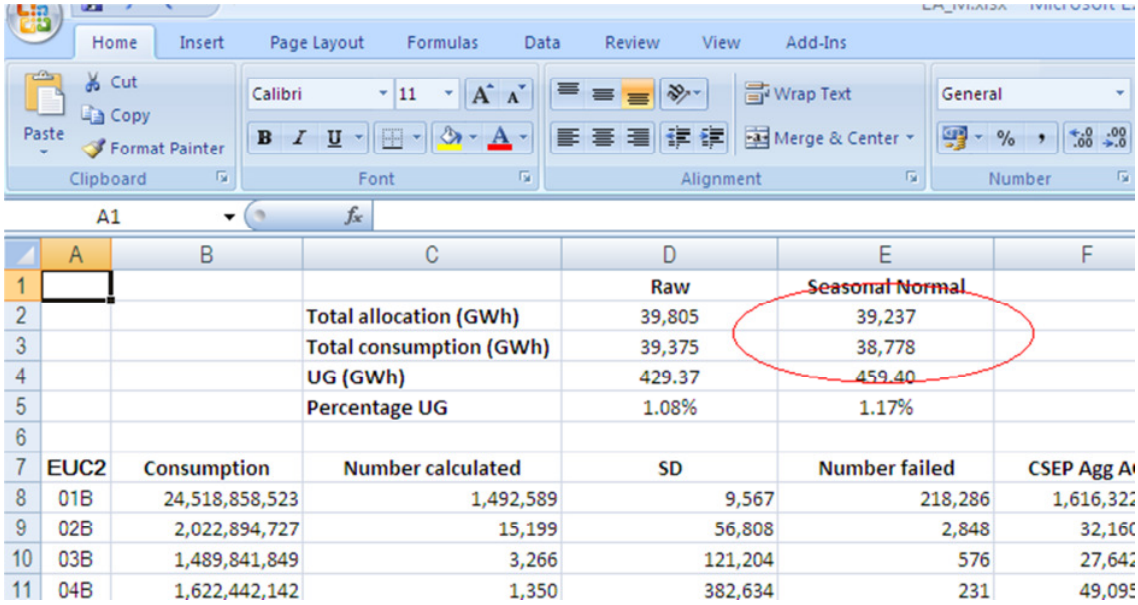
Queries relating to the Interim AUGS Table for 2014/15 AUG Year

Query 1

The Total Seasonal Normal Allocation volume for each LDZ for each year is different in Unidentified Gas Summary.xls (used to populate the final AUGS table) compared to the calculated volume within individual XX_M.xls.

For example this is an extract from the Unidentified Gas Summary.xls for EA 2009 allocation. The total is 39,271GWh (29,382.93 + 9,888.07) whereas the allocation total actually calculated in the EA_M.xls is 39,237GWh

16		WM	30,770.28	11,591.30	16.63	30,77
17		WN	3,581.37	1,429.67	11.09	3,58
18		WS	12,972.56	3,831.64	- 3.79	12,97
19		**Total**	**345,266.69**	**119,679.40**	**- 831.27**	**345,49**
20						
21	2009	LDZ	SN Allocs (GWh)		Meter Corrections (GWh)	Total
22			SSP	LSP		SSP
23		EA	29,382.93	9,888.07	0.00	29,36
24		EM	37,576.11	12,552.35	13.67	37,57
25		NE	23,407.41	8,119.38	15.57	23,40



	A	B	C	D	E	F
1				Raw	Seasonal Normal	
2			Total allocation (GWh)	39,805	39,237	
3			Total consumption (GWh)	39,375	38,778	
4			UG (GWh)	429.37	459.40	
5			Percentage UG	1.08%	1.17%	
6						
7	EUC2	Consumption	Number calculated	SD	Number failed	CSEP Agg A
8	01B	24,518,858,523	1,492,589	9,567	218,286	1,616,32
9	02B	2,022,894,727	15,199	56,808	2,848	32,16
10	03B	1,489,841,849	3,266	121,204	576	27,64
11	04B	1,622,442,142	1,350	382,634	231	49,09

The result of this error is to understate the overall allocation for the measured period and therefore understate the total UG calculated by subtracting consumption from allocations. The result is the Total Initial UG figure of 5,764.14GWh being replaced by 6,110.77GWh a difference of 346.63GWh.

Query 2

The balancing number should be calculated by subtracting from the Total Permanent UG (GWh) the directly measured components. Therefore the sum of the directly measured components when added to the balancing number should equal the Permanent UG (GWh) total. The relevant section of the UG methodology from the latest UNCC approved methodology is reproduced below.

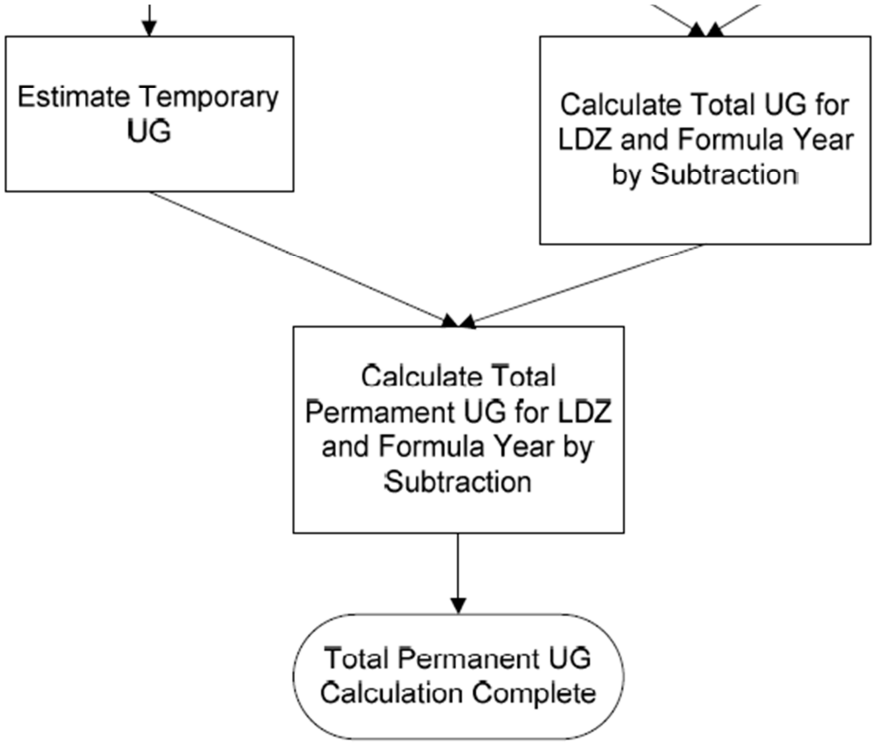


Figure 1: Overview of UG Calculation Methodology

Having obtained the total figure using the consumption methodology, the value of individual components that make up the UG total are calculated where this is possible. The difference between the calculated UG total and the sum of the directly estimated components is referred to as the Balancing Factor, and contains

the remainder of UG, which cannot be calculated directly. The Balancing Factor is comprised of UG elements for which data is either unavailable or unreliable.

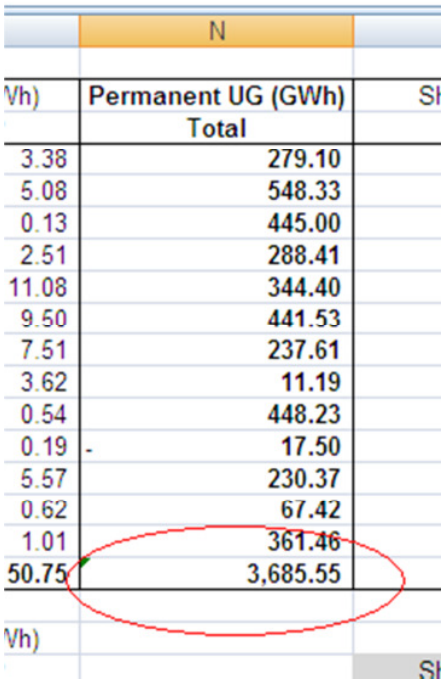
2013 Allocation of Unidentified Gas Statement for 2014/15

Therefore (from the interim AUG Table):

iGT CSEPs (288) + Shipperless/Unregistered (725) + Meter Erros (21) + Balancing Factor (2,235) = Total Permanent UG (3,270)

However the calculated quantity of permanent UG is 3,685.55 as can be seen from the extract below from Unidentified Gas Summary.xls therefore the balancing number has not been calculated as “the

difference between the calculated UG total and the sum of the directly estimated components" as per the methodology.



	N	
Vh)	Permanent UG (GWh) Total	Sl
3.38	279.10	
5.08	548.33	
0.13	445.00	
2.51	288.41	
11.08	344.40	
9.50	441.53	
7.51	237.61	
3.62	11.19	
0.54	448.23	
0.19	- 17.50	
5.57	230.37	
0.62	67.42	
1.01	361.46	
50.75	3,685.55	
Vh)		
		Sl

The effect of this is to understate the size of Permanent UG within the AUG table and therefore to understate the balancing Factor (Theft + Other) as a direct consequence. The Balancing Factor in the interim AUGS table is understated by 415.62GWh.

Query 3

Calculation of the Shipperless and Unregistered (both permanent and therefore temporary) UG figure is being skewed by the erroneous inclusion of AQs deemed (after investigation with Xoserve) to be unreliable.

Upon investigation it would seem that this error has been caused by not locking the cell references when summing the total 'remove?=1' volumes or some such error. For example, contained within the Unregistered and Shipperless Sites – Mar 2013_Back Up MPRs.xls is the following list of 'Remove?=1' sites:

	MPR_ID	LDZ	AQ	Size Ratio	Remove?	Avg LSP
2	23321770	EA	10200153600	11732.0	1	869,427
3	23310825	NE	9323119002	10723.3	1	
4	23309461	NW	9322529308	10722.6	1	
5	23312671	SW	4174424201	4801.4	1	
6	23312716	NT	3246041209	3733.5	1	
7	23312833	SC	3002433324	3453.3	1	
8	23312644	SC	1049726204	1207.4	1	
9	23308174	EA	327959102	377.2	1	
10	23176935	NW	150000000	172.5	1	
11	23309790	NO	120400000	138.5	1	
12	23309335	SO	97225690	111.8	1	
13	23252637	SW	67843002	78.0	1	
14	23316739	EA	54200000	62.3		

The sum of the AQs to be removed is 41,081,854,642KWh and the total AQ in the file (including the 'Remove?=1') is 43,998,976,049KWh and therefore the net AQ is (or should be) 2,917,121,407KWh but a figure of 30,759,294,729KWh appears in the Unregistered and Shipperless Sites – Mar 2013.xls.

A figure of 30,291,203,589KWh is used for Snapshot 7 <12 Months to calculate consumption which is 27TWh+ bigger than the actual. A summary of the difference between the AQ value used to calculate consumption for each category and the Net AQ in the Back Up MPRs.xls files is presented below.

Shipper Activity

	Total AQ*	Total 'Remove?=1' AQ*	Net AQ*	AQ used for consumption Calc**
Snapshot 1 Mar-12	25,661,155	0	25,661,155	20,000,729
Snapshot 2 May-12	33,795,830	17,400,000	16,395,830	20,737,411
Snapshot 3 Jul-12	37,461,144	8,836,880	28,624,264	33,936,014
Snapshot 4 Sep-12	39,895,722	23,353,232	16,542,490	6,686,551
Snapshot 5 Nov-12	27,050,544	8,000,000	19,050,544	24,704,878
Snapshot 6 Jan-13	25,040,077	8,895,440	16,144,637	21,449,062
Snapshot 7 Mar-13	18,212,363	6,492,301	11,720,062	12,377,339

*From Back Up MPR files includes all SSP and LSP **From Shipperless Contribution Calculator.xls

Shipper activity is then subject to a split based on where a meter is believed to be fitted

Orphaned

	Total AQ*	Total 'Remove?=1' AQ*	Net AQ*	AQ used for consumption Calc**
Snapshot 1 Mar-12	1,674,045,200	241,159,154	1,432,886,046	1,268,851,252
Snapshot 2 May-12	1,635,237,299	241,159,154	1,394,078,145	1,237,952,537
Snapshot 3 Jul-12	1,610,980,034	241,159,154	1,369,820,880	1,206,248,915
Snapshot 4 Sep-12	3,274,198,666	1,878,258,487	1,395,940,179	845,877,800
Snapshot 5 Nov-12	1,681,826,603	241,159,154	1,440,667,449	1,320,228,959
Snapshot 6 Jan-13	1,538,306,173	68,000,000	1,470,306,173	1,487,397,346
Snapshot 7 Mar-13	1,420,601,818	68,000,000	1,352,601,818	1,171,351,300

*From Back Up MPR files includes all SSP and LSP **From Shipperless Contribution Calculator.xls

Orphaned is then subject to a split based on where a meter is believed to be fitted.

Less Than 12 Months

	Total AQ*	Total 'Remove?=1' AQ*	Net AQ*	AQ used for consumption Calc**
Snapshot 1 Mar-12	4,439,256,538	424,952,950	4,014,303,588	3,710,922,068
Snapshot 2 May-12	4,083,095,489	424,952,950	3,658,142,539	3,310,010,948
Snapshot 3 Jul-12	17,055,026,877	13,170,588,286	3,884,438,591	6,779,149,400
Snapshot 4 Sep-12	4,541,820,902	752,912,052	3,788,908,850	4,001,960,345
Snapshot 5 Nov-12	32,844,172,544	29,614,958,156	3,229,214,388	3,564,907,425
Snapshot 6 Jan-13	35,793,628,910	32,824,676,438	2,968,952,472	12,922,023,775
Snapshot 7 Mar-13	43,998,976,049	41,081,854,642	2,917,121,407	30,291,203,589

*From Back Up MPR files includes all SSP and LSP **From Shipperless Contribution Calculator.xls

The difference in the AQ used to calculate consumption here is stark; the sum of the total Net AQ (SSP and LSP) is over 40TWh less than the sum of the AQ actually used to calculate consumption and therefore UG.

The consumption calculations above are used to derive and populate the permanent UG for each category. The temporary UG is derived by a simple multiplier of 5 times this value. (British Gas would like to request the data to support this simple multiplication to derive temporary volumes or would appreciate the AUGE demonstrating the relevant part of the AUGS that covers this element). Therefore any error in the permanent UG is introduced additionally into the temporary figure but at 5 times the magnitude.

WS	5168	911788	869237	700985	5847580	0
Total	**584,740**	**52,711,679**	**325,760,363**	**14,466,659**	**222,046,454**	**5,467,665**
	3,508,443	316,270,075	1,954,562,176	27,281,201	222,046,454	8,001,070

The summary of the other categories are below:

Shipperless PTS

	Total AQ*	Total 'Remove?=1' AQ*	Net AQ*	AQ used for consumption Calc**
Snapshot 1 Mar-12	70,623,012	5,815,572	64,807,440	37,410,357
Snapshot 2 May-12	63,112,216	3,344,276	59,767,940	34,312,957
Snapshot 3 Jul-12	59,654,379	3,344,276	56,310,103	33,319,431
Snapshot 4 Sep-12	53,523,996	0	53,523,996	28,715,486
Snapshot 5 Nov-12	32,350,167	0	32,350,167	19,935,993
Snapshot 6 Jan-13	35,309,299	0	35,309,299	21,246,504
Snapshot 7 Mar-13	42,100,617	3,191,481	38,909,136	25,242,337

*From Back Up MPR files includes all SSP and LSP **From Shipperless Contribution Calculator.xls

Shipperless SSP

	Total AQ*	Total 'Remove?=1' AQ*	Net AQ*	AQ used for consumption Calc**
Snapshot 1 Mar-12	328,171,039	121,323,813	206,847,226	282,797,585
Snapshot 2 May-12	337,693,216	121,323,813	216,369,403	294,935,521
Snapshot 3 Jul-12	341,279,761	121,323,813	219,955,948	200,461,666
Snapshot 4 Sep-12	316,366,953	92,999,813	223,367,140	202,161,531
Snapshot 5 Nov-12	268,686,978	64,094,474	204,592,504	176,660,300
Snapshot 6 Jan-13	273,754,118	64,094,474	209,659,644	210,828,410
Snapshot 7 Mar-13	263,102,568	64,094,474	199,008,094	201,715,481

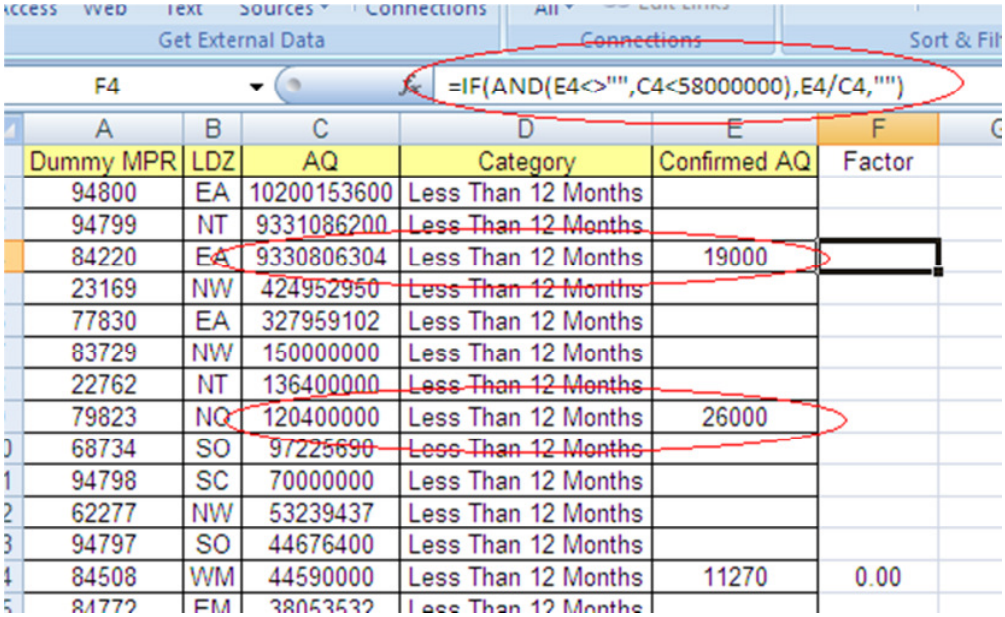
*From Back Up MPR files includes all SSP and LSP **From Shipperless Contribution Calculator.xls

This introduces a massive error into the calculation of permanent and more acutely temporary UG. Since temporary UG is subtracted from Total UG to derive the total Permanent UG then this has a significant effect on the final AUGS table.

Query 4

From Shipperless Unregistered AQ Comparisons.xls it seems that the formula to correct unreliable AQ estimates is not applied to sites with AQ in excess of 58,000,000KWh. Nor does it take sites with an AQ in excess of 58,000,000KWh into consideration when calculating the factor.

Only 2 sites with an AQ in excess of 58,000,000KWh have a confirmed AQ – both result in an initial DM site becoming an SSP site ultimately with a corresponding AQ reduction of 9,451,161,304KWh.



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F4 | =IF(AND(E4<>"",C4<58000000),E4/C4,"")

	A	B	C	D	E	F
	Dummy MPR	LDZ	AQ	Category	Confirmed AQ	Factor
	94800	EA	10200153600	Less Than 12 Months		
	94799	NT	9331086200	Less Than 12 Months		
	84220	EA	9330806304	Less Than 12 Months	19000	
	23169	NW	424952950	Less Than 12 Months		
	77830	EA	327959102	Less Than 12 Months		
	83729	NW	150000000	Less Than 12 Months		
	22762	NT	136400000	Less Than 12 Months		
	79823	NO	120400000	Less Than 12 Months	26000	
0	68734	SO	97225690	Less Than 12 Months		
1	94798	SC	70000000	Less Than 12 Months		
2	62277	NW	53239437	Less Than 12 Months		
3	94797	SO	44676400	Less Than 12 Months		
4	84508	WM	44590000	Less Than 12 Months	11270	0.00
5	84772	EM	38053532	Less Than 12 Months		

There are sites with AQs > 58,000,000KWh that are included in the consumption calculation.

1	ID	LDZ	AQ	Avg LSP Size Ratio	Remove?
2	23277344	NW	424952950	360.7	1
3	23308174	EA	327959102	278.4	1
4	23277339	EM	201559831	171.1	
5	23173941	EM	165645000	140.6	
6	23176935	NW	150000000	127.3	
7	23305417	NT	136400000	115.8	
8	23309790	NO	120400000	102.2	
9	23277341	EM	117206875	99.5	
10	10759333	NW	100800000	85.6	
11	23309335	SO	97225690	82.5	
12	23277342	NW	90431278	76.8	
13	23201384	NW	53239437	45.2	
14	23216406	WM	44590000	37.8	

These AQs are 'uncorrected' and the available evidence strongly suggests they will be hugely overstated and therefore lead to an overstatement of consumption and therefore permanent UG and therefore as a consequence temporary UG.

Query 5

CSEP consumption has not been adjusted for AQ>1 not consuming nor sites that only consume for part of the year in question as per the 'failed' site consumption calculation. CSEP sites will behave in exactly the same way to all other sites within each LDZ and each year. Therefore the aggregate AQ should be adjusted to cater for the same factors observed within the larger Xoserve population.

The result is that CSEP consumption is overstated in every LDZ for every year. CSEP is a growing proportion of total consumption and therefore this effect, whilst material now will only become larger.