

Demand Estimation Sub-Committee Minutes
Monday 06 July 2020
Via Microsoft Teams

Attendees		
Lorraine O'Shaughnessy (Chair)	(LOS)	Joint Office
Helen Bennett (Secretary)	(HB)	Joint Office
Shipper Members		
John Jones	(JJ)	ScottishPower
Louise Hellyar	(LH)	Total Gas & Power
Mark Jones	(MJ)	SSE
Sarah Palmer	(SP)	E.ON (Alternate for Anupa Purewal)
Zoe Ireland	(ZI)	British Gas
Transporter Members		
Emma Buckton	(EB)	Northern Gas Networks
Sanjeev Loi	(SL)	Cadent
Smitha Coughlan	(SC)	Wales & West Utilities
Observers		
Mark Perry	(MP)	Xoserve +Alternate for David Mitchell
Martin Attwood	(MA)	Xoserve
Simon Bissett	(SB)	Xoserve
Jason Blackmore	(JB)	Gas Analytics
Simon Geddes	(SG)	National Grid ESO

Copies of papers are available at: www.gasgovernance.co.uk/desc/060720

1. Introduction and Status Review

Lorraine O'Shaughnessy (LOS) welcomed everyone to the meeting and confirmed the meeting was quorate.

1.1. Apologies for Absence

Anupa Purewal

Fiona Speake

1.2. Note of Alternates

Sarah Palmer for Anupa Purewal

Mark Perry for David Mitchell (advised during meeting)

1.3. Approval of Minutes (DESC TWG 22 May 2020)

The minutes from the previous DESC meeting were approved by the DESC members present.

1.4. Approval of Late Papers

There were no late papers to approve.

1.5. Review of Actions DESCs Outstanding

Action 0201: CDSP (MM) to provide more information and detail on the calculations in relation to AQ Ratios including the checks undertaken as part of the update on Seasonal Normal Review at the 06 July meeting.

Update: The update for this action is covered in agenda item 3.0. **Closed**

Action 0404: DESC and DESC TWG to consider and feedback to Xoserve any suggestions on the NDM Demand approach document ahead of the July DESC meetings.

Update: Mark Perry (MP) explained the requirement on DESC members to review the NDM Demand Formula every 3 years, MP provided an update on questions raised with explanations under item 3, however, this will be next discussed and finalised at the next meeting on 22 July 2020. **Carried Forward.**

Action 0501: Joint Office (AR/MBJ) to publish the paper sent by JB on formal validation checks of the Stratification approach for EUC Bands 01 and 02 as well as provide a link to it in the minutes.

Update: The document was published (29 May. JB provided an overview (See further detail provided in the Any Other Business agenda item 8). **Closed.**

2. 2020/21 NDM Algorithms

2.1. Review TWG responses and DESC Representations

MP introduced his presentation by providing a summary of the background to Gas Demand Estimation noting that there are key Industry processes that require various types of gas demand estimation at Non Daily Metered (NDM) Supply Point level. These processes include:

- Determining Supply Point Capacity
- Daily Nominations and Allocations i.e. NDM Supply Meter Point Demand Formula
- Determining Annual Quantities (AQs)

To achieve this estimation, each NDM Supply Point belongs to an End User Category (EUC). EUCs are used to categorise NDM Supply Points in an LDZ and are defined by reference to variables which are maintained in the Supply Point Register. Each EUC requires an associated Gas Demand Model which represents its gas usage characteristics e.g. weather sensitivity, consumption profile etc.

Gas Demand Models are mathematical models which provides an estimate of gas demand for each EUC by reference to variables determined by DESC.

Timescales

DESC has an obligation to produce a set of EUC's and Gas Demand Models for the next gas year which has to be delivered within certain timescales:

- The Daily Gas Consumption Data collected for analysis must include the most recent Winter period (December to March), meaning full data validation cannot start until early **April**
- The Final EUCs and Gas Demand Models must be approved and submitted to the Authority and loaded to CDSP's systems by **15 August**
- In between **April** and **August** is when the Daily Gas Consumption Data validation results are reviewed, WAR Band ratios are set, Gas Demand Models are developed and reviewed, Demand Model Smoothing is applied, draft Gas Demand Profiles are produced and reviewed, followed by an industry consultation commencing **early June**.

The above explains why it is necessary to agree modelling principles and methodologies in February each year, as there is not time in the Spring/Summer to make fundamental modelling decisions and gain agreement from all DESC members.

MP shared the high level view of the Demand Estimation Timetable for the year 2020 and highlighted the key checkpoints which are on the horizon:

- | | |
|---------------|--|
| 6 July 2020: | Gas Demand Profiles Approved for wider industry (TWG/DESC) |
| 22 July 2020: | Final Approval of Gas Demand Profiles (DESC)
Adhoc Workplan approval (DESC) |
| 15 August: | SAP-ISU and Gemini updated (CDSP) |

MP confirmed the objectives for this meeting are for:

- TWG and DESC members to consider and review all representations raised and the responses provided by the CDSP
- To gain TWG and DESC support for proposals prior to submitting for wider industry review

MP went on to confirm that the Data Aggregations and WAR Band thresholds were agreed at the 27 April 2020 meeting. The single year modelling was approved at the 22 May 2020 DESC TWG meeting and the Model Smoothing process, along with the production of the Derived Factors, were published for DESC review on 12 June 2020.

MP clarified that all work completed has been completed using the new formula of Composite Weather Variable (CWV) and Seasonal Normal Weather (SNCWV) which become effective as from 01 October 2020.

Showing the smoothed model outcomes, MP advised that 3 years' worth of models have gone into the smoothed model and that 234 Small Non Daily Metered (NDM) End User Categories (EUCs) represents approximately 88% of the NDM)AQ and 273 EUCs Large NDM represents approximately 12 % of the current NDM AQ.

MP explained that, following the publication of the Model Smoothing process and the Derived Factors, CDSP asked for feedback from DESC, the feedback received has been categorised into the following topics:

- Topic 1: Christmas period ALP behaviour
- Topic 2: May Whitsun week ALP behaviour
- Topic 3: Flatter ALP profiles for some EUCs
- Topic 4: General summer holiday ALP behaviour
- Topic 5: General less sensitive DAF in Summer

Taking each topic in turn, MP explained the feedback comments received and the response to the comment as follows:-.

Topic 1: Christmas period ALP behaviour

MP provided a response as to why there is a change in the ALP shape over the Christmas period as seen in the ALP behaviour explaining that this is related to the application of the Holiday Code rules and provided an extract from the Modelling Approach 2020 document which was approved earlier on this year.

Noting that 5 Holiday Code rules, MP provided examples of how each of the holiday code rules are applied and showed a comparison for the Christmas and New Year period 2019 and 2020.

MP went on to explain that the application of the Holiday Codes is always a sensitive area, very often, the dates year on year are not static and do tend to move about. He advised that the last time the Holiday Codes were reviewed was in 2011, and suggested that a full review should be included in the new Workplan which will be agreed at the next meeting on 22 July 2020.

It was suggested that, as part of the modelling approach review, that an improvement might be to share the possible outcome prior to the commencement of the modelling to give an understanding in advance of what the outcome might be.

Topic 2: May Whitsun week ALP behaviour

MP explained that the observations raised for the Whitsun period are also due to the application of the Holiday Code rules 11 and 12 for Spring Bank Holiday

Topic 3: Flatter ALP profiles for some EUCs

MP advised that this topic relates to the EUC Band 8. MP advised that the Smooth Model for this EUC shows a flatter model as it is less weather sensitive.

As part of the analysis for the feedback on this topic, MP explained he looked at the CWV intercept for EA:E08B for a rolling 3 years, which shows, for this year, that year 16/17 has dropped off and year 20/21 has been added, has had the effect of making the model less weather sensitive which is why it appears flatter compared to last year.

Sarah Palmer (SP) asked if it is a trend for this year to see less weather sensitivity. MP advised that this is not a trend as, each year, the sample composition is different; year 16/17 would not have had any shipper data in that year, whereas the make-up of the sample has now changed, it is a unique set of data year on year.

Topic 4: General summer holiday ALP behaviour

MP explained that the observations raised for the Summer holiday period are also due to the application of the Holiday Code rules for General Summer Holiday.

The Summer Holiday Code rule applies to a 17 day period from the first Friday on or after 19 July. There are 2 rules that make up this which are:

Holiday Code 13: Saturdays and Sundays in period

Holiday Code 14: All other days in period

MP explained that for Holiday Code 14, the weekdays in that defined 17 day period sees more of a reduction compared to last year which explains the effects observed in this particular ALP, and that Holiday Code 13 does not appear to change very much, this sees less of a reduction compared to last year.

Topic 5: General less sensitive DAF in Summer

MP explained that the Daily Adjustment Factor (DAF) is used to report the weather sensitivity of the model.

MP provided a number of charts and tables in response to the feedback received and in conclusion advised that for EUC Band 09B, the difference observed in the DAF is very small, but agrees that the chart confirms the model for 09B is less weather sensitive. He said that the model for 09B EUC does tend to have much more variability in the sample composition, year on year.

The CWV intercepts for the 16/17 model from last year's smoothed model are more weather sensitive than this year's replacement 19/20 model, this explains the differences observed in this year's overall smoothed model.

MP thanked members for the feedback provided. This completed the review of the feedback received.

MP then went on to provide some information relating to a query received regarding the published CWV values for May 2020 where an issue with the off-line calculation has been identified.

This has impacted some of the gas days in the modelling analysis period (29 February 2020 up to 31 March 2020). The differences in the CWV for the modelling period were minor but as a result of the discrepancy CDSP have re-run the single year EUC Demand Modelling for the latest year and Model Smoothing and are currently producing a version 2 in readiness for the Industry consultation.

MP confirmed that the differences in the modelling results are not significant and crucially the underlying characteristics of the smoothed EUC demand models remain unchanged. He clarified that checks have been carried out by the team on the revised Gas Demand Profiles (ALPs, DAFs and PLFs) and the differences observed are negligible, meaning the version 1 output is effectively the same in terms of model shape and sensitivity.

MP advised that a revised version of the draft profiles will be republished this week and that this is what will be shared with the wider Industry as part of the consultation on the draft profiles.

LOS asked DESC members if they were happy to approve the smoothed EUC demand models for wider industry review following the analysis conducted by CDSP and DESC approved. The Industry consultation for the draft EUC demand models will commence week commencing 13 July and at the next DESC meeting on the 22 July, members will consider any further comments received with the aim of finalising the profiles for Gas Year 2020/21 at the meeting.

MP confirmed he is looking to publish the new version (version 2) within the next 2-3 days, there are one or two final checks being made and the intention is before the end of this week a communication will be issued via Joint Office to the wider Industry to advise Industry can review.

New Action 0701: CDSP (MP) to publish version 2 of the EUC Demand Models and Gas Demand Profiles for wider industry consultation.

Deleted: CDSP (MP) to provide the version 2 of the CWV values for publication to wider industry.

3. Seasonal Normal Review update (including update on action 0201)

MP provided a recap of the Seasonal Normal Review confirming a third Seasonal Normal Review Update article has been published on the Xoserve website which provides further detail.

EUC Ratios

MP advised that the the Seasonal Normal Review process was delivered during 2019 which included a review and revision to the CWV formula to include Solar radiation and provided a view of the draft Seasonal Normal End User Category (EUC) Ratios and confirmed these will be applied against those Supply Meter Points which fail to calculate an AQ in September with a 01 October 2020 effective date.

MP noted that once the Industry consultation is concluded, the ratios presented to DESC on 22 July 2020 will become the final set of EUC ratios and will be used in the AQ process during September in readiness for 1st October 2020.

Deleted: MP noted that once the Industry consultation is concluded, the ratios will be presented to DESC on 22 July 2020 will become the final set of EUC ratios and will be used for the rest of the year

Calculation

MP provided an explanation of the calculation that will be used for the seasonal normal demand on any given gas day. He added that this years EUC demand modelling has been performed with both Old and New CWV definitions.

The information provided for the calculations closed Action 0201.

MP presented the Draft EUC Ratios for all EUC Bands 1 to 9, advising that previously there has been a lot more movement than can be seen on slides 6, 7, 8 and 9. Going back to the year 2010 the ratios showed 4-5% whereas this year there is not a big step change. All of the ratios are slightly above or below 1.

Zoe Ireland (ZI) asked, why Northern EUCs tend to have a ratio of greater than 1 when the other LDZs are below 1. MP advised that Xoserve had also noticed this and as yet had not identified a clear reason why, ZI suggested he can look at the temperature data on the average annual data for years 20-25 weather station for Northern and review at next meeting.

Deleted: Zoe Ireland (ZI) asked, why Northern, EUC 02BPI shows a ratio of 1.001 which is different to all other LDZ's. MP advised that analysis had been reviewed and that no initial justification could be identified as to why there was this variation, however he suggested he can look at the temperature data on the average annual data for years 20-25 weather station for Northern and review at next meeting

New Action 0702: CDSP (MP) to investigate into possible reasons why Northern EUC ratios tend to be greater than 1 and other LDZs are not.

Next steps

As part of this review MP advised that CDSP have also been feeding into the implementation of the system changes required in order to calculate the new CWV. This change, inclusion of Solar Radiation and Precipitation (XRN4772) was implemented on 27 June 2020 and the effects of the new formula will go live 01 October.

Deleted: CDSP (MP) to investigate into why Northern, EUC 02BPI shows a ratio of 1.001 which is different to all other LDZ's. What will the future 5 years look like in terms of temperature for Northern

Following completion of the Industry consultation the final EUC Ratio values will be published on the secured area of Xoserve's website. Revised WAALPs for all EUCs using new ALPs, DAFs, CWVs, and SNCWVs to support AQ calculations in September 2020 will be produced and published.

Deleted: This change, inclusion of Solar Radiation and Precipitation (XRN4772) was implemented on 27 June 2020 and will go live 01 October

4. DESC / TWG Feedback for CDSP

In order to support the CDSP's Key Performance Measures (KPM's), MP advised the Committee that the Demand Estimation team would like to collect feedback from DESC, DESC TWG and the wider Industry at certain points of the modelling lifecycle in terms of how demand modelling is performed and presented.

MP provided some suggested topics for what may be important to DESC members when engaging with the Demand Estimation process:

- Accuracy / Quality

- Timeliness of delivery
- Communication – Meetings
- Query Handling
- Overall confidence in delivery

When asked, MP confirmed that the feedback collected would contribute to a view of Xoserves Demand Estimation work and help the team to identify any areas for improvement and will also feed into the high level Xoserve feedback.

Sarah Palmer (SP) agreed that it would be a good place to start. MP advised that due to the timings of information provided to DESC and DESC TWG, that feedback would be requested in late July and December. MP clarified he would produce a set of questions to submit for the first survey after the 22 July 2020 meeting.

LOS asked MP how the information will be fed back to DESC after the Surveys have been conducted. MP advised that he provide an update through the DESC workgroups on any findings/recommendations.

5. Ad-hoc Work Plan

MP confirmed this is a standard agenda item and that there were no additional elements which needed to be discussed. This will be reviewed at the meeting on 22 July.

6. DESC Related Modification/Change Updates

MP noted the below two DESC related changes were to be brought to TWG’s attention. These were:

XRN4772 - Composite Weather Variable (CWV) Improvements has been implemented.

XRN5047 - Seasonal Normal Review is due to be implemented in the next few weeks.

7. Communication of Key Messages

MP confirmed the agreements regarding the options chosen had been captured and would be documented and communicated via the DESC key messages process. The Key Messages will be published at: <https://www.gasgovernance.co.uk/desc/summarykeymessages>

8. Any Other Business

MP drew attention to the Stratification Approach paper provided by Jason Blackmore (JB) which has been published here: www.gasgovernance.co.uk/desc/060720

In relation to Action 0501 JB advised the paper has been provided for the Committee to consider and referred to discussions that took place at the February 2020 meeting where it was agreed that JB would propose validation methods which could be applied to sample data.

JB advised Committee to feedback any questions to him.

New Action 0703: DESC to review the Stratification Approach paper published on 29 May 2020. Direct any questions to JB.

9. Diary Planning

Further details of planned meetings are available at: <https://www.gasgovernance.co.uk/events-calendar/month>

Time / Date	Venue	Workgroup Programme
10:00 Wednesday 22 July 2020	Teleconference	Standard agenda, plus <ul style="list-style-type: none"> • 2020/21 NDM Algorithms: • Response to Industry Representations • Weather Station Review • Review Adhoc Workplan • Seasonal Normal Review Update
10:00 Monday	TBC	Standard agenda, plus

05 October 2020		<ul style="list-style-type: none"> • NDM Sample Update • Seasonal Normal Review Update
10:00 Monday 07 December 2020	TBC	<p>Standard agenda, plus</p> <ul style="list-style-type: none"> • Evaluation of Algorithm Performance for Gas Year 2019/20 • Modelling Approach – Spring 2021

Action Table (as of 06 July 2020)

DESC Actions					
Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
0201	10/02/20	2.0	CDSP (MM) to provide more information and detail on the calculations in relation to AQ Ratios including the checks undertaken as part of the update on Seasonal Normal Review at the 06 July meeting.	CDSP(MM)	Closed
TWG 0404	27/04/20	5.0	DESC and DESC TWG to consider and feedback to Xoserve any suggestions on the NDM Demand approach document ahead of the July DESC meetings.	DESC & DESC TWG	Carried Forward
TWG 0501	22/05/20	1.4	Joint Office (AR/MBJ) to publish the paper sent by JB on formal validation checks of the Stratification approach for EUC Bands 01 and 02 as well as provide a link to it in the minutes.	Joint Office (AR/MBJ)	Closed
DESC 0701	06/07/20	2.0	<p>Review TWG responses and DESC Representations (Topic 5):</p> <p><u>CDSP (MP) to publish version 2 of the EUC Demand Models and Gas Demand Profiles for wider industry consultation.</u></p>	CDSP (MP)	Pending
DESC 0702	06/07/20	3.0	<p>Seasonal Normal Review update:</p> <p><u>CDSP (MP) to investigate into possible reasons why Northern EUC ratios tend to be greater than 1 and other LDZs are not.</u></p>	CDSP (MP)	Pending
DESC 0703	06/07/20	AOB	<p>Stratification Approach</p> <p>DESC to review the Stratification Approach paper published on 29 May 2020. Direct any questions to JB.</p>	All members	Pending

Deleted: CDSP (MP) to provide the new version of the CWV values (version 2).

Deleted: CDSP (MP) to investigate into why Northern, EUC 02BPI shows a ratio of 1.001 which is different to all other LDZ's. What will the future 5 years look like in terms of temperature for Northern