Mod 644

20th March 2018

# Modification Requirements

Energy allocation can be improved in three distinct areas:

- 1. Introduction of three End User Categories for what was EUC01B/EUC02B:
  - i. EUC01P/EUC02P – For prepayment heating load
  - ii. EUC01I/EUC02I – For Market Sector Code of Industrial & Commercial (I&C) heating load
  - iii. EUC01B/EUC02B – All remaining MPRs
- 2. Expand the data items included in the CWV to improve the WCF applied to all EUCs (including the newly proposed ones) which would require amendments to Section H 5.1.1
- 3. To create wider parameters for the DAF and/or the WCF where the CWV and the SNCWV are >[1]% tolerance

EUC Splits – Pre-payment Data

- Data supplied as part of RG631 has supported previous analysis that pre-payment customers had flatter profiles that standard residential customers
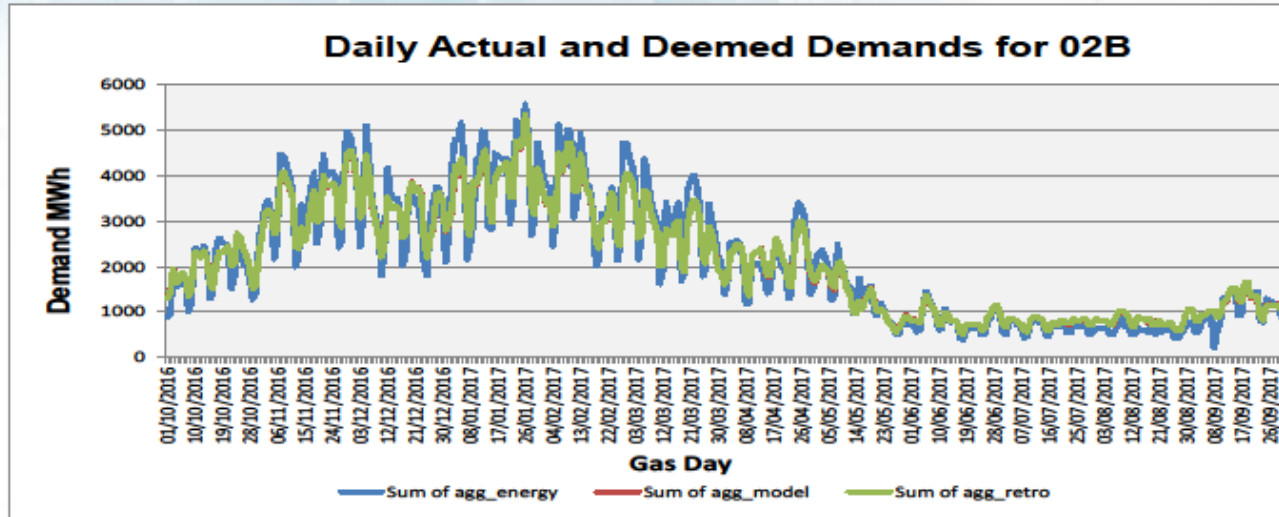
3rd Party NDM Daily Demand Analysis: Daily Demands

Daily Actual and Deemed Demands for 01B
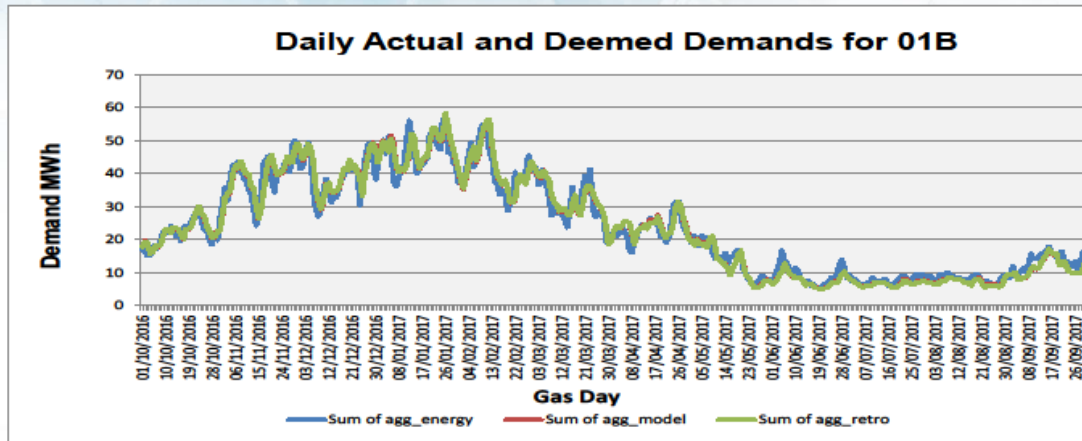
- Chart shows daily actual and allocated demand for Band 01B (using 3rd party data)
- 99% of all '3rd Party' data used in 01B assessment were Pre Payment meters (domestic) whereas the assessment using 'Sample' data used Credit meters (domestic)
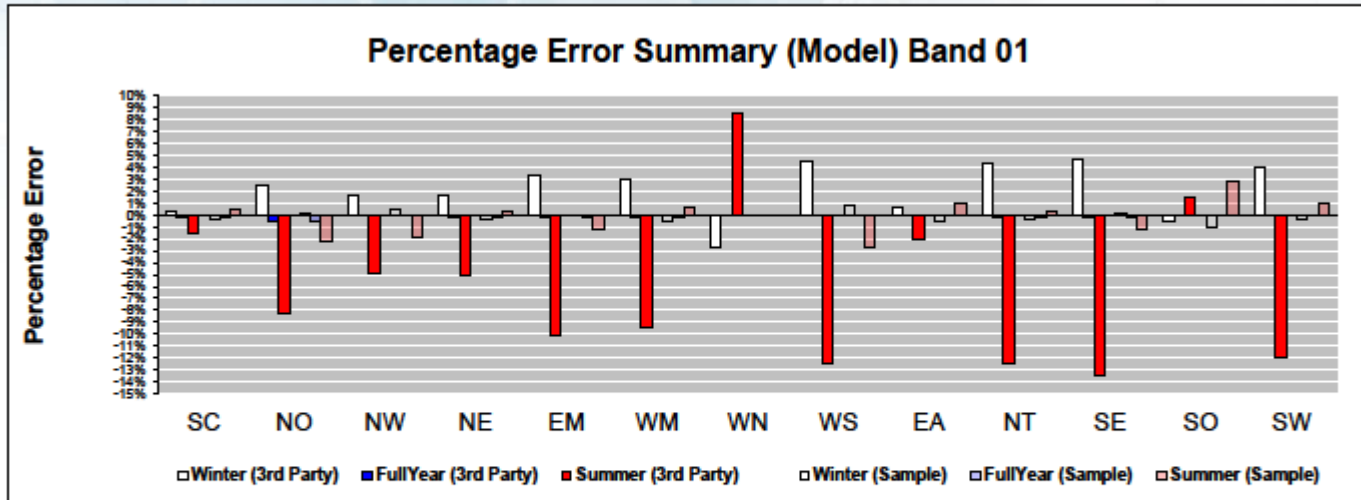- Evidence of winter over allocation and summer under allocation

EUC Splits

3rd Party NDM Daily Demand Analysis: Daily Demands

Daily Actual and Deemed Demands for 02B

Sum of agg_energy — Sum of agg_model — Sum of agg_retro

- Chart shows daily actual and allocated demand for Band 02B (using 3rd party data)
- Results show overall winter under allocation and summer over allocation
- 3rd party sample data for 02B appears to be made up of a different composition of consumer types than the Sample data (which are used to derive the profiles)

EUC Cont

3rd Party NDM Daily Demand Analysis: Error Summary

Percentage Error Summary (Model) Band 01

Legend: □Winter (3rd Party) ■FullYear (3rd Party) ■Summer (3rd Party) □Winter (Sample) □FullYear (Sample) □Summer (Sample)

- Chart shows % error over the winter, summer and full year by LDZ, for Band 01B using the '3rd Party' data (Results from the 'Sample' data are shown for comparison)
- Results show winter over allocation and summer under allocation is evident in all LDZs except WN and SO
- Analysis performed in summer 2014 confirmed profile for PPM customers is flatter than that of a standard Domestic credit meter customer

XOserve

I&C Small Sites
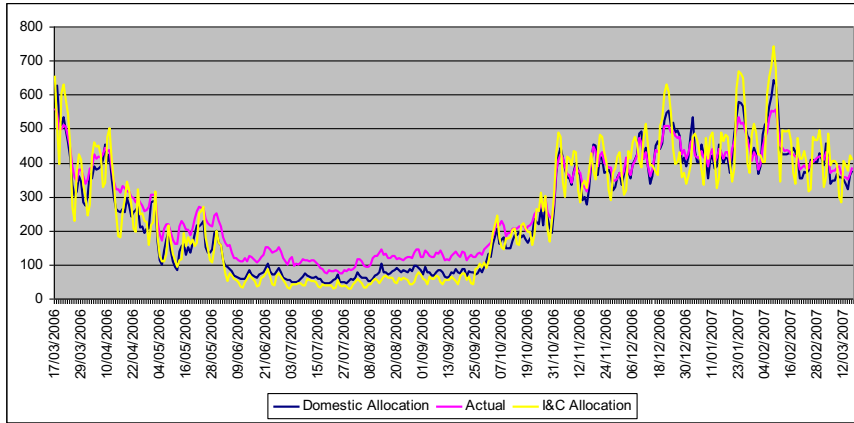
Large Domestics in Band 2
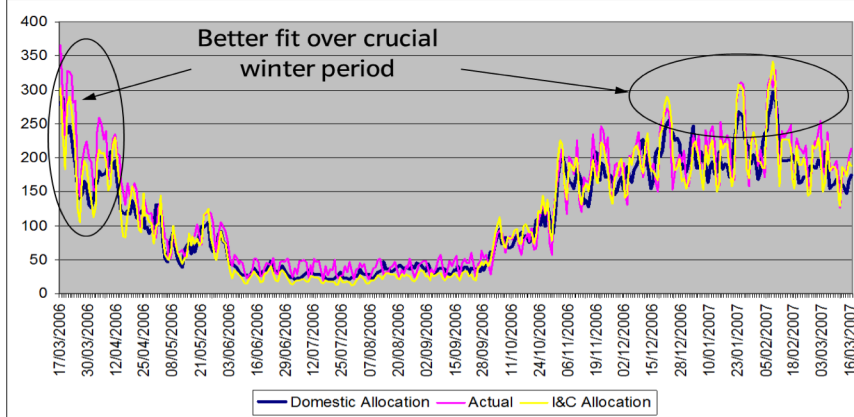
I&C in Band 1

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- Evidence is clear that there will be benefits from extra EUCs
- DESC is planning the EUC development, BUT will need data

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WCF changes

- We have run some analysis on links between UIG volumes and WCF

- UIG is highly correlated to WCF and CWV confirming our view that a large proportion of UIG is due to the algorithm not flexing sufficiently for temperature movement

- Our analysis shows that UIG is correlated to WCF lag 2 and CWV

- We also ran a number of regressions and the standard parameters of the algorithm are improved if you also include CWV or SNCWV in addition to the WCF value

- Our belief is we can improve the algorithm by adding an additional two elements – a two day lag to WCF and an increased weighting on CWV

  - HOWEVER we are limited to only our data, which is not pure UIG

  - We need help to analyse at an industry level and also to compare to sample data

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