UNC Demand Estimation Sub-committee Technical Workgroup Minutes

Tuesday 17 November 2015

31 Homer Road, Solihull B91 3LT

Attendees

Helen Cuin (Chair)	(HC)	Joint Office
Karen Visgarda (Secretary)	(KV)	Joint Office
Christian Ivaha	(CI)	British Gas (Representative)
Colin Thomson*	(CT)	Scotia Gas Networks (Representative)
Fiona Cottam	(FC)	Xoserve
Fiona Speak	(FS)	RWE npower
Jason Blackmore*	(JB)	British Gas
Joe Lloyd	(JL)	Xoserve
Lucy Manning	(LM)	Gazprom
Mandeep Pangli	(MPa)	Xoserve
Mark Perry	(MP)	Xoserve
Martin Attwood	(MA)	Xoserve
Rob Nickerson	(RN)	National Grid NTS (Representative)
Sallyann Blackett	(SB)	E.ON UK (Representative)
Tim Wong	(TW)	British Gas (Alternate)
Tony Davey	(TD)	SSE (Representative)

via teleconference

Copies of papers are available at: http://www.gasgovernance.co.uk/DESC/171115

1. **Introduction**

   1.1. **Apologies for absence**

   Chris Warner and Richard Pomroy

   1.2. **Note of Alternates**

   Fiona Cottam (Xoserve) for Transporters, National Grid Distribution and Wales & West Utilities.

2. **Review of Minutes and Actions from previous meeting (16 September 2015)**

   2.1. **Approval Minutes**

   The Minutes of the previous meeting were approved.

   2.2. **Actions (DESC TWG)**

   DTW0502: DESC and Xoserve to work together to look at ways to enhance the current data sets with a target to have additional data for October.
   Update: See item 4.0 – Results of Shipper sample data validation. **Closed**

   DTW1201 (related to DTW0502 above): FC to prepare an email for circulation to the industry inviting parties to support DESC Technical Workgroup analysis and data sets *(see Action DTW0502, above)*, if the use of Shipper data in the autumn validation exercise is a success.
   Update: See item 4.0 – Results of Shipper sample data validation. FC confirmed an email would need to be issued. **Carried Forward.**

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DTW0901: Xoserve to normalise the Shipper validation data using the ALP formula applied to demand.
Update: See item 4.0 – Results of Shipper sample data validation. **Closed.**

3.   **Re-evaluation of Model Smoothing Methodology**

MP provided a supporting paper (DESC TWG Model Smoothing Investigative Analysis) and a presentation (DESC TWG - Model Smoothing Evaluation) to review the results, look at the model smoothing methodology and provide a recommendation to DESC. He explained the supporting paper provided greater clarity regarding the investigative analysis. *(DESC Model Smoothing Review Autumn15).*

MP explained that the model smoothing approach was first undertaken in 1999/2000 and had been applied to all subsequent years based on the methodology detailed in the Spring Approach document. He went on to explain that the analysis being discussed in the meeting was the first full assessment of the model smoothing since Autumn 2013. MP then provided the DESC TWG – Model Smoothing Evaluation presentation summarising the model smoothing process and its principles, along with an explanation of the type of analysis performed which aims to assess if there has been reduced year-on-year volatility, together with investigating the predictability and trend analysis.

The volatility analysis compared results of the single year CWV intercept differences assessment with the equivalent results for the smoothed model results in order to illustrate the extent of year-on-year change between the two approaches. The aim being to assess which model type produces the smallest year on year differences.

The Technical Workgroup considered the CWV intercepts in relation to the volatility assessment, together with each of the analysis of Small NDM – all EUC bands; Small NDM – consumption bands; Large NDM – all EUC bands; Large NDM – consumption bands. MP explained that the smoothing approach appeared to be the better model in terms of reduced volatility. MP then provided an assessment of the 'predictability' for each approach.

MP explained that the predictability assessment used the same data in the Single Year Model Testing using 2013/2014 and 2014/2015 for the analysis of Small NDM - all EUC bands; Small NDM – consumption bands; Large NDM – all EUC bands; Large NDM – consumption bands. He said the assessment approach was the same with a similar spread overall. There was no evidence that the Single Year Model Test was any more accurate regarding predictability.

The results of the analysis looking into trends within the CWV intercepts were considered over 3 and 4 years. General discussion took place regarding the impact of the weather fluctuations specifically over the last few years, concerning the mild Winter weather.

The load factor trends were also considered to identify any trends occurring in the Load Factors for the individual year models. MP concluded that the analysis did not show evidence of trends in either the CWV intercepts or Load Factors.

MP confirmed the results indicated the current methodology of using model smoothing over 3 years does reduce volatility and is therefore fit for purpose.

The Workgroup agreed with this conclusion and recommended the continued use of the 3 Year model smoothing for Spring 2016, Spring 2017 and Spring 2018. The additional year of Spring 2018 was suggested because it was felt that a further review of model smoothing in Autumn 2017 maybe unnecessary after just one year of the new regime. A checkpoint will be added when reviewing the work plan in the Summer of 2017 in case it is felt that a review of the model smoothing methodology was desired in Autumn 2017, ahead of the Spring 2018 analysis

4.   **Results of Shipper sample data validation**

MPa explained that the NDM sample data numbers have been decreasing over time,

but that the UNC allows transporters to acquire NDM sample data from third parties (i.e. smart metered data). Action DWT0502, was established to allow analysis to be undertaken to review the suitability of the additional data and to determine whether it would be possible to use it as part of the sample data.

MPa gave an overview of the data sets and confirmed that the British Gas data (date range April 2014 – March 2015) had to be aggregated and normalised at an LDZ level, and that the validation rules had had to be relaxed to allow for the British Gas data to pass validation. MPa explained that the existing rule is to reject those MPRNs from the analysis if they have 15 or more days missing data over the Summer. This threshold had to be increased to 40 days, as none of the British Gas data would have passed validation otherwise. The analysis breakdown was AMR = 2,835 MPRNs and British Gas = 2,749 MPRNs. The Workgroup considered the results; MPa concluded that the results looked acceptable using normalised data.

MPa gave an overview of the data sets for E.ON and the process that was followed. The Workgroup considered the results, MPa confirmed that the results for the F-test and the T-test for North East (NE) indicated that when using the normalised demand, E.ON and Data Logger demands had equal variances and their means were not statistically different from one another. For South East (SE) the results from the F and T tests indicate that when using the normalised demand, E.ON and Data Logger demands have unequal variances, but their means were not statistically different from one another.

MPa concluded that Xoserve can utilise third party supplied NDM sample data providing that; the data is provided in an agreed format; the data is provided on a frequent basis (preferably monthly) and any missing consumption is minimised.

The Workgroup representatives views were sought on the possible inclusion of third party NDM sample data for use in future data modelling.

The representatives agreed with the conceptual use of Shipper data.

The Workgroup considered using the data consistently where sites remain in a Shippers ownership. A question was asked regarding the 'gap filling' process, if all the data was not available. MA explained that if there was a gap the data was then drawn from the week before or the week after and was then weather corrected to fill the gap. FC commented that the work that Xoserve was presenting was a 'Proof of Concept' to assess how the data behaves, prior to adding any of it to the NDM sample.

SB suggested obtaining other Shippers' data to gain a broader and un-biased view. FC confirmed that would be possible to include other Shippers' data, if the data was from 01 April 2015 and explained if that data passed validation then only the previous year's data would be required. TW then proposed he would supply a re-cut of the British Gas data that was now available for Xoserve to re-run the analysis.

FC acknowledged an email would need to be issued to the industry to request additional NDM data for the sample, outlining the requirement and the acceptance criteria. It was agreed to close actions DTW0502 and DTW0901 and carry forward action DTW1201.

5. **LDZ Data aggregation**

JL provided a presentation with an assessment of Sample numbers as at October 2015. This followed on from the September TWG meeting where the Workgroup concluded it would be best to reconsider the data aggregations at the November TWG after this work had been undertaken.

JL provided a set of slides updating the sample numbers for Autumn 2015 compared to Spring 2015, which indicated that the sample numbers were higher especially in the lower bands, boosting the sample size with the exception with band 1. This was caused by the de-aggregation of supply points under Modification 0428.

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The review of aggregations had initially been prompted by War band 4 for LDZ NO in consumption band 3&4, which only had a sample size of 18. The revised figures showed the number of sample points had now risen to 38, which is more than our preferred minimum sample size of 30.

SB suggested there might still be a problem with the split of WAR bands as the WAR band ranges would need to be revised, however JL confirmed he did rework the WAR band range and it showed the sample numbers were still sufficient, and he was confident a change in WAR bands would not require a change in the aggregations. The de-aggregations (under Modification 0428) had bolstered the sample sizes and at this stage Xoserve would recommend that no changes were made to the existing aggregations for the Spring 2016 analysis The Workgroup agreed with the recommendations. – no changes.

6.   Spring Approach 2016

MP provided a presentation explaining the background and the requirements for the Spring Approach 2016. MP confirmed on 01 October 2016 the NDM Algorithm formula for which DESC are responsible for providing factors, would change.

MP confirmed that the Daily Adjustment Factors (DAF) for Gas Year 2016/17 would no longer require the computations from an aggregate NDM demand model.

MP sought views from the representatives on Xoserve's proposal to make the approaches consistent for Load Factors by using simulation for both Small and Large NDM, thus providing a more thorough and EUC specific result for Large NDM Peak Day Demand going forward. The Workgroup agreed that the proposal should be included in the Spring Approach and communicated to the appropriate forums that this was being considered.

MP explained that in terms of the reporting output Xoserve had identified a number of efficiencies, and that the NDM Report and Supporting Files were still being proposed. He confirmed the NDM Report would still summarise the process and contain a set of parameters from the smoothed model, which would be provided in an electronic form. He also stated that the performance evaluation summary (Appendix 13) would still reflect the review of the algorithm performance for Gas Year 2014/15 using the NDM sample data, due to be reported at the February DESC meeting.

Before the end of the year Xoserve will publish the first draft of the Spring 2016 Approach document and representatives will be invited to comment.

7.   Proposed changes to NDM report

MP provided a background to the consultation and the content, explaining that the following information would be supplied:- Proposed EUC definitions and Demand models; Values of the Derived Factors and Performance of the Demand models in the preceding year. MP suggested that having considered the output, Xoserve had come up with a set of proposals and welcomed feedback from the representatives.

MP provided a breakdown of the proposed changes to the Appendices provided on the NDM Algorithm booklet and the supporting files.

The representatives supported the proposals presented.

8.   Any Other Business

8.1.   DESC TWG Representations

Fiona Speak, RWE npower nominated herself as an additional DESC TWG Representative.

9.   Diary Planning

Further details of planned meetings are available at: www.gasgovernance.co.uk/Diary

DESC and DESC Technical Workgroup Meetings 2015

Time/Date	Venue	Meeting	Programme
10:00 16 February 2016	31 Homer Road	**DESC**	Evaluation of Algorithm Performance: NDM Sample data TWG recommendation for Spring 2016 Approach
10:00 26 April 2016	Teleconference	**DESC TWG**	Discuss and confirm modelling runs to take forward based on data aggregations and WAR band definitions
10:00 17 May 2016	Solihull	**DESC TWG**	Review single year modelling results and provide approval to commence model smoothing stage
10.00 22 June 2016	Solihull	**DESC TWG**	Review Technical Workgroup responses to draft proposals and agree key messages for DESC
10.00 06 July 2016	Solihull	**DESC**	Review and Approval of 2016/2017 NDM Algorithms as recommended by the Technical Workgroup
10.00 26 July 2016	Solihull	**DESC**	Response to industry representations on 2016/2017 NDM Algorithms Review of Autumn/Winter ad hoc Work Plan 2016/2017
10.00 15 November 2016	Solihull	**DESC**	Evaluation of Algorithm Performance NDM Sample Update

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DESC TWG Action Table (17 November 2015)					
Action Ref	**Meeting Date(s)**	**Minute Ref**	**Action**	**Owner**	**Status Update**
DTW0502 *(transferred to DESC TWG)*	21/05/14	DESC TWG 3.0	DESC and Xoserve to work together to look at ways to enhance the current data sets with a target to have additional data for October.	All	**Closed**
DTW1201 *(transferred to DESC TWG)*	03/12/14	DESC 2.2	FC to prepare an email for circulation to the industry inviting parties to support DESC Technical Workgroup analysis and data sets.	Xoserve (FC)	**Carried forward**
DTW0901	16/09/15	DESC TWG 3.0	Xoserve to normalise the Shipper validation data using the ALP formula applied to demand.	Xoserve (MP)	**Closed**

DESC Action Table (17 November 2015)					
Action Ref	**Action Ref**	**Action Ref**	**Action Ref**	**Action Ref**	**Action Ref**
DE0501	19/05/15	DESC 3.0	FC to investigate with National Grid NTS adding the Unidentified Gas values on to the National Grid Operational Data Website.	Xoserve (FC)	**Carried forward**
UNCC0902	17/09/15	139.5	All UNCC Sub-Committees to review their Terms of Reference to ensure they are delivering an annual report to the UNCC.	All	**Closed**