: for Product 2, D-7 estimates are used until an actual read is received, or where there is no reading for Product 1).

Step 2

The NDM Algorithm calculates an initial allocation for all Product 3 and 4 meter points. This will require an improved estimation methodology. It is anticipated that this will still be based on AQ, but will be more responsive to other factors, such as weather. Further work on reviewing NDM Algorithms has been undertaken by the Demand Estimation Sub-Committee (DESC) and a separate Modification raised (0453).

Step 3

Total LDZ Throughput less Shrinkage, less Step 1 and Step 2 = Unidentified Gas for the LDZ.

Step 4

Unidentified gas in each LDZ is shared out to all portfolio Shippers in the LDZ based on their total Step 1 and Step 2 measurements for the day. The charge will be at portfolio level by Shipper by LDZ, not at meter point level.

Unidentified Gas will be amended subsequently and re-shared as meter point reconciliations occur. See Reconciliation section (3) below.

2.6 Submission of Meter Readings

Notwithstanding the introduction of DCC, little change is envisaged to the read submission arrangements. Submission of meter readings will remain the responsibility of the Shipper.

2.7 Meter Reading Validation (Settlement BRD 5.13, 5.14)

Shippers will continue to have responsibility for validating meter readings prior to submission to the GTs’ agent. The proposals include a new two-step validation process. Shippers will validate meter readings using the current AQ/SOQ for the meter point:

- For daily read meter points (Products 1 to 3), by comparing the energy that the reading would generate to the SOQ for the meter point
- For periodically read meter points (Product 4), by comparing the energy that the reading would generate to the AQ for the meter point, applied pro-rata for the number of days in the read period

If the proposed energy passes the first test, it can be loaded to the GTs' system and used in all subsequent processes.

The GT agent will replicate the Shipper validations and in certain circumstances will reject reads if they fail the tests. This enhanced validation is essential to support the changes to downstream AQ calculation and reconciliation processes, which rely on these readings.

If the energy fails the first test but passes the second test, it can only be loaded if it has been submitted with an "Override" flag. By using this flag the Shipper confirms that they have checked the reading (and the energy generated) and acknowledges that the energy is unusually large or small, but confirms that it is correct. The "flag" could be populated at first attempt at submission, or at a subsequent re-submission following a rejection by the GT.

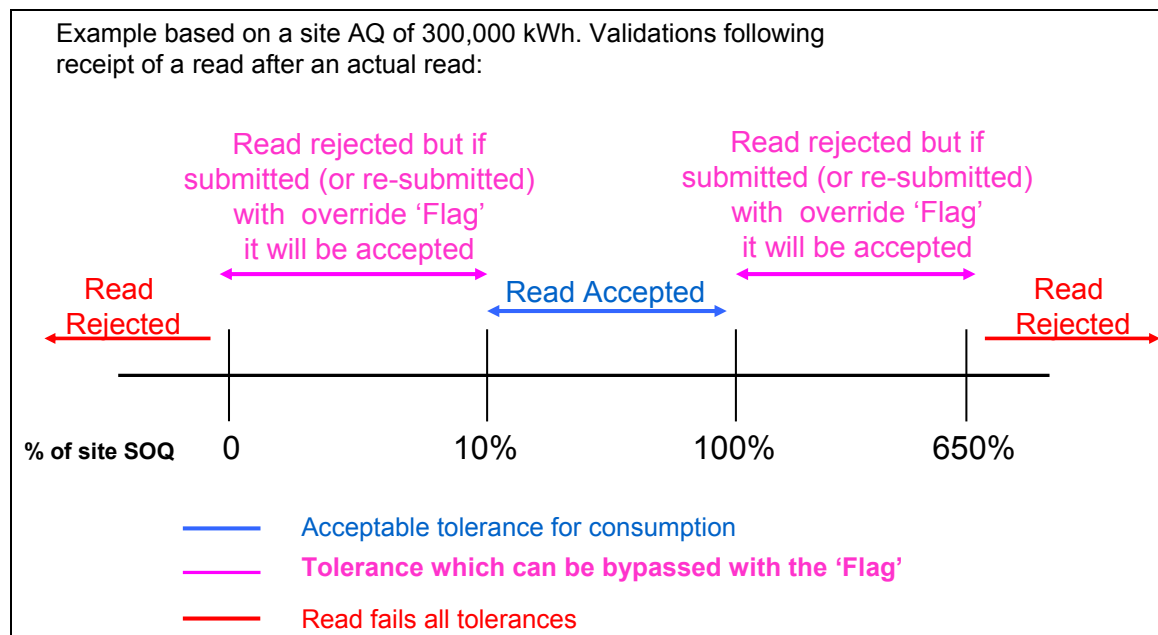
Reads where the energy fails the second test cannot be loaded. This second test is sometimes referred to as the "Market Breaker" test. Transactions outside of this test would risk "breaking" the market, and so cannot be allowed to load.

As a safeguard, if the "override flag" is set for a reading which according to the GTs' agent's calculation would pass both tests, the read will be rejected. This is to protect all downstream processes from erroneous use of the flag, e.g. trying to "force" reads through without performing full validation.

2.7.1 Read validation tolerances

The interaction of the two tests is shown below.

The working values of the tests can be found in the detailed Settlement BRD. It is intended that the actual values will be determined through further analysis at a later stage, and that there should be sufficient flexibility to amend the values after implementation if the industry agrees changes.



2.8 **Interaction with Smart Metering Programme/DCC arrangements**

None of the proposals for meter read submission is directly dependent on roll-out of smart meters or introduction of DCC, although we would expect that use of Products 1-3 would require automated meter reading facilities.

Product 4 is likely to be the default service for a current NDM meter point.

2.9 **Day Ahead Gas Nomination Processes (Settlement BRD 5.1)**

One of the Workgroup's objectives was to maintain or improve the alignment of Day Ahead NDM Gas Nominations with NDM Allocations (after the Gas Day). The proposal is to mirror the new NDM Allocation arrangements and to remain fairly close to the current principles for Day Ahead Gas Nominations:

- For the future equivalent of daily metered meter points (Products 1 and 2), the Shipper will nominate the next day's gas consumption
- Where the Shipper does not submit a gas nomination for Product 1 or 2 meter points (either for the interim or final runs of the nomination process) the GT will use a D-7 estimate (based on recorded consumption from 7 days earlier), however, for scheduling purposes this will be treated as the Shipper failing to input a gas nomination.
- For the future equivalent of non-metered meter points (Products 3 and 4), by estimating the next day's gas consumption, in a consistent manner to the after-the-day allocations
- Within each LDZ, the sum of daily metered nominations plus the sum of the NDM Estimates is deducted from the LDZ forecast consumption (as predicted by the Gas Control Room – unchanged from current arrangements)
- The difference between total LDZ forecast and the sum of all the meter point level forecasts is equal to forecast Unidentified Gas, and will be shared out to all portfolio Shippers in the LDZ based on their total forecast measurements for the day, the charge will be at portfolio level by Shipper by LDZ, not at meter point level.

2.10 **Access to Settlement Products (Settlement BRD 5.11)**

Except as detailed in 2.2.1 above, any meter point can access any of the 3 Products (Product 2, 3 & 4). Shippers will be required to designate a Product in advance for a meter point, and give future notice of a minimum of 5 days' notice of a change of Product.

3 Reconciliation

3.1 Key Proposals

- Meter point reconciliation for all MPRs
- Removal of RbD and replacement with an industry-wide scaling adjustment for unidentified gas, before the day, after the day and following a meter point reconciliation.
- No change to reconciliation principles and calculations, just to the range of meter points to which they apply
- Introduction of the concept of Resynchronisation for NDM meter points where meter readings are derived using certain types of automated reading equipment

3.2 Reconciliation services by Settlement Product (Reconciliation BRD 8.3, 8.4)

The four Settlement Products will be subject to meter point reconciliation as follows:

| Process Description | Basis of initial Allocation | Basis of Energy Balancing | Shipper Read Submission | Reconciliation |
|---|------------------------------------|----------------------------------|--------------------------------|---|
| Product 1: Daily Metered Time Critical Readings | Daily Read | Daily Read | Daily by 11 am on GFD+1 | Meter Point level following a re-synch or estimate |
| Product 2: Daily Metered not Time Critical Readings | Daily Read | Daily Read | Daily by end of GFD+1 | Meter Point level following a re-synch or estimate |
| Product 3: Batched Daily Readings | Allocation Profiles | Allocation Profiles | Daily Reads in Batches | Daily Rec at Meter Point level on receipt of a batch of reads |
| Product 4: Periodic Readings | Allocation Profiles | Allocation Profiles | Periodically | Meter Point level at receipt of read |

Reconciliation will still be based on a reconciliation energy amount (kWh) and will consist of Energy at SAP and Transportation Commodity costs at the applicable rates.

The three key reconciliation scenarios which exist in the current regime will continue to exist:

- DM Reconciliation on receipt of an actual reading following a series of estimated reads

- Resynchronisation reconciliation on receipt of a resynchronisation read, back to the previous resynch read
- NDM reconciliation, where periodic reads are received and reconciliation energy is attributed to the days since the last reading based on the allocation profile

In addition, Product 3 will introduce the concept of daily reconciliation when a batch of daily meter readings is received. The resulting reconciliations will be a series of one-day NDM reconciliations.

Meter point reconciliation will apply to all meter points, and will be triggered by the submission of a meter reading.

3.3 Reconciliation Safeguards (Settlement BRD 5.15 – 5.18)

There will be a number of safeguards to ensure that meter point reconciliation takes place in a timely manner. These safeguards all exist in the current regime, but the rules have been reviewed as part of these proposals. The safeguards include:

- Rules on which Products or meter read frequencies can be adopted, based on meter point AQ
- Performance standards for meter read submission (i.e. requirement to submit readings for a certain proportion of the portfolio each day/month/year)
- Where the reads are derived by meter reading equipment such as a datalogger, a requirement to obtain a check reading to a specified frequency. Note that meter reading equipment which captures and transmits the actual index of the meter, rather than relying on meter pulses or similar technology, would not require a check read.
- A “Must Read” requirement if reads are not submitted for a standard interval, whereby the GT will obtain a single meter reading and use it to trigger a reconciliation

The proposed trigger levels are set out below:

| Process Description | Qualification criteria | Performance standard | Must Read Requirement | Check Read Requirement (where applicable) |
|---|---|--|------------------------------|--|
| Product 1: Daily Metered Time Critical Readings | Mandatory for all meter points with AQ >58.6m kWh | 97.5% of sites in the portfolio per calendar month | Not applicable | Every 12 months |

| Process Description | Qualification criteria | Performance standard | Must Read Requirement | Check Read Requirement (where applicable) |
|---|---|--|---|--|
| Product 2: Daily Metered not Time Critical Readings | Any meter point | 97.5% of sites in the portfolio per calendar month | 4 months since last reading | Every [2 months |
| Product 3: Batched Daily Readings | Any meter point | Reads submitted for 90% of meter points each month | 4 months since last reading | Every 12 months |
| Product 4: Periodic Readings – Monthly Read | Product 4 meter points with AQ >[293,000] | Reads submitted for 90% of meter points each year | 4 months since last reading | Every 12 months |
| Product 4: Periodic Readings – LSP | Any meter point | Reads submitted for 90% of meter points each year | 24 months since last reading, 4 months if Monthly MRF | Every 24 months 12 months if Monthly MRF |
| Product 4: Periodic Readings – SSP | Any meter point | Reads submitted for 70% of meter points each year | 24 months since last reading | Every 24 months |

3.4 Impact of Reconciliation on Unidentified Energy (Reconciliation BRD 8.8)

Each reconciliation, re-reconciliation and resynchronisation changes the measurement at an individual meter point, and therefore changes the amount of unidentified energy for the reconciliation period in the LDZ.

Instead of the current RbD (Reconciliation by Difference) arrangements, under these proposals all meter point reconciliations (of all three types listed in 3.2 above) will trigger an equal and opposite amendment to Unidentified Gas. This will result in debits or credits to all Shippers in the LDZ in line with their latest measurements for the day. These amendments to Unidentified Gas will consist of energy charges only; there will be no Transportation Commodity element. These will be processed monthly at portfolio level only, not attributable to individual meter points.

LDZ Measurement Errors would be treated in the same way, with the opposite entry being included in Unidentified Gas Reconciliation.

3.5 **Resynchronisation (Reconciliation BRD 8.5)**

The concept of resynchronisation already exists for DM Meters, where drift between the datalogger readings and physical readings is accounted for and billed/credited in energy and transportation commodity terms.

The Proposals introduce the concept of resynchronisation for an NDM meter (Products 3 and 4) alongside DM Resynchronisation. Where the readings are derived, e.g. through a datalogger or other automated meter reading equipment, those reads can be used for daily or periodic reconciliation, but there will be the capacity for drift between reading equipment derived readings and physical readings at the meter. The minimum requirements for resynchronisation frequencies are set out in 3.3 above under Check Read requirements.

There will be a new requirement to perform resynchronisation within a set timeframe and to advise the GT of the outcome, including any new readings. Resynchronisation will cause a re-reconciliation back to the date of the last resynchronisation. The same principles as for current DM resynchronisation will apply, with the drift treated as arising equally across the period.

There will be no requirement for resynchronisation on smart meters or other equipment which transmits the actual index of the meter.

3.6 **Impact on Reconciliation Communication files (Reconciliation BRD 8.14)**

The move to universal individual meter point reconciliation could dramatically increase the number of reconciliation transactions on the Reconciliation Invoice supporting information file. NDM Reconciliation processes currently handle around 200,000 transactions per month. Assuming that all SSPs initially adopted the annual read frequency, this would add around 1.7m extra transactions per month to the reconciliation invoice. A Shipper with 10% of both the NDM LSP and NDM SSP markets would see an approximate increase from 20,000 to 190,000 transactions per month on the invoice supporting files. Due to the structure of the invoice, there are usually at least 3 records for each transaction. As meter points move to monthly read frequency or from Product 4 to any other Product, these volumes will increase further.

3.7 **AUGE (Allocation of Unidentified Gas Expert) (Reconciliation BRD 8.15)**

The introduction of an industry wide energy smear of unidentified gas will supersede the current RbD arrangements. The AUGER's role will need to change as a result.

3.8 **Impacts on other Processes (Reconciliation BRD 8.10)**

The meter read validation described in 2.7 above will remove the need for the current USRV ("NDM Filter Failure") and SRV processes, as all reads which pass the Shipper and GT validations are deemed suitable for use in downstream processes, e.g. reconciliation and AQ. The current queues of USRVs awaiting attention from Shippers are likely to be replaced by rejected meter readings awaiting investigation and correction/resubmission by Shippers.

The volume of rejected reads will depend on a large number of factors, including the accuracy and efficiency of the Shipper's processes, the frequency of read submission and also on the level at which the read tolerances are set. The tolerance values will be a matter for future industry agreement.

4 Annual Quantity (AQ)

4.1 Key Proposals

- Monthly re-calculation of AQ, if a new meter reading has been received in the last month
- If reads have previously passed validation against data held on the GT register they are deemed suitable for all processes, including AQ
- Removal of amendment and appeals phases of AQ process
- 2 SOQs – one for Allocation and another ‘fixed SOQ’ which applies for 6 or 12 months for transportation charging purposes.
- Minimum duration of the reference period for AQ calculation is 9 months (compared to current 6 months + 1 day)

4.2 Monthly AQ calculation process (AQ BRD 8.2)

Each month new AQs will be calculated for all meter points where a reading has been loaded since the last calculation run. If no new reading has been received, the AQ will not be recalculated. For a read to have loaded to the GTs’ system, it must have passed the validations described in 2.7 above. Where more than one read has been received in the month, only the latest dated reading will be used. Where one or more replacement reading has been supplied for the latest date, only the last provided reading will be used.

The AQ calculation will use the current approach of a WAALP (Weather Adjusted Annual Load Profile), to covert the actual consumption to a seasonal normal consumption. The exact formulation of future WAALPs will depend on the outcome of DESC’s deliberations on changes to the NDM Algorithm.

New AQs will automatically go live with effect from the 1st of the following month.

| <i>Process Description</i> | <i>Timing of AQ calculation</i> | <i>Reads used for AQ calculation</i> | <i>Read Type used for the AQ calculation</i> | <i>SOQ Calculation</i> |
|---|--|--|---|-------------------------------|
| Product 1: Daily Metered Time Critical Readings | Monthly | 2 reads a minimum of 9 months & max of 36 months apart | Actual read | Shipper Nominates |
| Product 2: Daily Metered not Time Critical Readings | Monthly | 2 reads a minimum of 9 months & max of 36 months apart | Actual read | Shipper Nominates |

| <i>Process Description</i> | <i>Timing of AQ calculation</i> | <i>Reads used for AQ calculation</i> | <i>Read Type used for the AQ calculation</i> | <i>SOQ Calculation</i> |
|--------------------------------------|--|--|---|-------------------------------|
| Product 3: Batched Daily Readings | Monthly | 2 reads a minimum of 9 months & max of 36 months apart | Actual read | GT Derives |
| Product 4: Periodic Readings | Monthly | 2 reads a minimum of 9 months & max of 36 months apart | Actual read | GT Derives |

4.3 AQ Calculation for Products 1 and 2 (AQ BRD 8.3)

The optimum read period for AQ calculation will be 365 days, with a minimum of 9 months and maximum of 36 months.

4.4 AQ Calculation for Products 3 and 4 (AQ BRD 8.3)

The optimum read period for AQ calculation will be 365 days. In all cases the minimum reference period is 9 months and the maximum is 36 months.

4.5 Validation of AQs (AQ BRD 8.4)

As all reads used in the calculation of AQs have been subject to both Shipper and GT validation as described in 2.7 above, there will be no Shipper review and challenge phase prior to their application. A communication file will be issued to Shippers, detailing all re-calculated AQs. These AQs will go live automatically, and there will not be an “Amendment Window”, unlike the current regime.

4.6 Correction of AQs (AQ BRD 8.6)

If a Shipper identifies an erroneous AQ, e.g. due to incorrect meter reads or meter asset details, they must correct the erroneous data and/or submit a further meter reading. The next AQ calculation will use the revised data and will calculate an improved AQ. There will be no retrospective correction of AQs. The new arrangements should allow the Shipper to correct their AQ for the following month.

Any mis-allocation of energy during the period that the AQ was erroneous will be corrected by the normal workings of reconciliation (which will apply to all meter points individually in future).

There will be a mechanism to amend AQs, to be used in exceptional circumstances, e.g. following a significant change in gas usage at a meter

point. The Shipper will need to submit a request to the GT, which will be validated prior to acceptance/rejection.

4.7 Calculation and Use of SOQs (AQ BRD 8.8)

Shippers will continue to nominate SOQs and SHQs for Product 1 and 2 meter points.

For Products 3 and 4, the GT will continue to calculate the SOQ, using Load Factors or a similar approach. As the AQ varies each month (assuming that monthly reads are received) so the SOQ and associated EUC for NDM Allocation will also vary. A change in AQ from the 1st of the month would result in a change to NDM Allocation level and patterns from that date.

In addition for Products 3 and 4, SOQs at a snapshot date (date to be determined) will continue to apply for a period of [12 or 6] months for Transportation charging rate purposes. This will give certainty of costs/income to both Shipper and GT. Regular monthly AQ updates will not affect this SOQ, although an AQ correction (as described in 4.6 above) would change this SOQ and therefore Transportation charging rates.

4.8 Communication of amended AQs (AQ BRD 8.12)

Shippers will be issued with a monthly update of their revised AQs, SOQs and EUCs (where applicable), which shows existing and revised values or the reason why an AQ was not calculated. Note, this communication will only be received where a valid read was loaded i.e. not a rejected read.

There will be a report of all rolled over (i.e. unchanged) AQs and the reason for non-calculation.

4.9 Reporting (AQ BRD 8.13)

The proposals envisage that there will be a need for monthly reporting of AQ movements and non-movements, although the exact contents have yet to be finalised.

The same safeguards that ensure that meter point reconciliation takes place at a reasonable frequency (see 3.3 above) should ensure that AQs are updated with reasonable frequency, depending on the AQ of the meter point.

4.10 Impacts on other Processes (AQ BRD 9.2)

The Workgroup identified that if monthly AQ calculation were implemented at the same time as or after universal meter point reconciliation, then the “End of Year AQ Reconciliation” for AQ Threshold Crossers (UNC E7.4.3) would no longer be required. If implemented earlier, then End of Year AQ Reconciliation would still be required for a transitional period.

These proposals remove the current AQ Amendment process, as the new values will go live automatically the following month. The AQ Appeal process will also be replaced, as the Shipper will have the power to amend the AQ at any time by submission of an up-to-date meter reading.

5 Retrospective Updates

5.1 Key Proposals

- Facility for current Shipper to amend asset data and Supply Meter Point data for the correct effective date
- Automatic financial adjustments for amended asset data for the current Shipper
- Ability for current and previous Shippers to amend any periodic meter reading for their period of ownership
- Automatic re-reconciliations where a meter reading is amended

5.2 Update of Meter Point/Meter Asset Data (*Retro Updates BRD 8.2*)

The current Shipper will be able to amend the key meter asset data for the correct effective date (e.g. the metric/imperial indicator or the read units).

If applicable, a financial adjustment will be calculated and issued automatically to the current Shipper following an update to Meter Point or meter asset data, in the form of a re-reconciliation. The invoicing Line in the Sand will continue to apply, so some reconciliation periods may not be adjusted and invoiced, if they fall before the cut-off date. Changes to current Line in the Sand arrangements are outside of the scope of the Topic Workgroups.

Any previous Shippers will not be able to amend asset or Meter Point data for their period of ownership and will not receive any notification of changes by subsequent Shippers. If a Shipper previously owned a meter point, lost it and regained it, the amendment facility applies only in the current period of ownership.

Where a previous Shipper identifies an error in the set up of meter assets or data held against the meter point for their period of ownership, they will need to liaise with the current Shipper to amend the data and, when the update has been carried out, separately request a financial adjustment via the GTs' agent.

5.3 Replacement of Meter Readings (*Retro Updates BRD 8.4*)

For Products 3 & 4 Shippers will be able to change any reading in their period of ownership, subject to the Line in the Sand date. An amended reading for Product 3 or 4 will usually trigger two re-reconciliations, for the two periods either side of the reading. For Products 1 and 2 only estimated reads can be replaced. Where an adjustment to energy for a gas day is required the Shipper will need to submit a consumption adjustment.

Replaced meter readings and consumption adjustments will be subject to the validations described in 2.7 above. Change of Shipper readings can only be changed with the agreement of both the outgoing and incoming Shippers via the existing Shipper Agreed Reads (SARs) process.

5.4 Address Amendments (*Retro Updates BRD 8.5*)

Both the Shipper and the GT will be able to amend the address details for a meter point. Where an address amendment changes the LDZ to which the meter point is assigned, this may change the Transportation charging rate for

the meter point. If applicable, where the current Shipper amends address data, a financial adjustment will be calculated and issued automatically following an update to address data, in the form of a re-reconciliation.

6 Supply Point Register

6.1 Key Proposals

- GT monitoring of Shippers' compliance with the check read requirement
- Provision of 12 months' consumption data (where available in the GTs' systems) to any potential new Shipper
- Improved management of priority and vulnerable customers
- Extension of the scope of the Supply Point Register

The proposals developed by the Workgroup have been documented as "Business Principles", as they are generally at a higher level than for the preceding topics.

6.2 Monitoring of check read submission (Supply Point BRD 8.1)

The GT will develop processes to record, monitor and report Shippers' performance in obtaining and submitting check reads. Obtaining the check read will remain the Shipper's responsibility: the GT will not become the "Check Read Provider of Last Resort".

6.3 Provision of historic consumption data (Supply Point BRD 8.4)

A Shipper contemplating a Supply Point Nomination will have the facility to obtain 12 months of consumption history, to assist in understanding the consumption levels and patterns of the meter point. The completeness of the read history will be dependent on the read submission performance of the Shipper(s) owning the site for the previous 12 months. Daily consumption history is only likely to be available for Products 1 to 3, and may not be complete if the meter point has only recently been moved to that Product from Product 4, or if there has been an equipment failure.

6.4 Improved management of priority and vulnerable customers (Supply Point BRD 8.6)

The GT will develop improved processes to record and manage data relating to Vulnerable and Priority Consumers, so that any incoming Shipper can be advised of the current status of the meter point. Responsibility for maintaining these data items will remain with the Shipper.

6.5 Extension of the scope of the Supply Point Register (Supply Point BRD 8.2)

The Workshop agreed an aspiration to have a single consistent Supply Point Register service, including:

- Unique Sites
- NTS meter points
- iGT meter points (see section 9)
- LPG meter points
- Interconnectors

7 Invoicing

7.1 Summary (Invoicing BRD Section 8)

The proposals developed by the Workgroup have been documented as “Business Principles”, as they are generally at a higher level than for the preceding topics.

The principles established in the Workgroup include:

- No wholesale change to current “thin invoice” and “thick supporting information” structure
- Requirement for all supporting information to be itemised at meter point level wherever possible
- Additional fields may be added to invoice supporting information to allow Shippers to sort/segment their invoices according to their own needs
- Aspiration for all Adhoc supporting information to be sent by electronic transfer
- Aspiration for a single supporting information format for Adhoc invoices
- Aspiration to reduce the number of Adhoc invoices

7.2 Invoicing Structure (Invoicing BRD Section 8.6)

Following a proposal presented at PN UNC on 20th May 2013 and further discussed on 17th June 2013 and approved on 30th July 2013, the following future structure of transportation invoices was agreed

- Key aspects of the change are:
 - one invoice for all Supply Point initial Capacity charges,
 - one invoice for all Supply Meter Point Commodity charges and
 - an invoice for all Reconciliation and adjustment charges.
 - Ratchet charges to be issued on the Capacity invoice. Due to timing of the Capacity invoice this will mean that the Ratchet charge will be issued on Month +2 after the Ratchet was incurred.

8 Non-Functional Requirements

8.1 Summary (Non-Functional BRD Section 8)

The proposals developed by the Workgroup have been documented as “Business Principles”, as they are generally at a higher level than for the preceding topics.

The principles established in the Workgroup include:

- Direct access to view and report the Shipper’s own meter asset, meter reads and invoicing details, with the facility to extract or report data
- Aspiration to minimise the change to communication file formats for invoices, read files etc.
- More parameterisation of values to make change to values easier
- Ensure the demand estimation methodology can be easily changed & applied

It will also be helpful to gain an early view of anticipated volumes, on a without prejudice basis.

9 iGT Agency Services

There is a longstanding aspiration amongst many Shippers to have a single consistent Supply Point Register service for all iGT supply meter points. The governance and further development of the requirements is being progressed in the Mod 440 Workgroup.

The principle of the requirements is, where possible, all gas meter points will be treated consistently, using standardised common communication flows and processes.

9.1 Key Proposals

- To provide a single service provision to Shippers for the operation of Supply Meter Points on iGT networks
- Single supply point register for all large and small transporters' gas supply points
- Common Gas Nomination and Allocation processes for GT and iGT meter points
- Single interface for change of Shipper processes
- Single consistent process for meter read submission and processing
- Meter Point reconciliation for iGT meter points
- Consistent AQ review process, operated by the central service provider
- Uniform standardised communication for all gas meter points
- Central register of gas meter points and data storage

9.2 CSEP and Meter Point Set Up and Maintenance (iGT Agency Services BRD 8.4 – 8.7)

All data relating to a CSEP and a meter point will be held and maintained on the supply point register including the relationships for 'Nested CSEPs' and the iGT(s) responsible for the CSEP. All meter points will be linked to a CSEP and an iGT.

The iGT will continue to allocate MPRNs. Once allocated to an address the iGT will notify the GT Agent of the MPRN, appointed Shipper and address details. This will initiate the creation of the MPRN on the supply point register.

The set up and initial registration of the meter point differs slightly depending on whether the iGT is the Meter Asset Manager (MAM);

- Where the iGT is the MAM; the iGT will notify the GT Agent of the installation of the meter. This notification will trigger a communication to the Shipper who will then register the meter point and submit the asset details.
- Where the iGT is not the MAM; the Shipper will register the meter point and update the meter installation details.

9.3 Shipper Transfers and Supply Meter Point Updates (8.9)

The Shipper transfer process will be the same for iGT meter points as GT meter points.

iGT Supply Meter Point updates will follow the same process and standard communication flows as GT sites although there may be a need for a 'referral' to an iGT for certain updates before it can be accepted, for example, address updates.

9.4 Invoicing (8.10)

GT transportation charges will remain un-changed and are not affected.

The iGTs will retain the invoicing function for their transportation charges. The GT Agent will provide the iGTs with the relevant information to enable them to complete their invoicing activities.

10 Glossary of Terms

Key jargon/abbreviations used in this document. UNC defined terms are indicated with a *.

| <i>Term</i> | <i>Explanation</i> |
|----------------|---|
| AUGE | Allocation of Unidentified Gas Expert* |
| AQ | Annual Quantity* |
| BRD | Business Requirements Document |
| CSEP | Connected System Exit Point* |
| D-7 estimate | An estimate of consumption based on the recorded consumption from 7 days earlier |
| DESC | Demand Estimation Sub-Committee |
| DM | Daily Metered* |
| EUC | End User Category* |
| GT | Large Gas Transporter (Distribution or Transmission Network) |
| iGT | Independent Gas Transporter |
| IRR | Initial Requirements Register |
| LDZ | Local Distribution Zone* |
| LSP | Larger Supply Point* |
| Market Breaker | The second read validation test described in 2.7 above |
| Nested CSEP | Extension to an existing CSEP |
| NDM | Non-Daily Metered* |
| RbD | Reconciliation by Difference |
| Referral | Notification to the GT or iGT of a change to the Supply Meter Point for their review and approval before the request can be processed |
| SAP | System Average Price* |
| SHQ | System Hourly Quantity |
| SOQ | System Offtake Quantity |
| SSP | Smaller Supply Point* |
| SRV | Suppressed Reconciliation Value* |
| UNC | Uniform Network Code |
| USRV | User Suppressed Reconciliation Value* |
| WAALP | Weather Adjusted Annual Load Profile |

11 Document Control

11.1 Version History

| Version | Status | Date | Author(s) | Summary of Changes |
|---------|-------------------------|------------|-----------|--|
| 0.1 | Draft | 20/12/2011 | Xserve | First draft |
| 0.2 | Draft | 11/01/2012 | Xserve | Updated following internal review. |
| 0.3 | Draft for PN UNC review | 19/01/2012 | Xserve | Further internal review and designation as "Draft" |
| 0.4 | Draft | 17/02/2012 | Xserve | Updated with cross-references to current versions of individual topic BRDs |
| 0.5 | Draft | 19/03/2012 | Xserve | Updated following discussions at March 2012 PN UNC Workgroup |
| 0.6 | Draft | 29/06/2012 | Xserve | Updated following updates to individual topic BRDs as agreed at PN UNC |
| 0.7 | For approval | 21/07/2013 | Xserve | Updated following updates to individual topic BRDs as agreed at PN UNC |
| 1.0 | Baselined | 05/02/2013 | Xserve | Approved 0.7 version as agreed at PN UNC on 05/02/2013 |
| 1.1 | For approval | 05/04/2013 | Xserve | Updates following changes to BRDs agreed at PN UNC |
| 2.0 | Baselined | 07/05/2013 | Xserve | Approved 1.1 version |
| 2.1 | For approval | 17/06/2013 | Xserve | Updated to reflect proposed Invoicing Structure |
| 2.2 | For approval | 20/09/2013 | Xserve | Updated to reflect Mod 0453 discussions on 10/09/2013 |
| 2.3 | For approval | 01/10/2013 | Xserve | Clarification added following PN UNC on 30/09/2013 |
| 3.0 | Baselined | 25/10/2013 | Xserve | Baselined & clean version of 2.3 |

Reviewers

| Name | Version | Date |
|------------------|--------------|------|
| PN UNC Workgroup | All versions | |
| | | |

11.2 Approval

| Name | Version | Date |
|------------------|---------|------|
| PN UNC Workgroup | All | |