

UNC Demand Estimation Sub-committee Minutes
Wednesday 11 June 2014
via teleconference

Attendees

Helen Cuin (Chair)	(HC)	Joint Office
Lorna Dupont (Secretary)	(LD)	Joint Office
Ceirán Sheehan	(CS)	Total Gas & Power
Edward Pope	(EP)	Met Office
Fiona Cottam	(FC)	Xoserve
Indre DeksnYTE	(ID)	Northern Gas Networks
James Hanks	(JH)	EDF Energy
Jamie Richards	(JR)	British Gas
Kate Brown	(KB)	Met Office
Mandeep Pangli	(MPa)	Xoserve
Martin Attwood	MA	Xoserve
Mo Rezvani	(MR)	SSE
Richard Bennett	(RB)	Met Office
Sarah Bristow	(SB)	EDF Energy
Timothy Wong	(TW)	British Gas
Zoe Ireland	(ZI)	British Gas

Copies of papers are available at: <http://www.gasgovernance.co.uk/DESC/110614>

1. Introduction

The meeting was declared quorate.

2. Confirmation of membership and apologies for absence**2.1. Apologies for absence**

C Thomson (Scotia Gas Networks), C Warner (National Grid Distribution) and S Blackett (E.ON UK).

2.2. Note of Alternates

FC (Xoserve) for C Warner (National Grid Distribution) and C Thomson (Scotia Gas Networks).

3. Review of Minutes from previous meeting (25 March 2014)**3.1. Minutes**

The minutes from the previous meeting were approved.

3.2. Actions

The review of outstanding actions was deferred until the next meeting on 25 June 2014.

DE0202: All parties to suggest different ways that the EUC Banding might be split, based on consumption levels or customer attributes.

Update: Update deferred until 25 June 2014. **Carried Forward**

Action DE0204: All parties to look to provide evidence suitable to support Xoserve in completing the analysis for Action DE0203.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE0301: *Climate Change Methodology (Phase 2)* - Confirm output delivery dates.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE0302: *UNC Modification 0451AV* - Xoserve (FC) to review whether daily data could be obtained from any Shippers submitting lists of Smart meters in Prepayment mode, on which to base a profile.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE0303: *UNC Modification 0451AV* - As soon as possible, Shippers to provide Xoserve with at least 12 - 18 months of Pre Payment data (to cover 2 winters - If 3 years' data is available that would be preferred) including prevailing AQs to assist building a profile.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE0304: *Changes to Gas Day - Impacts (Weather Data)* - SB to produce and analyse a mix of data to demonstrate how a new set of weightings might improve fit to demand, i.e. perform a regression analysis of daily consumption against two-hourly temperature and four-hourly windspeed.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE0305: *Changes to Gas Day - Impacts (Weather Data)* – Xoserve to explore with the Transporters what they are intending to do with their timings, e.g. forecasting, and whether they are staying on 'odd' hours.

Update: Update deferred until 25 June 2014. **Carried Forward**

DE306: *Changes to Gas Day- Impacts (Sample Data)* – Xoserve to discuss the datalogger position with the Transporters.

Update: Update deferred until 25 June 2014. **Carried Forward**

4. Review Climate Change Data Sets

FC outlined the background to the obligations introduced by Modification 0330, and the service that the Met Office was appointed to deliver with support from a stakeholder group convened for the purpose. The methodology had been signed off by DESC on 25 March 2014; datasets had been prepared that had included 5 data items.

Draft datasets were published last Tuesday, and FC explained that the aim of this meeting was to discuss and review any feedback on the datasets, with the Met Office being available to respond to any questions or concerns, and with the intention of obtaining 'sign off' at the next meeting on 25 June 2014.

MR had previously enquired about the Hawarden weather station data; there was no Weather Station Methodology dataset for this weather station, so it would need to be created prior to the Climate Change calculations taking place, and it was noted that data for the Hawarden weather station was still being worked on.

JR enquired about the use of data and how some of the data looks; he had been keen to compare this with EP2 data, but had found it not to be capable of comparison in its current guise. He would like to turn the forecast into a "normal" for each of the gas years 2015 to 2025 to be able to make a comparison. What would be the recommended method for calculating this?

FC clarified that the datasets are a projection, not a forecast; and the Met Office has not been asked to advise on development of Seasonal Normal, as it is not within its area of expertise, as it does not have experience of the relationship to gas demand. The Met Office output was designed to be used in the calculation of a single consistent value for Seasonal Normal (SN) for use over a period of years. The pattern over the next 5-10 years will be reviewed by DESC to determine which year(s) to use to calculate increments for temperature to apply back into the weather history. SN has always been the average

of a good long run of years.

EP pointed out that the EP2 projections were smoothed a lot more; and that the unsmoothed CCM projections provide a lot more information than smoothed in relation to the natural variability. MR explained why he believed EP2 and the forecast was the same. FC indicated that the outcomes of a Seasonal Normal CWV derived from this dataset could be reviewed later in the process to see if any smoothing was required.

FC gave a further explanation comparing the development of the EP2 predictions to the Climate Change Methodology dataset. EP2 data was used in much the same way as is planned for the climate change data. It is very difficult to validate data without understanding what it is going to be used for, or going on to the next phase. The Met Office is not expert on gas demand – DESC as a group must determine how the dataset is used in Seasonal Normal.

When asked about timelines, FC referred to CWV optimisation taking place and indicated it would probably be autumn time before the first indications of a new SN basis were available.

Receiving a question about the use of data, FC drew attention to slide 5 of the published presentation regarding adjusted history. Future trends would be looked at, and it would then be decided which additional set of increments to apply to the history. FC explained what might be done, observing that these slides were a reference point that DESC can return to; this is a DESC process and continues to evolve. Following MR's suggestion that Xoserve consider the delivering the presentation at the next meeting, FC will update it and it will be republished.

SB reported that she had been validating some of the data and had noted that some of the solar radiation files seem to have non zero values (overnight, mostly in the summer). EP agreed that this was incorrect and stated that the Met Office was looking at this, directing SB to the Phase 2 Report and bias correction procedures. He went on to explain that the climate models do not often provide the exact magnitude of a variable; the properties are somehow shifted and the Met Office use a bias correction technique to ensure projections are in line historically; he described how this transformation was done. Solar radiation is a particularly difficult variable and there is no bias correction procedure with which the Met Office is 100% happy. The only variable that the Met Office could confidently identify a climate change signal for was temperature. EP advised that it was best and safest to use the historic observations for the other variables rather than the projections, and suggested that SB look at the report (Phase 2) for a time series of increments. Solar radiation is dependent on factors like cloud cover and humidity, and with a limited understanding of cloud formation/properties it is one of the biggest uncertainties in the current understanding of climate, and climate models struggle to accommodate this.

FC added that if trying to build model of expectations for solar radiation it may be better to use history rather than predictions, however it was not of great concern to Xoserve in its current processes, as solar radiation is not part of the models.

There was no evidence for a climate change signal for wind speed. There was a small amount of evidence in relation to precipitation, but no certainty. Temperature records were much longer and provided better evidence. JR indicated that he had consulted various other experts and their views seemed to agree at the single site level; there was not enough evidence to point to climate change signals in relation to anything else.

The discussion moved on to considering Summer/Winter temperature differences and that projections show more expected warming in winter months than summer. JR had been looking at Heathrow weather station and explained the figures he had obtained in more detail, observing there was three times more warming than had previously been seen within the EP2 data. This seemed to be at variance with the Met Office data. EP explained which periods he had reviewed, observing that minimum temperatures were warming faster than maximum temperatures, and this was consistent. EP explained his figures; it could be argued that any trend is 'statistical noise' rather than anything

concrete. JR then enquired which months of the year the Met Office would predict the most/least warming.

EP explained the approach taken using an ensemble of models, which outperforms a single model approach (variants of which single model do not do everything). Using multi models (global) is better and gives a higher spatial resolution than in EP2. Since EP2 there has been great improvement in modelling and in climate science understanding. It is expected there would be some differences.

EP agreed to reassess the Heathrow data and JR's figures and analyse the new projections and report back.

Action 0601: Climate Change Datasets - Met Office to examine the Heathrow data and winter warming trends.

ZI enquired what data would be used for wind speed in the Seasonal Normal calculations FC responded that she thought that a long run of historic data would be used without application of any incrementing, but this was to be confirmed as part of DESC's decision-making process.

JH enquired about the base year of 2017/2018 and if there was any more detail on the process for deriving Seasonal Normal. FC explained how the uplift would be managed for the target period.

JR enquired when the underlying model was actually run. EP described the models used in 2007 and 2008 and more recently. They would not have been available to inform EP2. Others available to this project were run between 2007 and 2011. The models can take months or years to complete their runs. Climate experiments are then devised and models are re-run; assessment is carried out around every 5 years. The next generation is currently under planning. Any future model updates should take account of the next generation and any experiments run. There were 20-30 models devised by different global climate centres, all using different but equally valid ways; model runs would have been completed at different times but with a deadline of 2011. The analysis and validation is carried out and comparisons made to give confidence in projections – it was a very complex process.

5. Any Other Business

None raised.

6. Diary Planning

DESC and DESC Technical Workgroup Meetings 2014

Meetings will take place as follows.

Time/Date	Venue	Meeting	Programme
10:30 Wednesday 25 June 2014	31 Homer Road, Solihull B91 3LT	DESC DESC TWG	Approve Climate Change Data Sets 0451AV Draft Profile Review responses to draft NDM proposals and agree key messages for DESC. Review responses to the E.ON within-day shape analysis
10:30 Wednesday 09 July 2014	31 Homer Road, Solihull B91 3LT	DESC	Review and approval of 2014/15 NDM Algorithms
10:30	Teleconference	DESC	Review representations (if any) and

Wednesday 30 July 2014			consider response 0451AV Draft Profile
10:30 Monday 18 August 2014	31 Homer Road, Solihull B91 3LT	DESC	<i>Provisional meeting – to be confirmed</i>
10:30 Monday 22 September 2014	31 Homer Road, Solihull B91 3LT	DESC	<i>Provisional meeting – to be confirmed</i>
10:30 Wednesday 12 November 2014	Energy Networks Association (ENA), 6 th Floor, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF	DESC	Evaluation of Algorithm Performance: Strand 1 – SF and WCF

Action Table: Demand Estimation Sub-committee

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DE0202	12/02/14	5.	All parties to suggest different ways that the EUC Banding might be split, based on consumption levels or customer attributes.	All	Carried forward
DE0204	12/02/14	6.1	All parties to look to provide evidence suitable to support Xoserve in completing the analysis for action DE0203.	All	Carried forward
DE0301	25/03/14	4.	<i>Climate Change Methodology (Phase 2)</i> - Confirm output delivery dates.	Xoserve (FC)	Carried forward
DE0302	25/03/14	5.	<i>UNC Modification 0451AV</i> - Xoserve (FC) to review whether daily data could be obtained from any Shippers submitting lists of Smart meters in Prepayment mode, on which to base a profile.	Xoserve (FC)	Carried forward
DE0303	25/03/14	5.	<i>UNC Modification 0451AV</i> - As soon as possible, Shippers to provide Xoserve with at least 12 - 18 months of Pre Payment data (to cover 2 winters - If 3 years' data is available that would be preferred) including prevailing AQs to assist building a profile;	Shippers	Carried forward
DE0304	25/03/14	6.	<i>Changes to Gas Day - Impacts (Weather Data)</i> - SB to produce and analyse a mix of data to demonstrate how a new set of weightings might slot in, i.e. hourly demand and temperature, weight the hours, regression analysis, etc	E.ON (SB)	Carried forward

Action Ref	Meeting Date(s)	Minute Ref	Action	Owner	Status Update
DE0305	25/03/14	6.	<i>Changes to Gas Day - Impacts (Weather Data)</i> – Xoserve to explore with the Transporters what they are intending to do with their timings, e.g. forecasting, and whether they are staying on ‘odd’ hours.	Xoserve and Transporters	Carried forward
DE0306	25/03/14	6.	<i>Changes to Gas Day - Impacts (Sample Data)</i> – Xoserve to discuss the datalogger position with the Transporters.	Xoserve and Transporters	Carried forward
DE0601	11/06/14	4.	<i>Climate Change Datasets</i> - Met Office to examine the Heathrow data and winter warming trends.	Met Office (EP)	Pending