

Pre Payment Meters – Updated Analysis – 2009 to 2012 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. However the data provided was anonymous (i.e. did not include live Meter Point References) and Xoserve is unable to check the status or ownership of the Meter Points.

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.

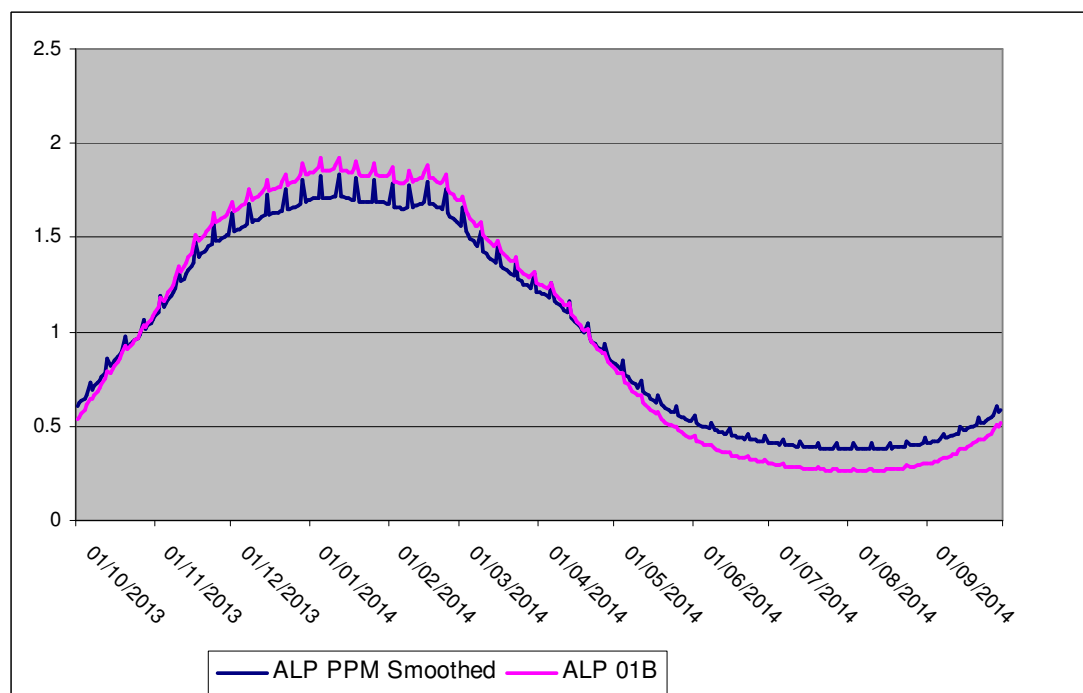
The source data is for the gas years 2009/10, 2010/11 and 2011/12 for SO LDZ only. Prior to the analysis, the data was subjected to the same validation tests as for the NDM Sample data, to ensure that no erroneous data was used. After applying validation to the dataset provided, up to 451 MSNs were eligible to be used in the analysis (71 for 2009/10; 415 for 2010/11 and 332 for 2011/12).

The data was analysed to calculate a relationship to the relevant weather for each year, and the regression parameters were averaged to provide a smoothed model, in line with normal NDM modelling processes. 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

Earlier analysis was carried out on the 2009/10 data only by splitting the dataset into the following ranges: AQ between 0 – 10,000kwh and 10-20,000 kWh. That analysis identified that the general trends in both sectors were consistent with the overall profile, but that the weekend effects were slightly more marked in the 0 – 10,000 kWh dataset.

That analysis has not been repeated for subsequent years, as the intention is to develop a single profile for all PPM meters for simplicity and not to sub-divide any calculations.

Comparison to 01B Profile

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

	12/01/2014	30/07/2014
ALP PPM Smoothed	1.8340184	0.380638406
ALP 01B	1.926613	0.263989
Difference	-5%	44%