

DEMAND ESTIMATION TECHNICAL FORUM
and
DEMAND ESTIMATION SUB COMMITTEE
Minutes
Monday 02 June 2008
Elxon, 350 Euston Road, London NW1 3AW

Attendees (for both meetings)

Julian Majdanski (Chair)	(JB) Joint Office
Lorna Dupont (Secretary)	(LD) Joint Office
Chris Burston	(CB) TPA Solutions
Fiona Cottam (Transporter Agent)	(FC) xoserve
Joe Ciardiello	(JC) xoserve
Louise Child	(LC) E.ON
Mark Linke	(ML) Centrica
Mark Perry	(MP) xoserve
Mo Rezvani	(MR) Scottish & Southern Energy
Paul Tuxworth	(PT) National Grid Transmission
Remi Guerinet	(RG) Total Gas and Power
Richard Robinson	(RR) TPA Solutions
Sally Lewis	(SL) RWE Npower
Sallyann Blackett	(SAB) E.ON
Steve Taylor (member)	(ST) Centrica

Attendee for DESC only

Indra Thillinaithan	(IT) Ofgem
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Apologies

Julie Round	(JR) RWE Npower
Steve Coles (member)	(SC) E.ON

DEMAND ESTIMATION TECHNICAL FORUM

1. Introduction

JM welcomed all attendees.

2. Progress on Non-Daily Metered (NDM) profiling and capacity estimation algorithms for 2008/09

MP (xoserve) gave an overview of Demand Estimation, its associated timetable, and presented the current completed analysis (including the modelling basis, Small NDM analysis, and Large NDM analysis). Queries and

views were invited on Transporter recommendations during or following on from the presentation.

2.1 Timetable

It was confirmed that the NDM draft proposals, based on the recommendations made at this meeting, would be published by 30 June 2008, and that User representations should be made by 15 July 2008. Consultation will then take place, and any representations received would be discussed and responded to at the next DESC meeting (provisionally arranged for 25 July 2008). The final proposals will be published on the xoserve website by 15 August 2008. (If no representations are received the July meeting will not be held.)

2.2 Modelling

The modelling basis (as previously agreed with the Demand Estimation Sub Committee) remains broadly unchanged from Spring 2007, and smoothed models will be produced using three years of data.

MP explained that the purpose of the DETF was to offer an opportunity for the comparison of data and model accuracy and appropriateness. A description of the proposed data sets was given, together with data set identification and impacts, and modelling impacts in terms of Indicative Load Factors (ILFs). The statistical tools and mechanisms used to identify the recommended way forward were also presented, including Root Mean Squared Error (RMSE) and R² Multiple Correlation Coefficients.

2.3 Small NDM Analysis (<2,196 kWh)

Small NDMs represented a significant proportion of the total NDM load (almost 90%).

Small NDM Data Recorders

MP advised that the population of active data recorders within the sample had increased by 250 over the collection period. Installation programmes were ongoing and there were no issues in respect of the modelling.

Small NDM Dataloggers: MP advised that the population of validated Supply Points within the sample had decreased for Bands 2, 3 and 4 over the collection period but that this had had no impact on the modelling results.

Small NDM: Proposed Data Sets for Analysis

MP described the proposed data sets for analysis and explained that the small NDM analysis was undertaken at individual LDZ level. He confirmed that there had been an increase of 356 Supply Points in Band 1 and a reduction of 644 Supply Points in Bands 2 - 4 compared to the previous year, but that the remaining samples still provided sufficient data for analysis and would have no impact on the modelling.

The current small NDM EUC Bands were then identified and the appropriateness of the bandings had been investigated. The analysis from 2007 gave no significant reason for changing the EUC bandings. The 2008 analysis would investigate the most appropriate consumption bandings, looking at the inclusion of non-domestics within Band 1, and splitting Bands 2 and 4. Shippers thought that it was important to investigate any identified fall

in consumption each year, as more sites would then drop into the lower bands.

Band 1 (0 – 73.2MWh) Data Set Identification and Impacts

MP advised that this Band contained Domestic and I & C Supply Points, but due to the persistence of accuracy and verification issues relating to the Market Sector Flag (MSF) it was not feasible to treat these separately at the current time. Some analysis had been performed with the inclusion of non-domestic sample points which lead to lower positive or negative weekend factors in the 01B model. WSF patterns continued to indicate under estimations of demand as with previous years with the inclusion of non-domestics.

Band 1 Data Set Identification and Impacts – Domestic and Non-Domestic Inclusion

MP gave examples of the modelling undertaken and presented slides showing the Demand against CWV.

The proposed approach was therefore to continue the same as for Spring 2007 and previous years, ie no change.

Band 2 Small NDM 73.2 to 293 MWh pa split at 145 MWh pa, Consumption Band Analysis: ILF Comparison and Historical ILF Comparison

MP advised that analysis had been undertaken on a Band 2 split at 145 MWh pa. Aggregation of 5 LDZs was required to allow for sufficient sample analysis. Differences in the ILF values across the sub bands were found to be generally small and were inconsistent across LDZ groups both within and between years. No obvious trends were apparent, therefore it was not proposed to split Band 2. This conclusion was further supported by the fact that no overall improvement in RMSE analysis of model accuracy could be identified. RMSE analysis showed degradation in model/profile accuracy when splitting EUC Band 2.

MP gave examples of the modelling undertaken and presented an example slide showing the Demand against CWV.

The proposed approach for Band 2 was therefore to continue as before, ie no split.

Bands 3 and Band 4: Small NDM 293 to 2,196 MWh pa split at 1,465 MWh pa, Consumption Band Analysis: ILF Comparison and Historical ILF Comparison:

MP pointed out errors made in the column headings and advised that a revised slide (28) would be produced.

Action DE1050(TF): xoserve to provide a revised slide (28) correcting the errors noted in the column headings. (Post meeting Note: Errors rectified and replacement presentation published on 04 June 2008 on www.gasgovernance.com).

Analyses of Band 3 (293 – 732 MWh pa), and Band 4 using the current breadth (732 – 2,196 MWh pa) as well as a split (732 – 1,465 MWh pa, and

1,456 – 2,196 MWh pa) were presented. MP gave examples of the modelling undertaken and presented a slide showing the Demand against CWV.

There was very little difference overall and no real trends evident. The sample size was quite high in Band 4 and it was possible to carry out individual LDZ analysis. No aggregation was required.

ILF variations for Band 4 were quite small and inconsistent across LDZ groups both within and between year; 4 LDZs indicated a minor improvement.

For Band 4 there was no improvement in RMSE when splitting the band and analysis showed degradation in model/profile accuracy when split.

The proposal for Band 4 was therefore to retain the current approach, ie no EUC split at 1,465 MWh pa.

WAR Band Analysis 293 – 2,196 MWh pa

The Winter Annual Ratio (WAR) Band analyses were summarised.

The analysis showed that WAR Band limits had moved towards ‘one’ as a result of the 2007/08 ‘colder’ winter, compared to winter 2006/07.

The proposal was to retain the current approach

In summary the following recommendations were made by xoserve on behalf of the Transporters in respect of the small NDM analysis:

Consumption Band	Proposed Approach
Band 1 0 – 73.2 MWh pa	Banding to remain unchanged from Spring 2007 (and previous years). Consumption Band Analysis by LDZ (no aggregation recommended) Use Domestic sites only (no I&C sites).
Band 2 73.2 – 293 MWh pa	Maintain current approach. Band width to remain unchanged Analysis by LDZ (no aggregation recommended) No additional split at 145 MWh pa.
Band 3 293 – 732 MWh pa Band 4 732 – 2,196 MWh pa	Maintain current approach. Band width to remain unchanged. Consumption & WAR Band analysis by LDZ Consumption Band analysis for 293 –732 and 732 – 2,196 WAR Band analysis across whole band 293 – 2,196 No additional split at 1,465 MWh pa.

2.4 Large NDM Analysis (>2,196,000 kWh)

A description of the prescribed data sets was given.

The sample data aggregations were similar to that of the previous year, with the bandings remaining constant. No analysis is required to define the appropriateness of the bandings.

MP reported that since 2007 the number of large NDM Dataloggers had reduced by 828 (as a result of site terminations and an increased impact of missing read periods) but the remaining number was still considered to be a good and sufficient representation of the population. MP confirmed that the available sample data counts were sound and the modelling outputs were satisfactory.

Comparison was made of the count of Sample Supply Points to the Total Market Supply Points and the data presented was discussed. On an AQ basis, although forming 10.4% of the total AQ the Large NDM sector constituted only 0.04% of the total count of NDMs.

Bands 5-9 Consumption Band Analyses – ILFs

The ILFs were all representative; the R^2 Multiple Correlation Coefficients were all good, and there were no obvious areas for concern.

Examples of Demand against CWV were presented and discussed, followed by the WAR Band analysis.

Band 5: Despite small sample numbers in SC LDZ WAR Bands 1 and 4 the model fit remained good and the 5 LDZ group basis of data aggregation as applied in 2007 and 2006 remained appropriate.

Band 6: Three LDZ aggregations were applied; no issues were identified.

Band 7: National aggregations were applied; no issues were identified.

Band 8: National aggregations were applied due to a low count. It was noted that this band was close to falling below what was considered the minimum reasonable count of 40, and may be a potential area of concern in the future.

Further examples of Demand against CWV were presented, showing that there was very little relationship between demand and weather. The example for Band 7 showed a weather insensitive model; the data set was reasonable resulting in the high R^2 value. The example for Band 8, also a weather insensitive model, exhibited a wider incidence of data scatter, for which there was no obvious explanation.

Comparison of the provisional results of the Large NDM EUC smoothed models with those of the previous year indicated no significant change.

In response to a question from SAB, FC stated that the results would not take account of Modification Proposal 0204 as things stand at present. JM confirmed that Ofgem required formal legal text to be produced for Modification Proposal 0204 and that this would be included in a revised Final Modification Report as soon as it had been received by the Joint Office.

SAB also asked whether Scotia Gas Networks had finished the migration of its data recorders. FC confirmed that this was continuing and pointed out that

there may be some impact carrying over into next year; Wales and West Utilities were doing the same and hoping to see a subsequent improvement in sample sizes also.

SAB asked if the value of SND for 2008/09 could be produced early and FC noted this.

2.5 Recommendations

In conclusion, the ongoing analysis showed no significant differences to the previous year's analysis. There may be potential in future years to merge Bands 7 and 8. Splits in bandwidths degraded model/profiling accuracy and provided no significant benefit to Indicative Load Factors.

There were no objections to the following Transporter recommendations for 2008/09:

- Retain Small NDM EUC Breakdowns at same points as in previous years
- Model EUC Band 1 (0 – 73.2 MWh pa) using a 'Domestic only' dataset
- Model Large NDM EUC Bands using similar levels of aggregation to those of previous years (same as 2007/08)
- Publication of initial proposals by 30 June 2008
- Publication of Final Proposals by 15 August 2008.

2.6 Note on Actions

Actions generated through this Demand Estimation Technical Forum will be progressed through subsequent Demand Estimation Sub Committee meetings, and documented on the Action Logs and Minutes of those meetings.

DEMAND ESTIMATION SUB COMMITTEE

1. Introduction

JM welcomed all attendees and explained the purpose of the meeting.

2. Confirmation of Membership and Apologies for Absence

2.1 Membership and alternates

The membership was confirmed.

2.2 Apologies

Apologies were received from Julie Round and Steve Cole.

3. Review of Minutes and Actions from the Previous Meeting

3.1 Minutes

The minutes from the meeting held on 15 January 2008 were accepted.

3.2 Actions

Outstanding actions were reviewed (see Action Log below).

Action DE1045: xoserve to consider carrying out analysis on the levels of volatility in the profile of customer usage.

Update: xoserve gave a presentation on the analysis undertaken on a sample of Band 1 domestics in the NDM Demand Estimation Sample in regard to AQs and their historic volatility. A brief discussion of the results took place. The sample was behaving no differently to the general population. FC pointed out that this did not mean that AQs will drop by 1-1.5% at the next review; the national picture seemed to be patchier at present. Referring to the 0 – 73 band and single profile behaviour SAB commented that this may apply to the mid band AQs but not at the smaller end. In response to the original Action DE1045 SAB was expecting to see a spread as to how far the sample deviated. The action was rephrased as: “Is the standard domestic profile applicable across the whole band?” xoserve will reconsider this. **Action carried forward.**

Action DE1047: Joint Office to add regular agenda item for the provision of NDM sample updates.

Update: Added to agenda. **Action closed.**

Action DE1049: xoserve to include an analysis of the monthly levels of unreconciled energy along with the updated RV Analysis at the June meeting.

Update: MP advised that the updated RV Analysis will be included in the draft Proposals to be published shortly. Analysis of the monthly levels of unreconciled energy is to be presented at a future meeting. **Action carried forward.**

4. Relevant UNC Modifications (potential DESC implications)¹

Modification Proposal 0204: Amendment to the calculation of WCF

Ofgem had asked for formal legal text to be produced for Modification Proposal 0204 and this would be included in a revised Final Modification Report as soon as it had been received by the Joint Office. FC confirmed that both sets of DAFs had been prepared at the request of the Transporters and xoserve was preparing for potential implementation this year.

5. NDM Sample Update

MP presented an update on the NDM sample numbers.

¹ www.gasgovernance.com/NetworkCode/UNCMModificationProposals/LiveModificationProposals

Band 1 (0 – 73.2MWh) Data Recorders

Results indicated that actual recorder sample sizes were well above the target numbers for each LDZ.

Datalogger Supply Points (>73.2 MWh)

There had been a reduction of 190 sites since January 2008, the total of active sites now being 11,537. There were 665 inactive sites where no consumption or read had been received within the last two months, which had the potential to change status to active. This would lead to an improvement in Bands 2-5, but not in Bands 6 - 8 which had the greater deficits.

Generally across the LDZs Bands 4 – 8 were currently below sample requirements. Wales and West Utilities was updating its equipment on its sites and was addressing the sample shortfall. Scotia Gas Networks was trying to take on sites itself; some sites were being lost in the handover but Scotia was seeking to improve the situation. MR was keen to influence Scotia internally to aid this approach and was provided with a contact name to initiate discussions to this end.

FC confirmed that numbers continue to be monitored and Transporters were informed of the sample numbers; these will be reviewed and reported on for the November meeting. However, MR was concerned that there was great potential for a period of 'no action' and that this should be addressed. SAB observed that there are obligations already under UNC but there were no penalties or incentives. FC said that benefits should be seen over the longer term.

Whilst acknowledging that the data recorder is managed by xoserve and welcoming the fact that this is being maintained and improved successfully the Shippers reiterated their concerns that Transporters were not meeting their obligations in respect of sample sizes and that this was detrimental.

6. Approval of the DE Technical Forum Proposals

The DESC gave its approval to the draft proposals put forward by xoserve at the Demand Estimation Technical Forum.

The initial proposals will be published by 30 June 2008 and final proposals will be published by 15 August 2008.

7. Review of Work Plan

Dates for 2008/09 meetings are set out below, together with the topics expected to be covered.

Date	Work Items	Venue
25 July 2008 <i>(if required)</i>	1) Response to representations on EUC definitions and demand models	10:00am 31 Homer Road, Solihull B91 3LT

	2) Finalisation of proposed revisions	(Conference Room 6)
11 November 2008	1) Re-evaluation of NDM Sampling and sizes 2) Re-evaluation of EUC definitions and demand model performance Strand 1 – Scaling Factor and WCF analysis	10:00am Elexon, 350 Euston Road, London NW1 3AW (Pink Room)
January 2009	1) CWV Review 2) Re-evaluation of EUC definitions and demand model performance Strand 2 – RV and NDM sample strands 3) Approach for Spring analysis	10:00am Solihull (venue to be confirmed)

8. AOB

8.1 Review Group 0178 Output – E.ON UK

SAB gave a presentation on the output of Review Group 0178; the profiles of SSP I & C and LSP Domestic and how each translated to reconciliation were discussed.

Moving SSP I & C sites from Band 1 to Band 2 would give a better allocation potentially. The difference in allocation and consumption is absorbed by smearing because of the banding category. An improved allocation would result from a change in banding profile. Re-categorising a LSP Domestic would give a slightly improved fit in parts. With more appropriate allocation between the markets less reconciliation would be necessary and therefore there would be less risk to smaller Shippers.

It was recognised that there were some issues relating to the identification of sites as the MSF was not 100% populated, although Shippers did validate this, though not retrospectively. UK Link may also need to be adjusted to take account of a different split (AQ/site usage).

8.2 Review Group 0178 Outputs – Transporter Views

FC briefly summarised the E.ON Proposal and presented the NDM market as at November 2007 (as a percentage of Total AQ). The Transporters' views were then presented together with additional points for consideration. Recommendations were made and FC indicated that xoserve would look into this further, ie the modelling for the autumn. It was thought that system changes should be accommodated within the Project Nexus Consultation.

9. Date of next meeting

If required (see the Table in 7, above) the next meeting will be held at 10:00am on Friday 25 July 2008 in Conference Room 6, 31 Homer Road, Solihull B91 3LT.

If the July meeting is *not* required then the next meeting will be held at 10:00hrs on Tuesday 11 November 2008, at Elexon, 350 Euston Road, London NW1 3AW.

Action Log: UNC Demand Estimation Sub Committee 02 June 2008

Action Ref*	Meeting Date(s)	Minute Ref	Action	Owner**	Status Update
DE1045	08/11/07	3.1	xoserve to consider carrying out analysis on whether the standard domestic profile is applicable across the whole band.	xoserve (FC/MP)	02/06/08 Action was rephrased and carried forward.
DE1047	15/01/08	4.0	Joint Office to add regular agenda item for the provision of NDM sample updates.	Joint Office	Action closed.
DE1049	15/01/08	4.1	xoserve to include the updated RV Analysis within the draft Proposals to be published in June, and an analysis of the monthly levels of unreconciled energy at a future meeting.	xoserve (FC/MP)	Action carried forward.
DE1050 (TF)	02/06/08	2.3	xoserve to provide a revised slide (28) correcting the errors noted in the column headings.	xoserve (FC/MP)	Amended presentation provided. Action closed.

* TF – Technical Forum

** Key to initials of action owner: FC: Fiona Cottam, MP: Mark Perry