

iGT UNC

AQ Procedures Document

Version 1.0

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iGT AQ REVIEW PROCESS

The process for the Smaller Supply Point (SSP) and Larger Supply Point (LSP) AQ review is set out in Part CI 6 of the iGT UNC.

General

- 1 Terms used in this Document but not defined herein shall have the same meaning as in the iGT UNC.
2. The data which the Pipeline Operator requires from the Large Transporter by no later than 19th May in the preceding Gas Year as referred to in Part CI 6.4 of the iGT UNC is
 - (a) weather adjusted load profiles.
 - (b) the daily Calorific Values for the relevant LDZfor the period from 1st October 2002 up to and including a date which is not later than 15th May in the preceding Gas Year.
3. The Pipeline Operator will seek to implement the Annual Quantities notified to Pipeline Users pursuant to Part CI 6.10 of the iGT UNC at the same time as xoserve regardless of when calculations derived from the Annual Quantities are made.

Challenges by Pipeline Users

1. Any challenges submitted by a Pipeline User pursuant to Part CI 6.6 of the iGT UNC must be as part of the original file sent by the Pipeline Operator as the file is designed for shippers to add the challenges to fields already in the file sent.
2. Pipeline Users must provide all their SSP challenges at the same time as a single file, and all their LSP challenges at the same time as a single file. Only under exceptional circumstances, as decided by the Pipeline Operator, can other challenges be sent separate from the initial file.
3. Pipeline Users must follow the UNC rules when choosing the Meter Readings used in the calculation of User Provisional Annual Quantities used to challenge Provisional Annual Quantity (i.e. a Pipeline User cannot challenge a valid calculated Provisional Annual Quantity if the Pipeline Operator has used the Meter Readings available to them at the time based on the xoserve rules).

Rejections

The reasons for rejection referred to in Part CI 6.6(d) are as set out below. For each rejection the Pipeline Operator should advise the Pipeline User of the rejection reason as per the file format in Appendix A

CODE	REJECTION TEXT
AML00011	METER POINT REJECTED DUE TO OTHER METER POINT COMPONENTS BEING REJECTED
AQA00016	INSUFFICIENT INFORMATION TO CALCULATE AQ
AQA00019	SHIPPER PROPOSED AQ LIES IN AQ AMENDMENT TOLERANCE RANGE (+/- 20%)
MPO00587	PRIMARY METER
MRE00470	CONSUMPTION PERIOD NOT GREATER THAN 6 MONTHS
MRE00471	READING DATES INVALID FOR COMPETITION EFFECTIVE DATE FOR THIS METER POINT
POC00011	POSTCODE DOES NOT CONTAIN THE METER POINT REFERENCE PROVIDED
RRR00010	START READING / DATE NOT CONSISTENT
RRR00011	END READING / DATE NOT CONSISTENT
RRR00012	EXCHANGE START READING / DATE NOT CONSISTENT
RRR00013	EXCHANGE END READING / DATE NOT CONSISTENT
RRR00014	TTZ COUNT INCORRECT
RRR00015	METER EXCHANGE NOT IDENTIFIED ON AMENDMENT
SHI00010	SYSTEM USER IS NOT RESPONSIBLE FOR THE METER POINT REFERENCE PROVIDED
STD00137	EXCHANGE METER SERIAL NUMBER NOT PROVIDED
STD00139	EXCHANGE IMPERIAL INDICATOR NOT PROVIDED
STD00143	EXCHANGE START READING DATE NOT PROVIDED
STD00145	EXCHANGE END READING DATE NOT PROVIDED
STD00149	START READING DATE MUST BE AFTER 1.10.2002
STD00150	END READING DATE MUST BE AFTER 1.10.2002
STD00151	EXCHANGE START READING DATE MUST BE AFTER 1.10.2002
STD00152	EXCHANGE END READING DATE MUST BE AFTER 1.10.2002
STD00153	INVALID VALUE FOR IMPERIAL INDICATOR

CODE	REJECTION TEXT
STD00154	INVALID VALUE FOR EXCHANGE IMPERIAL INDICATOR
STD00155	INVALID VALUE FOR READING UNITS
STD00156	INVALID VALUE FOR EXCHANGE READING UNITS
STD00157	INVALID VALUE FOR READING FACTOR
STD00158	INVALID VALUE FOR EXCHANGE READING FACTOR
STD00159	START READING DATE IS GREATER THAN THE PROCESSING DATE
STD00160	END READING DATE IS GREATER THAN THE PROCESSING DATE
STD00161	EXCHANGE START READING DATE IS GREATER THAN THE PROCESSING DATE
STD00162	EXCHANGE END READING DATE IS GREATER THAN THE PROCESSING DATE
STD00164	EXCHANGE START READING DATE DOES NOT EQUAL END READING DATE
STD00165	EXCHANGE END READING DATE NOT GREATER THAN EXCHANGE START READING DATE
STD00166	END READING IS LESS THAN START READING
STD00167	EXCHANGE END READING IS LESS THAN EXCHANGE START READING
STD00168	END READING DATE NOT GREATER THAN START READING DATE
STD00171	OCCURRENCE OF DM SINCE START READING DATE
STD00178	REQUESTED AQ IS LESS THAN 1
STD00181	INVALID VALUE FOR NUMBER OF DIALS OR DIGITS
STD00182	INVALID VALUE FOR EXCHANGE NUMBER OF DIALS OR DIGITS
STD00183	METER POINT WAS NOT PART OF A LIVE SUPPLY POINT FOR ENTIRE CONSUMPTION PERIOD
STD00186	GAS NOMINATION TYPE WAS NOT DM FOR THE ENTIRETY OF THE CONSUMPTION PERIOD
STD00193	SUM OF TTZ COUNT AND EXCHANGE TTZ COUNT IS GREATER THAN 99

APPENDIX A

AQ File Format

The AQ file format (provided as a spread sheet) to be used by the Pipeline Operator and by Pipeline Users pursuant to Part CI 6.4, 6.6(a) and (d) (completed as indicated as follows):

Field Number	Field Name	Mandatory / Option	Domain	Field Length	Decimal	Description	Value / Format	Completed by
1.	MPRN	Mandatory	Number	10	0	Meter Point Reference Number		iGT
2.	EUC - Numeric Code	Conditional	Number	8	0	End User Category Numeric code allocated to the EUC	e.g. 4629 for numeric code for EA:E0301B	iGT
3.	EUC – Code	Conditional	Text	8	0	End User Category Code This is the EUC “without” the LDZ shown for example E0301B, therefore the LDZ will need to be provided with this EUC		iGT
4.	LDZ	Mandatory	Text	3	0	Local Distribution Zone		iGT
5.	MSN	Mandatory	Text	14	0	Meter Serial Number		iGT
6.	No. of Meter Dials	Mandatory	Number	2	0	Number of dials on meter which must be taken into account when recording the meter read		iGT
7.	Meter Unit	Mandatory	Text	1	0	Indicates whether the meter measures the volume of gas in imperial or metric units	“M” for metric “I” for Imperial	iGT
8.	Current Meter Point AQ	Mandatory	Number	12	0	AQ value applicable for current gas year		iGT
9.	Calculated AQ	Conditional	Number	12	0	AQ calculated using valid meter readings		iGT
10.	Revised Meter Point AQ	Mandatory	Number	12	0	This will be the calculated AQ where a new AQ has been calculated or the same as the current AQ where the iGT has been unable to calculate a new AQ		iGT

Field Number	Field Name	Mandatory / Option	Domain	Field Length	Decimal	Description	Value / Format	Completed by
11.	Start Read	Conditional	Number	12	0	1 st meter read used by iGT in AQ calculation by iGT in AQ calculation NB: field length will vary dependent on no. of meter dials		iGT
12.	Start Meter Read Date	Conditional	Date	8	0	Date of 1 st meter read	YYYYMMDD	iGT
13.	End Read	Conditional	Number	12	0	2 nd meter read used by iGT in AQ calculation by iGT in AQ calculation This read should be for the same MSN as the start read NB: field length will vary dependent on no. of meter dials		iGT
14.	End Meter Read Date	Conditional	Date	8	0	Date of 2 nd meter read	YYYYMMDD	iGT
15.	TTZ count	Mandatory	Number	1	0	How many times the meter has gone through the zeros between the start and end read – if the meter has not clocked, the value of this field would be 0		iGT
16.	Exch MSN	Conditional	Text	14	0	Serial Number of new meter if meter has been exchanged since end read		iGT
17.	Exch No. Meter Dials	Conditional	Number	2	0	Number of dials on meter which must be taken into account when recording the meter read for the exch MSN		iGT
18.	Exch Meter Unit	Conditional	Text	1	0	For the exch MSN Indicates whether the meter measures the volume of gas in imperial or metric units	“M” for Metric “I” for Imperial	iGT
19.	Exch Start Read	Conditional	Number	12	0	Read that new meter was installed to		iGT
20.	Exch Start Meter Read Date	Conditional	Date	8	0	Date that new meter was installed	YYYYMMDD	iGT
21.	Exch End Read	Conditional	Number	12	0	Most recent read for newly installed meter		iGT

Field Number	Field Name	Mandatory / Option	Domain	Field Length	Decimal	Description	Value / Format	Completed by
22.	Exch End Meter Read Date	Conditional	Date	8	0	Date of exch end read	YYYYMMDD	iGT
23.	MSN	Mandatory	Text	14	0	Meter Serial Number		Shipper
24.	No. of Meter Dials	Mandatory	Number	2	0	Number of dials on meter which must be taken into account when recording the meter read		Shipper
25.	Meter Unit	Mandatory	Text	1	0	Indicates whether the meter measures the volume of gas in imperial or metric units	"M" for Metric "I" for Imperial	Shipper
26.	Start Read	Mandatory	Number	12	0	1 st meter read used by shipper if challenging the AQ NB: field length will vary dependent on no. of meter dials		Shipper
27.	Start Meter Read Date	Mandatory	Date	8	0	Date of 1 st meter read	YYYYMMDD	Shipper
28.	End Read	Mandatory	Number	12	0	2 nd meter read used by shipper if challenging the AQ NB: field length will vary dependent on no. of meter dials		Shipper
29.	End Meter Read Date	Mandatory	Date	8	0	Date of 2 nd meter read	YYYYMMDD	Shipper
30.	TTZ count	Mandatory	Number	1	0	How many times the meter has gone through the zeros between the start and end read		Shipper
31.	Exch MSN	Conditional	Text	14	0	Serial Number of new meter if meter has been exchanged since end read		Shipper
32.	Exch No. of Meter Dials	Conditional	Number	2	0	Number of dials on meter which must be taken into account when recording the meter read for the exch MSN		Shipper
33.	Exch Meter Unit	Conditional	Text	1	0	For the exch MSN Indicates whether the meter measures the volume of gas in imperial or metric units	"M" for Metric "I" for Imperial	Shipper
34.	Exch Start Read	Conditional	Number	12	0	Read that new meter was installed to		Shipper

Field Number	Field Name	Mandatory / Option	Domain	Field Length	Decimal	Description	Value / Format	Completed by
35.	Exch Start Meter Read Date	Conditional	Date (YYYYMMDD)	8	0	Date that new meter was installed	YYYYMMDD	Shipper
36.	Exch End Read	Conditional	Number	12	0	Most recent read for newly installed meter		Shipper
37.	Exch End Meter Read Date	Conditional	Date (YYYYMMDD)	8	0	Date of exch end read	YYYYMMDD	Shipper
38.	Shipper Calculated AQ	Mandatory	Number	12	0	AQ calculated by shipper using valid reads, to challenge the Revised Meter Point AQ (field 10)		Shipper
39.	Challenge Outcome	Conditional	Text	2	0	Outcome of shipper challenge to AQ	"AT" – Accepted "RT" - Rejected	iGT
40.	Rejection Reason Code	Conditional	Text	8	0	If AQ challenge is rejected, this is the reason code for rejecting the challenge	See section on rejections	iGT
41.	Rejection Reason	Conditional	Text	unlimited	0	Rejection reason corresponding to rejection code in 40	See section on rejections	iGT
42.	Final AQ	Mandatory	Number	12	0	AQ nominated to xoserve that will apply from 1 st October		iGT
43.	Final SOQ	Conditional	Number	12	0	SOQ value that will apply from 1 st October NB: only for large supply points		iGT
44.	File Section	Optional	Number	1	0	Number to indicate which section the site belongs to e.g. Threshold Crossers would be 4		iGT

Guidance for completion is as follows:

- The Pipeline Operator to communicate the Provisional Annual Quantities to Pipeline Users (fields 1-22 completed)
- The Pipeline Users to communicate User Provisional Annual Quantities to the Pipeline Operator (fields 23-38 completed)
- The Pipeline Operator to accept or reject User Provisional Annual Quantities (fields 39 to 41 completed)
- The Pipeline Operator to provide the Annual Quantities (fields 42 and 43 completed)

The fields shaded grey are currently optional.

The Provisional Annual Quantities will be split into the following 4 sections within the AQ file:

1. AQs that are to change and which Pipeline Users CAN challenge.
2. No AQ change because the site became live less than 26 weeks previously.

Note: Pipeline Users cannot challenge these.

3. There are no reads with which to calculate the AQ.
4. Threshold crossers.

The Smaller Supply Points will be provided in a separate file to the Larger Supply Points.

APPENDIX B

The Guidance Document for the Annual Quantity Calculation, provided by xoserve and based on the Large Transporters' Uniform Network Code

Contents

Section 1	Introduction
Section 2	The Calculation
Section 3	Example of an AQ Calculation
Section 4	Winter Consumption Calculation and End User Categories
Section 5	Data Sources
Section 6	Use of Meter Reads in AQ Calculation
Section 7	The AQ Review Timetable for iGTs
Section 8	Supply Point Calculation
Section 9	Reporting

Disclaimer

Whilst every effort is made to ensure the technical accuracy of the information contained within the guidance document xoserve can accept no responsibility for any claims (however they arise) made against the Company as a result of using the information contained within this package.

1. Introduction

This guidance document outlines the basic principles of the AQ calculation, the data required for the calculation and the process for reviewing AQs as defined by the Uniform Network Code.

Its purpose is to provide a framework from which an understanding of the calculation can be achieved and from which the calculation of an AQ can be built.

- Section 2. examines the formula for the calculation and the definition of data items used within that calculation.
- Section 3. builds on the definitions and formula previously described by working through an example of an AQ calculation from base data.
- Section 4. outlines the importance of the winter consumption calculation and end user categories.
- Section 5. describes the sources of the data required for a calculation.
- Section 6. summarises Uniform Network Code rules around the use of meter reads in the AQ calculation.
- Section 7. gives an overview of the processes and timescales for the calculation, notification, amendment and application of AQ values on a yearly basis.
- Section 8. looks at the aggregation of meter point AQs to supply points.
- Section 9. outlines some of the reports that could be used as key performance indicators.

2. The Calculation

There are 2 main components to an AQ calculation; the relevant metered quantity (RMQ) and the weather adjusted annual load profile (WAALP):

$$^1AQ = RMQ \times \frac{365}{CWAALP}$$

where CWAALP is the cumulative WAALP – the sum of all the daily WAALP values between (and including) the 2 delimiting reads.

2.1 Definition of Relevant Metered Quantity

- RMQ (relevant metered quantity) is the *metered quantity* or sum of metered quantities (if over more than 1 read in the calculation period). **H3.3**

¹ The comparative Uniform Network Code formula in H3.4 is;

$$AQ = RMQ * 365 / \sum_{t-1}^m (ALP_t \times (1 + DAF_t \times EWCF_t))$$

- The metered quantity is determined by multiplying the *metered volume* by the applicable calorific value. **M1.4.4(b)**
- Metered volume is the volume (corrected for temperature & pressure) of gas off taken at the meter point during the *meter reading period*. **M1.4.4 (a)**
- Meter reading period is the period between 2 reads. **M3.1.7**

RMQ is calculated as follows:

$$\text{RMQ} = \frac{(R2-R1) \times U \times CF \times 0.0283 \times CV}{3.6}$$

- Where R1 and R2 are the Meter Readings²
- The value 0.0283 is a metric conversion factor (rounded from 0.3047³ as per Gas Act 1986) and should be omitted if the meter is metric.
- CV is the Calorific Value for that LDZ over the date range concerned and is required as part of the conversion from cubic metres to kilowatt hours.
- CF is the Meter point Correction Factor relating to the height over sea level, pressure and standard temperature at the Meter point.
- The term U refers to the Meter Reading units, the number of cubic feet/metres of gas represented by a single reading unit.

2.2 Definition of Weather Adjusted Annual Load Profile

WAALP is calculated as follows:³

$$\text{WAALP} = (\text{ALP} * \max(0.3, 1 + \text{DAF} * (\text{SNCMV} - \text{CWV}) * \text{WSENS} / \text{SND}))$$

- ALP is Annual Load Profile.
- DAF is daily adjustment factor.
- SNCWV is seasonal normal composite weather variable.
- CWV is composite weather variable.
- WSENS is weather sensitivity.
- SND is seasonal normal demand.

² The delimiting reads selected for an AQ calculation are subject to Uniform Network Code rules in Section H3.2

³ The comparative Uniform Network Code formula in H3.4 is;

$$\text{CWAALP} = \sum_{t-1}^m (\text{ALP}_t \times (1 + \text{DAF}_t \times \text{EWCF}_t))$$

3. Example of an AQ Calculation⁴

3.1 RMQ

Read1 25/06/99 - 296406

Read2 29/06/00 – 369833

Reading Units (RU) = 100

Reading factor (RF) = 1

Correction factor = 1.01785

Imperial CV = 40

$$\text{RMQ} = \frac{(369833 - 296406) \times 100 \times 1 \times 1.01785 \times 0.0283 \times 40}{3.6}$$

RMQ = 2,350,084.57353

$$\text{AQ} = 2,350,084.57353 \times \frac{365}{\text{CWAALP}}$$

3.2 Cumulative WAALP

The table below sets out the cumulative WAALP for the delimiting read dates. By subtracting the WAALP on the start read date from the WAALP on the end read date a net WAALP is determined. Alternatively each daily WAALP can be added together.

The profiles that determine the WAALP figure change for each gas year and as the delimiting read dates cover more than 1 year the calculation is split as below.

Delimiting Start Read	WAALP on Start Date	Delimiting End Read	WAALP on End Date	Net WAALP
25/06/99	318.491767	30/09/99	326.3709	7.879133
01/10/99	0.648012	29/06/00	317.8893	317.241288

CWAALP = 325.120421

$$\text{AQ} = 2,350,084.57353 \times \frac{365}{325.120421}$$

AQ = 2,638,348

4. The Winter consumption Calculation and End User Categories

For non-daily metered (NDM) supply points, the peak daily load (SOQ) is estimated using a set of end user categories. Each NDM supply point is allocated to an end user category and in each LDZ every end user category has an associated load factor.

⁴ Please note that this is a manual representation of the AQ calculation.

These end user categories depend on the AQ of the supply point and, in the case of monthly read sites, the winter to annual ratio (WAR) banding where available.

Winter consumption calculations are therefore carried out at the same time as the AQ calculation (for applicable monthly read sites) and the ability to amend winter consumptions is available through the same process as an AQ amendment.

The calculation of a winter consumption value utilises reads within the winter period. The ideal read period is from the 1st December to March 31st, however reads 1 month either side of these dates can be used and pro rated to calculate the actual winter consumption value.

The end user categories and applicable load factors are submitted within the NDM profiling disks at the end of June each year.

5. Data Sources

The following table details the data items used in the WAALP calculation and identifies the source of the data and when it is available.

Data Item	NDM Profiling Disks	Shipper Information Service (SIS)	Availability
ALP	YES	NO	In advance of gas year
DAF	YES	NO	In advance of gas year
SNCWV	YES	YES	In advance of gas year
SND	YES	YES	In advance of gas year
WSENS	YES	NO	In advance of gas year
CWV	NO	YES	At D + 1

All data items (except CWV) are published within the “NDM Profiling and Capacity Algorithms” prior to the start of each gas year and submitted to all Shippers and iGTs.

xoserve publish the proposals for NDM profiling by the end of June and following a period of industry consultation Ofgem approve or disapprove the profiles by the end of August each year. The profiles are applied on the 1st October.

6. Use of Meter Reads in Calculation

The Uniform Network Code sets out the requirements for calculating an AQ and for subsequent Shipper amendments to the AQ value. In summary these requirements are defined below.

- The ending meter read is the latest valid meter read prior to the calculation.
- The starting meter read is the latest meter read before the “target opening date” or if no read is available up to 3 years before this date the starting meter read shall be the first valid meter read after the “target opening date”.
- The period between the ending and starting meter read must be a minimum of 6 months and 1 day.

- The “target opening date” is 50 weeks prior to the ending meter read for monthly read meters or 42 weeks prior to the ending meter read for annual read meters.

Ofgem have set out guidelines to Shippers defining when a Shipper amendment to the calculated AQ may be submitted. They are:

- Where the Shipper challenges the meter asset data on which the AQ has been calculated
- Where the Shipper challenges the meter reads used in the AQ calculation
- Where no AQ calculation has been possible

7. The AQ Review Timetable

The high level process is as follows:⁵

1. xoserve to provide the iGTs with the weather correction data and CVs for up to and including 12th May. This data will be provided before 19th May.
2. iGTs will provide shippers with all the calculated AQs for their **complete** portfolio by 7th July. This will be provided in accordance with the AQ Review File Format as detailed in Appendix A.
3. The period in which shippers have to send the iGTs **all** their challenges on the calculated AQs ends on 11th August. iGTs must respond to a shipper’s challenges within 21 calendar days of receipt of the challenges.
4. The period in which shippers and iGTs have to resolve the challenges to the calculated AQs ends on 7th September.
5. iGTs will provide shippers with the final calculated AQs and SOQs by 15th September. This file will represent the final calculated AQ values of all Meter Points included within the files submitted by iGTs to shippers under Point 2.
6. iGTs will nominate the logical meter numbers using the updated AQs in line with NExA obligations to xoserve by 15th September.
7. xoserve will start using the updated logical meter aggregated AQs on 1st October (note that this may take longer for LSPs).
8. The iGTs will use, where it is relevant for the iGT, the new AQs on 1st October.
9. The iGTs will provide shippers with their portfolio of sites post AQ review with the new AQs and SOQs listed by 13th October. iGTs will inform the shippers of the date that the portfolio was collated. This file differs from the one provided under Point 2 in that it takes into account any gains and losses over the AQ review period.

⁵ The process is defined within iGT UNC Section CI 6

8. Supply Point Calculation

From the initial calculation of AQs through the notification and amendment stages the emphasis is on the meter point AQ value. However in order to apply the applicable profiles and determine the peak daily loads (SOQ) the meter point AQs are aggregated at supply point level.

The AQ and WC values for the whole supply point determine the Winter Annual Ratio (WAR) banding and the subsequent end user category into which the supply point resides.

Any subsequent AQ or WC appeals are validated at supply point level and if a successful appeal is processed a nomination and confirmation has to occur in order for the new AQ or WC value to apply.

iGTs are responsible for updating xoserve within 7 business days of the AQ amendment being agreed. iGTs will ensure that all appropriate LDZ notifications are made in order that the AQ updates are processed in line with NExA requirements.

9. Reporting

The following reports are generated during the AQ Review for Industry analysis and debate.

a) AQ by Shipper by LDZ

The report brings back the current AQ and the revised AQ by LDZ by Shipper and is run following the AQ calculation and then periodically to determine any AQ trends throughout the process.

b) Shipper Amendments

This report brings back the number of amendments received, accepted and rejected by Shipper.

c) Threshold crossers

This report identifies the number (count and energy) of SSP to LSP, and LSP to SSP, threshold crossers.

d) Calculation rate of success

This report identifies the number of meter points having an AQ calculated as a percentage of the total population.

Shipper/Supplier Contact Name, Tel, Fax, Email, Address