

ALLOCATION OF UNIDENTIFIED GAS

2014 Allocation of Unidentified Gas Interim Table for 2015/16

Xoserve Ltd

Report No.: 15858, Rev. 1

Date: 15th October 2014



Project name: Allocation of Unidentified Gas DNV GL - Software
Report title: 2014 Allocation of Unidentified Gas Interim Table Software Consulting
for 2015/16 Holywell Park
Customer: Xoserve Ltd Ashby Road
Contact person: Fiona Cottam Loughborough
Date of issue: 15th October 2014 LE11 3GR
Project No.: 4003808 Tel: +44 (0)1509 282000
Organisation unit: Software
Report No.: 15858, Rev. 1

Task and objective:

Provide the interim estimate of Unidentified Gas volumes apportioned between the LSP and SSP market sectors and provide a forward estimate of the SAP price

Prepared by: Verified by: Approved by:

Tony Perchard
Technical Lead

Clive Whitehand
Section Head

Anthony Gilbert
Section Head

Andy Gordon
Consultant

Mark Lingham
Senior Analyst

- ☒ Unrestricted distribution (internal and external) Keywords:
☐ Unrestricted distribution within DNV GL Unidentified Gas, AUGÉ, AUGS
☐ Limited distribution within DNV GL after 3 years
☐ No distribution (confidential)
☐ Secret

Reference to part of this report which may lead to misinterpretation is not permissible.

Rev. No.	Date	Reason for Issue	Prepared by	Verified by	Approved by
1	15 th October 2014	First issue	Tony Perchard Andy Gordon Mark Lingham	Clive Whitehand	Anthony Gilbert

This document is protected by copyright and may not be reproduced in whole or in part by any means without the approval in writing of DNV GL. No Person, other than the Customer for whom it has been prepared, may place reliance on its contents and no duty of care is assumed by DNV GL toward any Person other than the Customer.

This document must be read in its entirety and is subject to any assumptions and qualifications expressed therein. Elements of this document contain detailed technical data which is intended for analysis only by persons possessing requisite expertise in its subject matter.

DNV GL is the trading name of GL Industrial Services UK Ltd

Registered in England and Wales No. 3294136 Registered Office: Holywell Park, Ashby Road, Loughborough, Leicestershire, LE11 3GR UK.

© 2014 GL Industrial Services UK Ltd



TABLE OF CONTENTS

1	UNIDENTIFIED GAS ESTIMATES.....	5
1.1	Estimation of SAP price	5
1.2	Interim AUGS Table	6
2	CONTACT DETAILS	9
3	REFERENCES	10
	GLOSSARY	11
APPENDIX A	UNIDENTIFIED GAS BY LDZ.....	12



List of Tables

Table 1 Unidentified Gas Summary (GWh) – Example Table	5
Table 2 Unidentified Gas Volumes for 2015/16	7
Table 3 Unidentified Gas Rates 2015/16	7
Table 4 Unidentified Gas Volumes for 2015/16 – UNC Format.....	8
Table 5 Unidentified Gas Summary (GWh) – EA, EM, NE, NO AND NT	12
Table 6 Unidentified Gas Summary (GWh) – NW, SC, SE, SO and SW	13
Table 7 Unidentified Gas Summary (GWh) – WM, WN and WS	14

1 UNIDENTIFIED GAS ESTIMATES

This document provides a set of tables containing the interim estimates of permanent Unidentified Gas (UG) calculated using the methods and data described in the 2014 Allocation of Unidentified Gas Statement for 2015/16 [1]. These values have been calculated using the methodology as approved by the UNCC on 2nd September 2014.

The estimates are also provided by LDZ in Appendix A, with each set of LDZ figures split into SSP and LSP market sectors, and also by each category of UG. The Scottish Independents are also included within the figures for SC LDZ, although their contribution to the overall UG figure has been negligible up to this point. These tables will therefore give a full breakdown of UG by source in each LDZ.

An example (unpopulated) table is shown below. The top section shows the breakdown of UG by category, with different columns for the SSP and LSP market sectors. The individual components of the Shipperless (Shipperless PTS, Shipperless SSrP and Without Shipper<12 months) and Unregistered (Shipper Activity, Orphaned, Unregistered < 12 months) categories are shown in grey, with the total for the category in black. The total of the directly measured components is shown, to which the Balancing Factor (i.e. Theft plus Other) is added to give the overall LDZ UG totals for the SSP and LSP sectors, which are shown in bold. All units are GWh. All values represent the permanent component of UG only.

Table 1 Unidentified Gas Summary (GWh) – Example Table

	XX LDZ		
	SSP	NDM LSP	DM LSP
iGT CSEPs	0.00	0.00	0.00
Shipperless/Unregistered	0.00	0.00	0.00
- Shipper Activity	0.00	0.00	0.00
- Orphaned	0.00	0.00	0.00
- Unregistered <12 Months	0.00	0.00	0.00
- Shipperless PTS	0.00	0.00	0.00
- Shipperless SSrP	0.00	0.00	0.00
- Without Shipper <12 Months	0.00	0.00	0.00
Meter Errors	0.00	0.00	0.00
Total Directly Measured	0.00	0.00	0.00
Theft + Other	0.00	0.00	0.00
Total	0.00	0.00	0.00

1.1 Estimation of SAP price

The estimation of SAP price has been based on the methods used for previous AUGS years. Historical SAP price data has been taken from the National Grid industry website from November 2008 to August 31st 2014 and will be updated later in the year when the final figures and rates are calculated.

The 2015/16 SAP price is only used to provide a common basis for estimating the overall cost of UG in the coming gas year. In practice the SAP price actually used will be the daily average SAP price over the reconciliation billing period in question. This is described in the TPD section E 10.5 [3].



The following SAP price estimates have been calculated:

- 1) Annual average year on year SAP price based from 2011 onwards extrapolated to 2015/16 (2.50p/kWh)
- 2) Monthly trend based on data from April 2011 onwards (1.96p/kWh)
- 3) Daily trend based on data from April 2011 onwards (1.96p/kWh)

The average of these methods gave an estimated SAP rate of 2.14p/kWh for the period April 2015-March 2016. In previous years the SAP price has actually turned out slightly lower than these projections (typically ~5% less) although there has been a general upward trend. Applying a correction for this historical bias gives a SAP rate of 2.03p/kWh for 2015/16.

DECC publish projected fuel prices across a range of commodities. The most recent DECC projections gave a figure of 2.38p/kWh [2] published in July 2013. However, there does not appear to be an update in 2014 for future prices. The AUGS notes that the SAP price has been somewhat lower (average of 1.46p/kWh April-August) than the DECC projections for 2014 and the AUGS estimate from 2013.

The AUGS has therefore looked at other sources of information to sense check the SAP price projections calculated using the historical SAP data. Argus publishes a Daily Natural Gas Market Prices report which includes NBP Market prices forward to 2019. From issue 148 (1st August 2014), average NBP asking price for gas year 2015-2016 is approximately 2.0p/kWh.

Taking everything into account we recommend the SAP price to be used for the interim rates table for 2015/16 should be 2.03p/kWh.

1.2 Interim AUGS Table

The Interim AUGS table is provided below showing overall permanent UG volumes by market sector and source of UG. Due to rounding error, the sum of the individual values do not always match the total, however, the totals are correct. This applies to the gas volumes, rates shown below and the UG by LDZ summary tables in Appendix A.

Table 2 Unidentified Gas Volumes for 2015/16

Unidentified Gas source	Aggregate Quantity of Unidentified Gas/GWh	Unidentified Gas Quantity/GWh		
		Larger DM SPCs	Larger NDM SPCs	Smaller SPCs
iGT CSEPs	288	0	0	288
Shipperless/Unregistered	246	5	176	65
- Shipper Activity	0	0	0	0
- Orphaned	16	5	9	2
- Unregistered <12 Months	25	0	19	6
- Shipperless PTS	11	0	8	4
- Shipperless SSrP	187	0	136	51
- Shipperless <12 Months	7	0	4	3
Meter Errors	21	0	21	0
Balancing Factor (Theft + Other)	5,505	0	1,414	4,091
Total (inc Independents)	6,060	5	1,611	4,444

Using a SAP price of 2.03p/kWh results in the following interim rates table. These are calculated using the UG volumes prior to rounding from the above table.

Table 3 Unidentified Gas Rates 2015/16

Unidentified Gas source	Aggregate Estimated cost of Unidentified Gas/£M	Unidentified Gas Costs/£M		
		Larger DM SPCs	Larger NDM SPCs	Smaller SPCs
iGT CSEPs	5.85	0.00	0.00	5.85
Shipperless/Unregistered	4.99	0.10	3.57	1.32
- Shipper Activity	0.00	0.00	0.00	0.00
- Orphaned	0.32	0.10	0.18	0.04
- Unregistered <12 Months	0.51	0.00	0.39	0.12
- Shipperless PTS	0.23	0.00	0.16	0.07
- Shipperless SSrP	3.79	0.00	2.76	1.03
- Shipperless <12 Months	0.15	0.00	0.08	0.06
Meter Errors	0.43	0.00	0.43	0.00
Balancing Factor (Theft + Other)	111.74	0.00	28.69	83.05
Total (inc Independents)	123.02	0.10	32.70	90.22

Note that these rates are not the amounts that will actually be levied in practice. The SAP price will be calculated as defined in the TPD section E10.5 [3].

The AUG tables above are in the format provided in previous years by the AUG. However, a slightly different format is specified in the Uniform Network Code [3], Section E10. Table 4 below provides the interim estimates of the permanent component of UG volumes in this alternative format.

Table 4 Unidentified Gas Volumes for 2015/16 – UNC Format

Unidentified Gas source	Aggregate Quantity of Unidentified Gas/GWh	Unidentified Gas Quantity/GWh		
		Larger DM SPCs (A)	Larger NDM SPCs (B)	Smaller SPCs (C)
iGT CSEPs	288	0	0	0
Shipperless/Unregistered	246	5	176	-181
- Shipper Activity	0	0	0	0
- Orphaned	16	5	9	-14
- Unregistered <12 Months	25	0	19	-19
- Shipperless PTS	11	0	8	-8
- Shipperless SSrP	187	0	136	-136
- Shipperless <12 Months	7	0	4	-4
Meter Errors	21	0	21	-21
Total Directly Measured	556	5	197	-202
Balancing Factor (Theft + Other)	5,505	0	1,414	-1,414
Total	6,060	5	1,611	-1,616

This table contains UG adjustments to the post-RbD market sector totals rather than the value of UG assigned to each market sector. Therefore $C=-(A+B)$.



2 CONTACT DETAILS

Questions can be raised with the AUGE at AUGE.software@dnvgl.com



3 REFERENCES

- [1] 2014 Allocation of Unidentified Gas Statement for 2015/16, 16th September 2014, Report Number 15118 Rev. 3, DNV GL
- [2] DECC Fossil Fuel Price Projections, URN 13D/170, July 2013, DECC
- [3] Uniform Network Code - Transportation Principal Document

GLOSSARY

AUGE	Allocation of Unidentified Gas Expert
AUGS	Allocation of Unidentified Gas Statement
Balancing Factor	An aggregate of the combined unidentified gas of various items calculated by subtraction. This includes theft, errors in the Shrinkage estimate, open bypass valves, meters "Passing Unregistered Gas", unknown sites, and additional Common Cause variation.
DECC	Department of Energy and Climate Change
DM	Daily Metered
iGT	Independent Gas Transporter
LSP	Larger Supply Point
LDZ	Local Distribution Zone
NBP	National Balancing Point
NDM	Non-Daily Metered
PTS	Passed To Shipper
SAP	System Average Price
SPC	Supply Point Component
SSP	Smaller Supply Point
SSrP	Shipper Specific rePort
TPD	Transportation Principle Document
UG	Unidentified Gas
UNC	Uniform Network Code

APPENDIX A UNIDENTIFIED GAS BY LDZ

This appendix contains a breakdown of UG by LDZ.

Table 5 Unidentified Gas Summary (GWh) – EA, EM, NE, NO AND NT

	EA		EM		NE		NO		NT	
	SSP	LSP	SSP	LSP	SSP	LSP	SSP	LSP	SSP	LSP
iGT CSEPs	13.69	0.00	47.67	0.00	6.51	0.00	5.33	0.00	12.11	0.00
Shipperless/Unregistered	5.26	14.84	5.58	26.53	3.45	13.10	1.67	9.77	11.59	23.24
- Shipper Activity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Orphaned	0.15	0.88	0.13	1.13	0.09	0.57	0.08	1.73	0.34	1.52
- Unregistered <12 Months	0.60	2.21	0.43	1.66	0.40	1.05	0.24	0.85	0.42	4.23
- Shipperless PTS	0.38	0.47	0.30	0.23	0.17	0.60	0.14	0.44	0.59	0.83
- Shipperless SSrP	3.76	10.06	4.30	23.11	2.64	10.88	0.99	6.53	9.76	16.31
- Shipperless <12 Months	0.36	1.22	0.42	0.40	0.15	0.00	0.22	0.22	0.47	0.34
Meter Errors	0.00	1.36	0.00	2.56	0.00	1.39	0.00	1.55	0.00	2.60
Total Directly Measured	18.95	16.20	53.25	29.09	9.95	14.49	7.00	11.31	23.70	25.84
Balancing Factor (Theft + Other)	354.59	115.67	278.28	94.45	534.94	183.57	280.39	91.00	417.24	178.21
Total Permanent UG	373.54	131.87	331.53	123.54	544.89	198.06	287.39	102.32	440.94	204.05

Table 6 Unidentified Gas Summary (GWh) – NW, SC, SE, SO and SW

	NW		SC		SE		SO		SW	
	SSP	LSP	SSP	LSP	SSP	LSP	SSP	LSP	SSP	LSP
iGT CSEPs	21.67	0.00	37.22	0.00	19.64	0.00	44.75	0.00	44.32	0.00
Shipperless/Unregistered	8.16	15.75	3.45	6.98	12.10	17.92	4.07	26.31	2.18	4.88
- Shipper Activity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
- Orphaned	0.23	1.06	0.17	0.47	0.23	0.78	0.06	0.67	0.10	1.88
- Unregistered <12 Months	0.52	2.74	0.78	0.96	0.73	2.06	0.44	0.83	0.68	1.01
- Shipperless PTS	0.62	0.64	0.29	0.74	0.33	0.60	0.18	0.73	0.12	0.11
- Shipperless SSrP	6.26	10.33	2.04	4.73	10.47	14.34	3.25	23.90	1.28	1.88
- Shipperless <12 Months	0.53	0.98	0.17	0.08	0.34	0.14	0.15	0.18	0.01	0.00
Meter Errors	0.00	0.43	0.00	2.54	0.00	2.28	0.00	1.74	0.00	1.71
Total Directly Measured	29.83	16.19	40.66	9.52	31.73	20.20	48.82	28.05	46.50	6.59
Balancing Factor (Theft + Other)	564.63	184.07	287.60	109.93	140.17	36.16	400.39	139.88	245.09	82.58
Total Permanent UG	594.46	200.25	328.26	119.45	171.90	56.36	449.21	167.93	291.60	89.18

Table 7 Unidentified Gas Summary (GWh) – WM, WN and WS

	WM		WN		WS	
	SSP	LSP	SSP	LSP	SSP	LSP
iGT CSEPs	17.87	0.00	7.26	0.00	10.30	0.00
Shipperless/Unregistered	5.29	19.02	0.56	0.22	1.60	2.49
- Shipper Activity	0.00	0.00	0.00	0.00	0.00	0.00
- Orphaned	0.12	3.00	0.01	0.05	0.05	0.18
- Unregistered <12 Months	0.34	1.35	0.01	0.00	0.13	0.28
- Shipperless PTS	0.36	2.23	0.04	0.09	0.09	0.09
- Shipperless SSrP	4.09	12.04	0.49	0.08	1.34	1.94
- Shipperless <12 Months	0.38	0.39	0.00	0.00	0.00	0.00
Meter Errors	0.00	2.29	0.00	0.27	0.00	0.58
Total Directly Measured	23.17	21.31	7.81	0.49	11.90	3.07
Balancing Factor (Theft + Other)	228.61	84.81	65.94	26.18	293.16	87.00
Total Permanent UG	251.78	106.12	73.75	26.67	305.07	90.07



ABOUT DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.

SOFTWARE

DNV GL is the world-leading provider of software for a safer, smarter and greener future in the energy, process and maritime industries. Our solutions support a variety of business critical activities including design and engineering, risk assessment, asset integrity and optimization, QHSE, and ship management. Our worldwide presence facilitates a strong customer focus and efficient sharing of industry best practice and standards.