UNC Demand Estimation Sub-committee
Technical Workgroup Minutes
Tuesday 20 November 2012
31 Homer Road, Solihull B91 3LT

Attendees

Bob Fletcher (Chair)	(BF)	Joint Office
Lorna Dupont (Secretary)	(LD)	Joint Office
Christian Ivaha	(CI)	British Gas
Fiona Cottam (Transporter Member - Alternate)	(FC)	Xoserve
Joseph Lloyd	(JL)	Xoserve
Louise Gates (User Member)*	(LG)	EDF Energy
Mark Perry	(MP)	Xoserve
Matthew Jackson (User Member)	(MJ)	British Gas
Roy Malin (Transporter Member - Alternate)	(RM)	National Grid Distribution
Sallyann Blackett (User Member)	(SB)	E.ON UK
Zoe Lambert	(ZL)	British Gas

via teleconference

Meeting papers are available at www.gasgovernance.co.uk/desc/201112

1. Confirmation of membership and apologies for absence

The meeting was declared quorate.

1.1 Apologies for absence

Apologies were received from C Warner (National Grid Distribution); C Thomson (Scotia Gas Networks); R Pomroy (Wales & West Utilities); P Tuxworth (National Grid NTS); M Rezvani (SSE).

1.2 Alternates

R Malin for C Warner (National Grid Distribution); Xoserve (F Cottam) for J Ferguson (Northern Gas Networks), C Thomson (Scotia Gas Networks), R Pomroy (Wales & West Utilities) and P Tuxworth (National Grid NTS).

2. Review of Minutes and Actions from the previous meeting(s)

2.1. Minutes

The minutes from the Technical Workgroup (03 October 2012) were approved.

2.2. Actions

DTW0801: Complete analysis for options A, C and E by the end of September.

Update: Presentations were provided for Options A and C. **Closed**

DTW0803: *Ref No 2: Review of appropriateness of current EUC definitions for Small and Large NDMs* – Consider different approaches and submit suggestions/ preferences to Xoserve by 31 August 2012.

Update: Responses had been received from British Gas and E.ON, and these were discussed.

British Gas

MJ clarified what sub divisions meant. FC explained that applying different allocation profiles in EUC Band 1 would undermine the key premise of RbD; it would not be feasible to consider this prior to implementation of Project Nexus changes. However, it might be possible to consider moving the upper ceiling of Band 1, eg to 100,000kWh; any proposal to do this would require rigorous testing of both Xoserve and Shipper systems.

Responding to questions from MJ, FC observed that if analysis indicated a need for change then it would require further assessment to see whether any such change could be carried out before/after Project Nexus. FC added that at this stage nothing could be done for gas year 2013/14, but it might be possible for 2014/15. SB added that Project Nexus should not constrain what the answer should be and what is a good idea to implement.

MJ asked about impacts on transportation and distribution charges, and JL confirmed that this area would require review. SOQ is the main driver, so it was likely that charges would be impacted if the balance were to be changed. RM added that National Grid Distribution had looked at changing charging bands for different charging functions, and it was recognised that introducing new bands would create a lot of work to review and assess potential implications.

SB observed that it was best to wait and see what the answers were to assess whether anything needed to be done; the best and most appropriate solution can then be pursued.

E.ON

SB explained her assumptions and suggestions in more detail. Linear programming and the use of different profiles, eg customers who use/do not use gas for space heating, to produce different analysis was briefly discussed. SB explained how such analysis might be approached. FC believed that this might require data relating to the daily demand pattern across the population to assess this. The domestic and I&C flag is virtually completely populated (although there was no guarantee of accuracy) so this information was now available.

SB suggested targeting read performance or considering incentives to enable charging to better reflect customer's use.

Referring back to the sample, FC observed that this was already dependent on the framework that is in place; the focus of the sample management had been directed to attracting and including sites that would sit within the middle of the Bands and therefore be less subject to 'falling out'.

SB commented that fewer EUCs might be required at the upper end (less sites/data available the higher the Band).

Next Steps

The analysis required was discussed. SB suggested considering reviewing the actual break points of the Bands, rather than arbitrary division (a break point would not then be expected at 73,200). Full 'bottom up' linear programming was not expected.

FC indicated that Xoserve might try to do a Stage 1 'top down' approach, and tests were discussed, eg Indicative Load Factor (ILF).

SB suggested that some measure of the variance from the average of a group should be looked at, eg standard deviation.

Bucket EUCs were discussed; FC expressed concern that this could be misleading when splitting boundaries, referring to the example of Band 5, within which WAR Bands vary, and questioned if these should be ignored. SB indicated that she was expecting to look at the annual shape. JL suggested looking at proportions per month. ZL suggested looking at total populations first; JL observed that it assumes that the population is fairly representative.

BF summarised that Xoserve will consider what is required and commence appropriate analysis, in light of these responses and discussions.

Closed

3.   **Project Nexus – New Allocation Algorithm**

   3.1 Updates on Options A and C

   3.1.1 Option C (British Gas)

Presenting the results of the regression analysis performed, CI explained the modelling carried out for each EUC (WM LDZ). Summer was construed as June – September, and winter as October – May.

Initial In-Sample results were displayed Band by Band and discussed.

EUC1 – It was noticed that there was a huge improvement in the shape of the graphs. The biggest influencing factor was the CWV, ameliorated by other factors.

EUC2 – SB commented that this was still reasonably good.

EUC3 – Referring to the treatment of Bank Holidays, FC suggested that the binary approach would be good. A poor fit was noted for this Band. FC observed that it had overcompensated for the factors in the model.

EUCs 4 and 5 – An acceptable fit was noted.

EUC 6 – Bank Holidays and how they had been accommodated was briefly discussed.

EUCs 7, 8 and 9 - An acceptable fit was noted.

At this stage FC commented that a relatively good fit had been demonstrated so far.

Out-of-Sample results were then displayed Band by Band and discussed. CI believed that the Out-of-Sample demonstrated quite a bad fit. It was suggested the reason for this is that the regression parameters should be normalised first to reflect 1 unit of kwh which can then be applied to any dataset in the Out-of-Sample analysis.. FC suggested that it could become a forecast vehicle for nominations.

MP drew attention to the information provided in a spreadsheet previously circulated by Xoserve (on 16 October 2012). This contained the out-of-sample data for gas year 2009/10 that all model options should be tested against in order that results are comparable. MP suggested that CI should utilise and apply this to expand and possibly improve the analysis, and to enable better comparison with Options A and E.

SB observed that missing AQ changes might contribute to differences between the In-Sample and Out-of-Sample results; correcting for AQs moving downwards may make a difference to the present 'over statement'. It was suggested improvement might also be seen if the variables were made against more than one LDZ.

ZL added that each LDZ would have different factors; analysis was being considered for each LDZ.

CI concluded that the level of accuracy could be improved by moving to winter and summer modelling for ALPs and DAFs.

3.1.2 Option A (E.ON UK)

SB presented results for Option A, explaining that she had nothing to compare with at an EUC level for accuracy. It was noted that the MAPE was 6.4% over the year (worse in April and October).   She indicated that there was no way at present of doing an In-Sample/Out-of-Sample as produced by CI for Option C.

MP believed that a secondary sample would be required to take this forward. JL suggested a separate sample dataset could be derived from the existing NDM sample – utilising two thirds for the equation, and one third for testing it. Xoserve could provide this to SB for this purpose if necessary.

FC observed that Options E and C were using in-sample data to predict out of sample values – could the same be done for Option A? There was a brief discussion on how this might be taken forward to reach a comparative position across all options. It was suggested that SB might use E.ON's Smart Meter population data to derive the EUC factors which could then be used to predict the values for the NDM sample data, however SB was not certain how complete and widespread the Smart data would be.

It was reiterated that the objective was to ascertain how well the process predicts NDM demand to support the changes to allocation, not the Scaling Factor.

British Gas and E.ON had Smart Meter data, which could be utilised in the analysis for 2009/10; however, depending on each organisation's collection and retention of data, it might be necessary to call upon other Shippers to bridge any gaps in data.

LG confirmed that she would ask if Smart Metering data was available for southern LDZs, as their sample may be wider than other suppliers in these areas.

3.1.3 Option E (Xoserve)

MP confirmed that Xoserve had completed the 2009/10 analysis and the results had been published. The data for 2009/10 had also been shared with TWG in order to test the various options against it. There would be a need to complete the analysis for three years, including 2010/11 and 2011/12. The datasets were under preparation now and should be provided to the TWG soon. Whichever option came out best for 2009/10 should be tested on these additional years to check the same option repeats its success.

MP explained what Xoserve was doing for each Band and having sought their views on dealing with the split of domestic and non-domestic in Bands 01B and 02B, the group agreed that the same approach should be carried on for the following years, i.e. to maintain the maximum sample data, even if it did not match the total population in its I&C/Domestic split.

It was suggested that E.ON and British Gas advise Xoserve where they have reasonable samples of Smart Meter data so that appropriate specific LDZs could be focused on.

FC pointed out that a holistic approach would be welcomed, and that interactions with other factors should be noted, eg LFs, together with views on ease of use, etc.

3.2 Plan to complete the Analysis – update for PN UNC Workgroup

BF asked the group to consider and agree next steps, and a discussion ensued.

MP pointed out that analysis was still required relating to more recent gas years.

SB suggested including a full set of parameters for Option C, rather than excluding those deemed to be insignificant.

FC suggested looking at 3 year smoothing to see how that compares, however SB believed that might not be required.

MP suggested that further discussion was needed to understand how this interacts with/applies to Load Factor calculations and AQs, and there was a brief discussion relating to how factors would feed into the formula and the calculation.

Referring to the spreadsheet information previously mentioned by MP, CI intended to correct for Out-of-Sample AQs, review the results, address any further improvements that could be made, and present any appropriate revisions to the next meeting.

Action DTW1101: Revise analyses for Options A and C and present to next meeting (05 December 2012), and advise Xoserve where reasonable samples of Smart Meter data are held so that appropriate specific LDZs can be focused on.

BF then reminded the group that DESC must provide a response to the PN UNC Workgroup.

It was the view of prominent members of the DESC Technical Workgroup that the algorithm does not need to be reflected in the UNC. It was agreed this recommendation would be made to the DESC for communication to the PN UNC Workgroup.

4.   Draft Spring Approach to Modelling 2013

MP gave a presentation drawing attention to the publication of the draft modelling approach document published at: www.gasgovernance.co.uk/desc/201112

The timeline for decision-making had been included at the end of the document. MP would welcome suggestions if there was any additional information required that Shippers would find helpful.

MP encouraged those present to review the document and submit comments/views to Xoserve by the end of 2012 with the intention for TWG to provide a recommendation to DESC in time for the February meeting

5.   Technical Workgroup (TWG) Work Planning

Covered in previous discussions above.

6. Any Other Business

6.1 Closure and Replacement of Edgbaston Weather Station

Noting that the closure of Edgbaston weather station was imminent, CI asked who would publish (and where) the new/replacement CWV.

FC confirmed that Xoserve was liaising with National Grid; analysis was being done on alternatives to achieve the best forecast for demand/good nominations, and a replacement would be instated for the West Midlands area. The feeds would be switched a few days before 01 December 2012.

Unfortunately there has been very little notice given of this impending closure; DESC may eventually decide on a different solution/weather station in the New Year and restate some CWVs. ZL expressed concern at restatement 'after the event'. FC explained in more detail. If a different weather station was used it will be reconfigured.

FC will keep DESC updated with any changes/restatements required. The eventual decision on which weather station to use for CWV in WM would be made by DESC. She intended to ascertain the National Grid contact responsible for CWV and forecasts and appraise them of Shippers' concerns and the importance of being kept informed.

7. Diary Planning

Please see Table below for planned meeting dates and provisional programme for 2013.

7.1 DESC Meetings

The next DESC meeting will take place at 10:30 on 11 February 2013, at the Energy Networks Association (ENA), Dean Bradley House, 52 Horseferry Road, London SW1P 2AF.

7.2 DESC Technical Workgroup Meetings

DESC Technical Workgroup meetings are held on a monthly basis, and arrangements have been made accordingly (see Table below).

The next DESC Technical Workgroup meeting will take place at 10:30 on Wednesday 05 December 2012, at 31 Homer Road, Solihull B91 3LT; teleconference arrangements for this meeting can be made on request.

DESC and DESC Technical Workgroup Meetings 2012 - 2013

Date	Time	Venue	Meeting	Programme
Wednesday 05 December 2012	10:30	31 Homer Road, Solihull B91 3LT	DESC TWG	Options A, C and E: Presentation of analysis/results.
Monday 14 January 2013	10:30	31 Homer Road, Solihull B91 3LT	DESC TWG	TBC
Monday 28 January 2013	09:30	Teleconference	DESC TWG	TBC
Monday 11	10:30	Energy Networks	DESC	- Evaluation of Algorithm Performance: Strands 2 &

February 2013		Association (ENA), Dean Bradley House, 52 Horseferry Road, London SW1P 2AF		3 - RV & NDM Sample data - TWG recommendation for Spring 2013 Approach.
Wednesday 24 April 2013	09:30	Teleconference	DESC TWG	Confirm NDM modelling runs to take forward based on data aggregations and WAR band definitions.
Wednesday 22 May 2013	10:30	31 Homer Road, Solihull B91 3LT	DESC TWG	Review single year modelling results and provide approval to commence model smoothing stage.
Wednesday 26 June 2013	09:30	Teleconference	DESC TWG	Review all responses to draft NDM proposals and agree key messages for DESC.
Wednesday 10 July 2013	10:30	31 Homer Road, Solihull B91 3LT	DESC	Review and Approval of 2013/14 NDM Algorithms as recommended by TWG. To discuss NDM proposals review and NDM report seeking approval to prepare publication for wider industry.
Wednesday 31 July 2013	09:30	Teleconference	DESC	(If required) Review industry representations to 2013/14 NDM algorithms and consider response.
Wednesday 13 November 2013	10:30	Energy Networks Association (ENA), Dean Bradley House, 52 Horseferry Road, London SW1P 2AF	DESC	- Evaluation of Algorithm Performance: Strand 1 - SF & WCF - Re-Evaluation of Model Smoothing methodology.

Action Log: Demand Estimation Sub-committee

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DE0404	04/04/12	7.0	*Minimising Losses of Xoserve AMR Equipment* – DESC members to establish appropriate contacts and provide a view on the procurement of non-Transporter data for samples as permitted under Modification 0258A.	DESC	Closed

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DE0404A	11/07/12	2.2	*Minimising Losses of Xoserve AMR Equipment* – Transporters to confirm how any data gathered by Shippers should be provided and any minimum requirements (samples, details, formats, etc).	Transporters	Closed
DE1001	18/10/12	2.0	JF to seek formal confirmation from the Transporters that they were happy for the tender process to proceed without delay.	Northern Gas Networks (JF)	Closed
DE1101	07/11/12	7.2	Members to consider the Phase 2 requirements and provide their views to Xoserve.	All	Pending
DE1102	07/11/12	8.0	Provide a deadline date for including the new algorithm within legal text for Modification 0432.	National Grid Distribution (CW)	Pending
DE1103	07/11/12	8.0	Seek legal advice as to whether it is possible to publish the new algorithm in a document referenced by UNC.	National Grid Distribution (CW)	Pending
DE1104	07/11/12	8.0	DESC to request that the DESC TWG provide a recommendation for the new algorithm as soon as possible.	DESC (BF)	Pending

Action Log: Demand Estimation Sub-committee – Technical Work Group

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DTW0801	15/08/12	3.0	Complete analysis for options A, C and E by ~~the end of September.~~ 09 November 2012.	CI, MR, SB and Xoserve	Closed
DTW0803	15/08/12	4.2	*Ref No 2: Review of appropriateness of current EUC definitions for Small and Large NDMs* – Consider different approaches and submit suggestions/ preferences to Xoserve by 31 August 2012.	ALL	Closed

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DTW1101	20/11/12	3.2	Revise analyses for Options A and C and present to next meeting (05 December 2012), and advise Xoserve where reasonable samples of Smart Meter data are held so that appropriate specific LDZs can be focused on.	British Gas (CI) and E.ON (SB)	Pending