

## Pre Payment Meters – Analysis – 2009/10 data - SO

### **Nature of the Analysis**

Daily consumption data was provided by one Shipper for one LDZ. We are advised that all meter points (“MSNs”) in this data set are fitted with Smart meters and are operating in prepayment mode.

The data was subjected to the same analysis process as the data from the Xoserve NDM Sample, which is used to determine the NDM Algorithms each year. The outputs of that process include the “Annual Load Profile” (ALP) which is a daily value used in Demand Estimation. The value represents the daily proportion of energy consumed under seasonal normal conditions compared to average daily consumption: a value greater than 1 represents more than the daily average; and a value lower than 1 represents below average consumption.

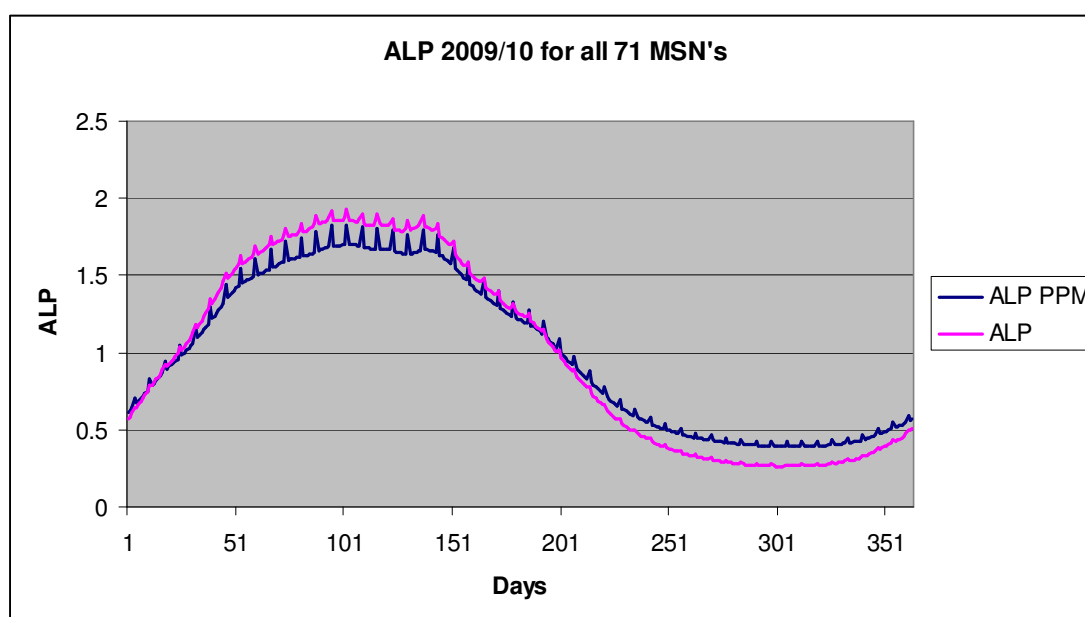
The source data is for the gas year 2009 – 2010 (1<sup>st</sup> Oct 2009 – 30<sup>th</sup> Sep 2010) for SO LDZ only. Prior to the analysis, the data was subjected to the same validation tests as for the NDM Sample data, to ensure that no erroneous data was used. After applying validation to the dataset provided, 71 MSNs were eligible to be used in the analysis.

The data was analysed to calculate a relationship to the relevant weather for 2009/10. This was then used to determine a “PPM ALP” for 2013/14 under seasonal normal conditions, which could be compared to the proposed EUC1 ALP for SO LDZ, to identify any difference in patterns.

### **Results – all MSNs**

Below is a graph showing the proposed EUC1 ALP for the coming year (2013-2014), for LDZ SO, EUC01, compared to the calculated ALP for PPM, for LDZ SO.

The PPM AQs in this dataset varied between 1,611kwh and 23,299kwh.

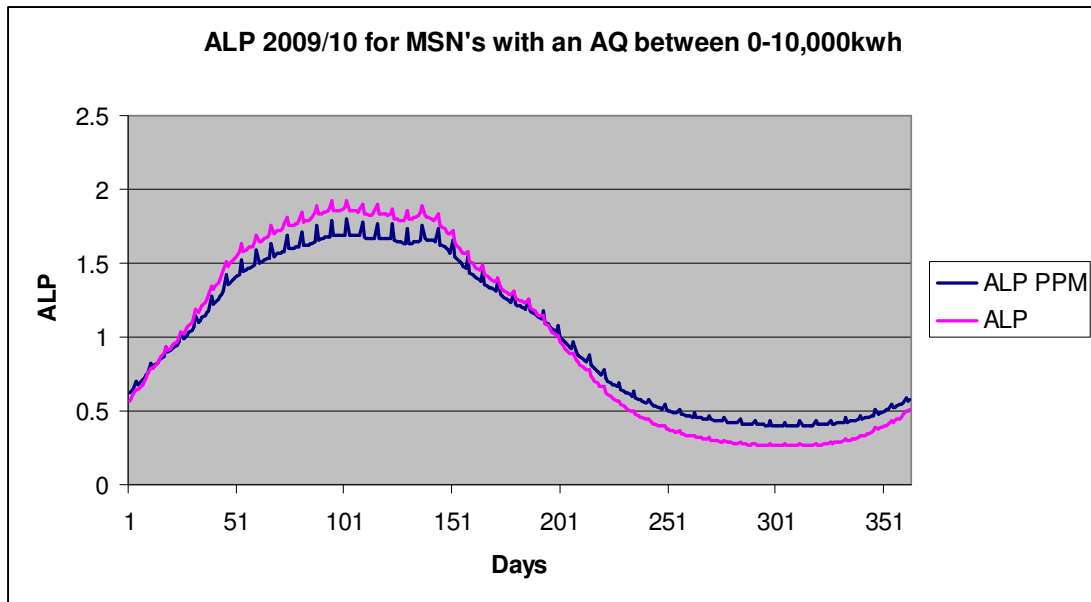


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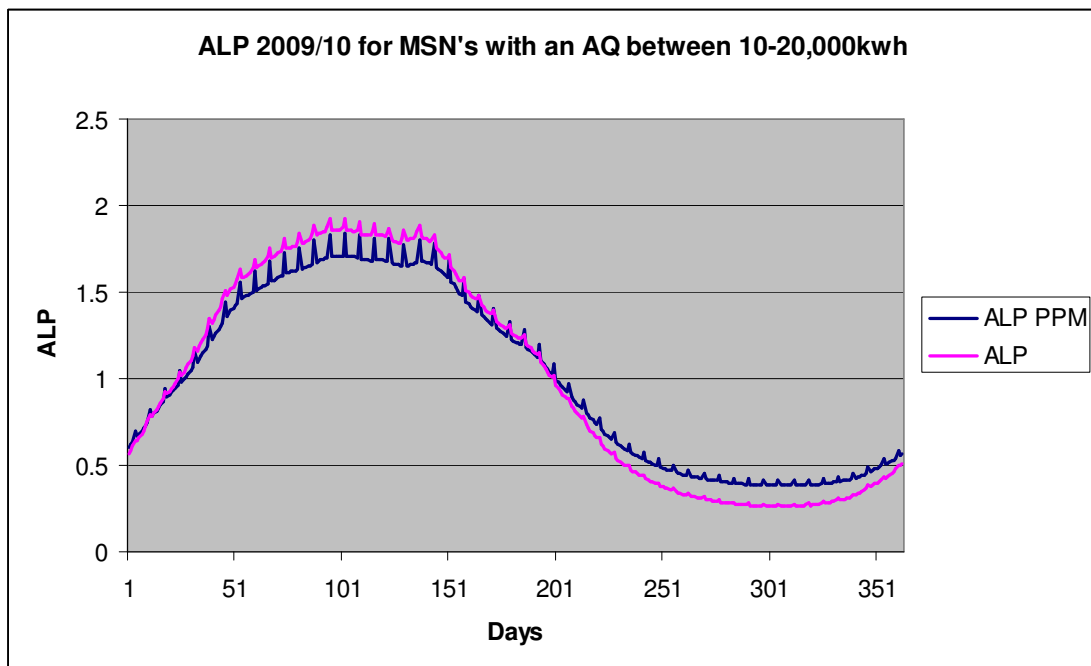
### **Analysis by Consumption Band**

Further analysis was then carried out by splitting the dataset into the following ranges: AQ between 0 – 10,000kwh and 10-20,000kwh.

Below is the graph displaying the ALPs based on an AQ of 0-10,000kwh. There were 28 MSNs in this dataset.



Below is the graph displaying the ALPs based on an AQ of 10-20,000kwh. There were 39 MSNs in this dataset.



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Below is a table displaying the ALP values at both the peak and trough points within the gas year.

		<b>Day 102</b>	<b>Day 300</b>
<u>All Data</u>	<b>ALP</b>	1.92661	0.26399
	<b>ALP PPM</b>	1.82826	0.39453
	<b>Difference</b>	-5.1%	+49%
<u>0-10k AQ</u>	<b>ALP</b>	1.92661	0.26399
	<b>ALP PPM</b>	1.79516	0.40396
	<b>Difference</b>	-6.8%	+53%
<u>10-20k AQ</u>	<b>ALP</b>	1.92661	0.26399
	<b>ALP PPM</b>	1.84174	0.38478
	<b>Difference</b>	-4.4%	+46%