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DESC/TWG

15th Feb 2017

Unidentified Gas

Updated Analysis: 2015/16

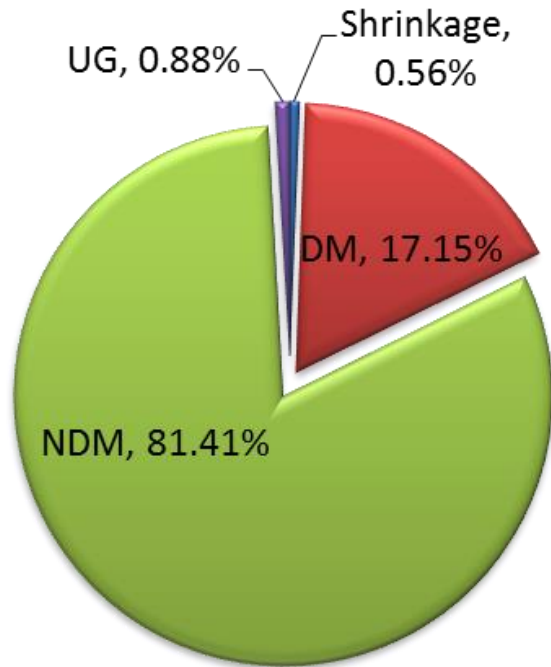
- There is a new concept of daily Unidentified Gas (UG) in the post Nexus regime
- We last presented our analysis on UG to DESC on 16th Feb 2016
- For background info on UG please refer to previous presentations
- This presentation analyses updated UG results using the most recent data.

Data used in the analysis

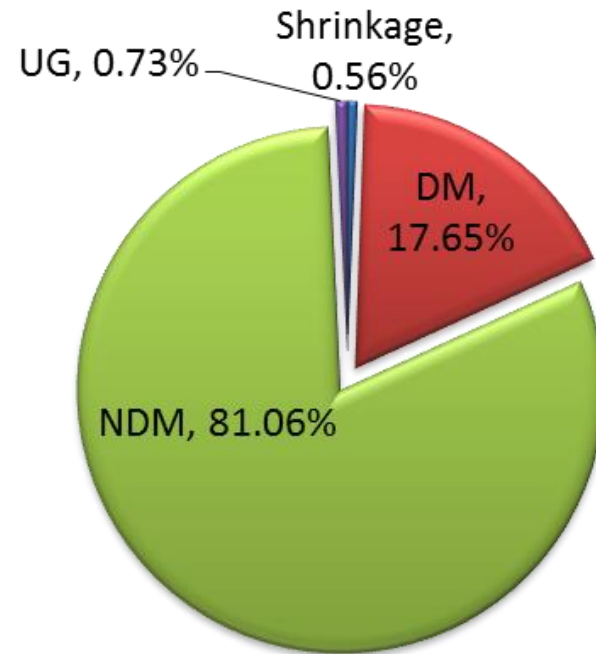
- Daily data at LDZ level
- Actual DM and LDZ measurements
- Actual NDM AQs
- Gas Year analysed:
 - 12 months of additional data – 01/10/2015 to 30/09/2016
 - Data used in the analysis 01/10/2012 to 30/09/2016
- Simulated the new algorithm to derive estimates of what UG would have been using
 - Revised ALPs and DAFs under the new seasonal normal basis
 - Revised CWV definitions

Updated UG Proportion Summary

**Total Proportion over 3 years
2012/13, 2013/14, 2014/15,**



**Total Proportion over 3 years
2013/14, 2014/15, 2015/16**



UG Summary Statistics

UG Summary Statistics (%)				
	Mean	Std Dev	Min	Max
2012/13	1.47	5.93	-50.54	23.62
2013/14	-2.03	5.78	-33.95	19.93
2014/15	-0.31	6.08	-50.00	21.91
2015/16	1.47	5.71	-58.11	33.98

UG tolerance levels

Below is the 95% range for 'normal' values. Often, values that are more than 2 standard deviations from the mean are regarded as unusual.

2012/13, 2013/14, 2014/15: -12.49 to 11.91

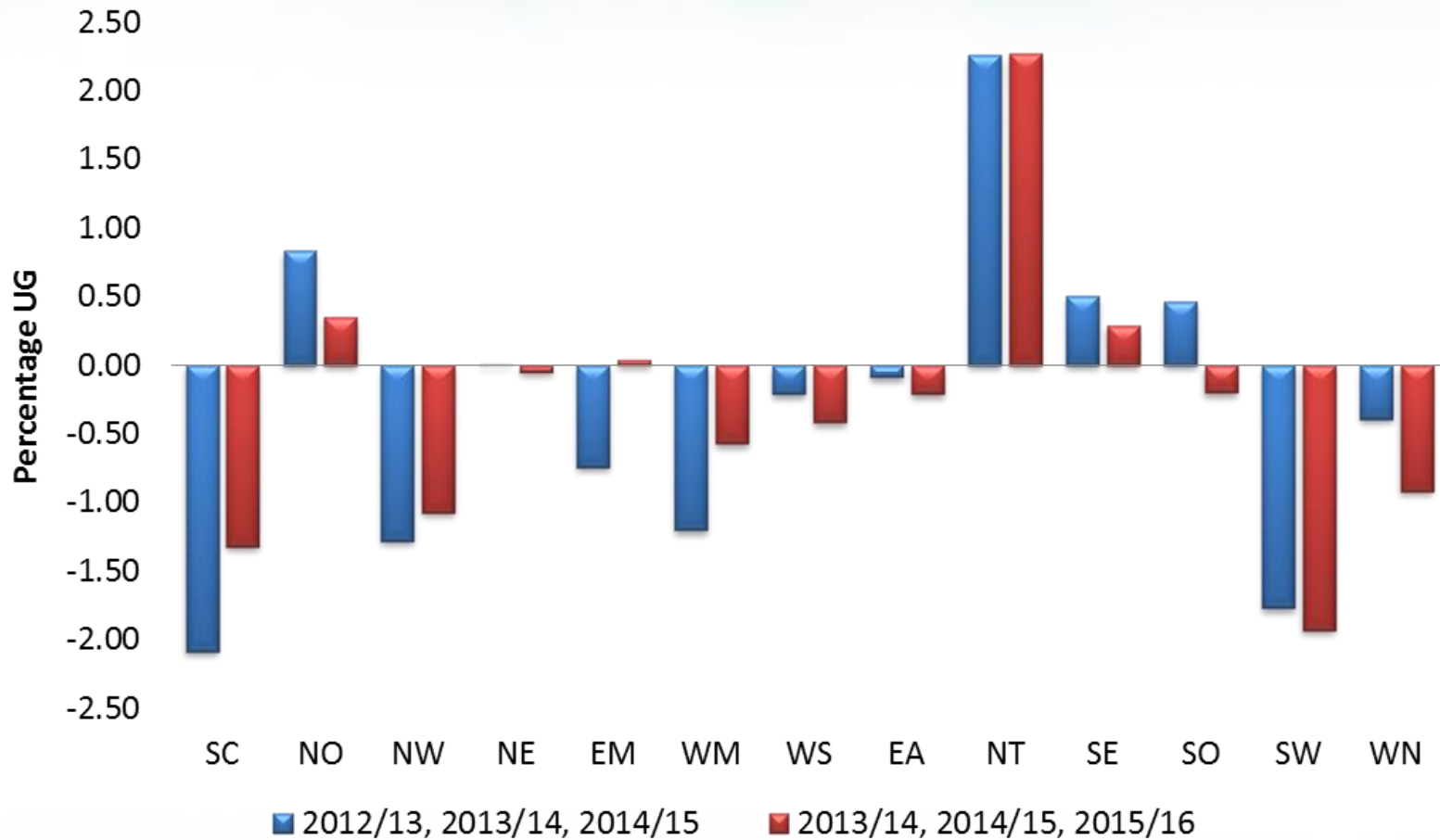
2013/14, 2014/15, 2015/16: -12.35 to 11.77

UG Percentage confidence intervals by LDZ

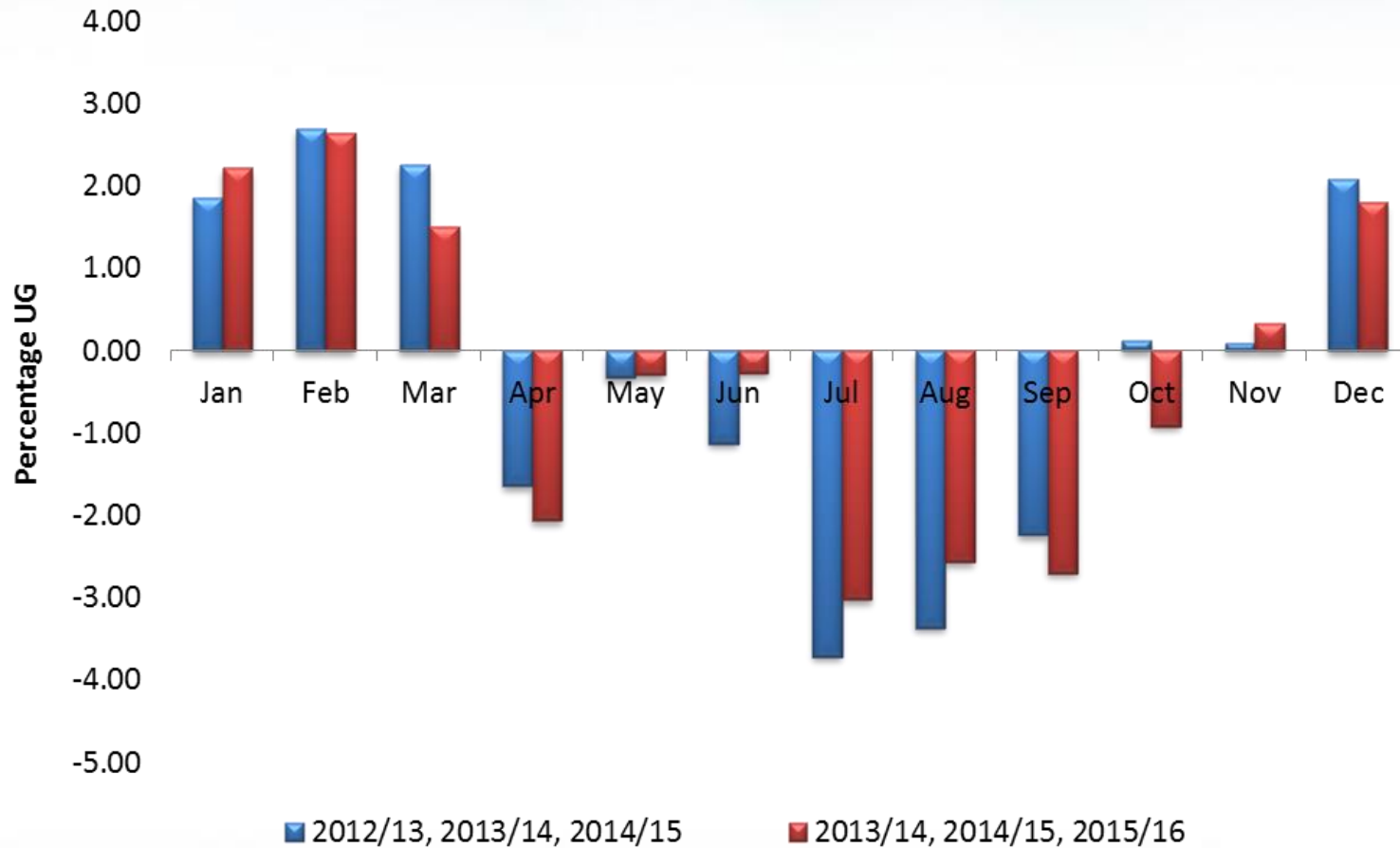
LDZ	2012/13, 2013/14, 2014/15				2013/14, 2014/15, 2015/16			
	Mean	Std Dev	95% Confidence Interval		Mean	Std Dev	95% Confidence Interval	
SC	-2.09	6.15	-14.39	10.21	-1.32	6.13	-13.58	10.93
NO	0.83	5.46	-10.08	11.75	0.35	5.43	-10.52	11.22
NW	-1.28	7.00	-15.27	12.72	-1.07	7.21	-15.50	13.35
NE	0.00	5.66	-11.32	11.32	-0.05	5.90	-11.86	11.76
EM	-0.75	5.19	-11.13	9.64	0.04	5.61	-11.18	11.26
WM	-1.20	5.92	-13.05	10.64	-0.57	5.86	-12.30	11.15
WS	-0.21	6.17	-12.56	12.14	-0.42	5.73	-11.88	11.04
EA	-0.09	5.18	-10.46	10.28	-0.21	5.21	-10.63	10.21
NT	2.26	5.38	-8.50	13.02	2.27	5.15	-8.03	12.57
SE	0.51	5.64	-10.76	11.78	0.09	8.63	-17.18	17.36
SO	0.46	5.42	-10.37	11.29	-0.20	5.50	-11.20	10.80
SW	-1.77	6.55	-14.88	11.34	-1.93	6.32	-14.57	10.71
WN	-0.39	7.69	-15.78	15.00	-0.92	7.37	-15.66	13.83

Updated Slide – Action DESC0203

Average percentage UG by LDZ



Average percentage UG by month



GB CWV Comparisons

	2012/13	2013/14	2014/15	2015/16
Oct	9.99	12.01	12.05	11.03
Nov	6.54	6.33	7.98	8.56
Dec	4.01	5.37	4.56	7.89
Jan	3.02	4.61	3.52	4.51
Feb	2.94	4.98	3.67	4.49
Mar	3.48	7.43	6.43	6.13
Apr	8.44	10.88	10.29	8.85
May	11.96	13.17	12.29	13.31
Jun	14.53	15.06	14.48	14.80
Jul	15.64	15.59	15.21	15.31
Aug	15.52	14.97	15.28	15.49
Sep	14.04	14.73	13.64	14.97

The cells highlighted blue show the coldest month out of the 4 years.
The cells highlighted red show the warmest month out of the 4 years.

Conclusions

- On average, UG is more likely to be negative across the majority of LDZ's.
- UG is most likely to be negative in the summer and positive in the winter.