

**Demand Estimation Sub-Committee Minutes**  
**Wednesday 27 April 2021**  
**via Microsoft Teams**

| <b>Attendees</b>  |      |                                 |
|---|------|---------------------------------|
| Rebecca Hailes (Chair)  | (RH) | Joint Office                    |
| Helen Bennett (Secretary)   | (HB) | Joint Office                    |
| <b>Shipper Members (Voting)</b>   |      |                                 |
| Anupa Purewal   | (AP) | E.ON                            |
| John Jones  | (JJ) | ScottishPower                   |
| Louise Hellyer  | (LH) | Total Gas & Power               |
| Daniel Stenson  | (DS) | Centrica                        |
| <b>Transporter Members (Voting)</b>   |      |                                 |
| David Mitchell  | (DM) | SGN                             |
| Paul O'Toole Alternate for Emma Buckton   | (EB) | Northern Gas Networks Alternate |
| Smitha Coughlan   | (SC) | Wales & West Utilities          |
| <b>Observers (Non-Voting)</b>   |      |                                 |
| Andrew Hayes  | (AH) | Wales & West Utilities          |
| Joseph Lloyd  | (JL) | Correla on behalf of Xoserve    |
| Kiranjit Shergill   | (KS) | Correla on behalf of Xoserve    |
| Mark Perry  | (MP) | Correla on behalf of Xoserve    |
| Mike Maguire  | (MM) | Correla on behalf of Xoserve    |
| Penny Griffiths   | (PG) | Correla on behalf of Xoserve    |
| Simon Bissett   | (SB) | Correla on behalf of Xoserve    |
| Copies of papers are available at: <a href="http://www.gasgovernance.co.uk/desc/280421">www.gasgovernance.co.uk/desc/280421</a> |      |                                 |

**1. Introduction and Status Review**

Rebecca Hailes (RH) welcomed everyone to the meeting.

**1.1. Apologies for Absence**

None received

**1.2. Note of Alternates**

Andrew Hayes (Wales & West Utilities for Helen Fitzgerald)

Paul O'Toole (Northern Gas Networks for Emma Buckton)

**1.3. Quoracy Status**

The meeting was not determined quorate at the beginning of the meeting, RH reminded the Workgroup that DESC TWG meetings will be quorate where there are at least four voting members or their alternates, of which at least two shall be Users and two Transporters in attendance.

Once contact was made with other shipper members of DESC, Shipper members joined the meeting which was then determined to be quorate.

RH thanked the members that joined the call at such short notice.

*Post Meeting Note:*

Apologies for the confusion around the invitation and any inconvenience caused. This was determined to be as a result of a technical issue at the Joint Office, which has now been corrected.

#### **1.4. Approval of Minutes (24 February 2021)**

The minutes from the previous DESC meeting were approved.

#### **1.5. Approval of Late Papers**

No late meeting documentation needed to be approved.

#### **1.6. Review of Actions DESCs Outstanding**

**Action 0201:** Xoserve (SB) to provide comparison of sample composition across the I&C EUC Bands from 2020 to 2021.

**Update:** Simon Bissett (SB) provided the comparison as part of his presentation during agenda item 2. **Closed**

## **2. Collection of Daily Gas Consumption Data for EUC Modelling**

### **2.1. Background and Summary**

SB introduced himself and clarified he was presenting for Correla on behalf of Xoserve. He advised the presentation provided relates to the “Data Collection & Validation” and “Model Definition” phases of the Demand Model cycle. He confirmed the objective for the meeting is for the Technical Workgroup to:

- Review the number of sample points available for period 01 April 2020 to 31 March 2021
- Based on data available, confirm the EUC definitions which require demand models
- Agree the most appropriate data sets / aggregations to be used to represent the demand models
- Agree the Winter Annual Ratio (WAR) Thresholds for EUC Bands 3 and above

SB explained that on the 10 December 2018 DESC agreed to apply a stratification method to Band 1 Domestic and Band 2 Non-Domestic sites.

Xoserve and the Network managed samples have been prioritised, any additional sites obtained from third party provided data will be randomly selected to avoid any Shipper bias in the demand profiles created.

SB updated the Workgroup with the starting number of records with at least 300 Daily Gas Consumption Data (**42,961**); the number of records that have been removed from that data set due to varying reasons, such as, exceeding the Missing Read Tolerance, AQ Ratio Failures, (**20,571** Sites removed); and the number of records removed that are identified as not being required following Stratification (**1,970**). This leaves a total number of records that passed validation (post Stratification) and will go through to the next phase, **20,420**, (for comparison this was **21,625** in 2019/20).

SB then showed this broken down into the EUC Bands 1 to 9 and provided some further clarification on the validated data:

- During the validation process it was apparent again that the Market Sector Code (MSC) held on UK Link is not always reliable (over 60 in Band 3+)
- Accuracy of the EUC demand models and now EUC assignment will be impacted by these data inaccuracies.
- Several data issues with 3rd party data continued

He issued a plea to Shippers that prior to submission please could they ensure the data is quality checked as customers know their data / systems better than Xoserve/CDSP does.

A document highlighting the common data errors can be found here: <https://www.gasgovernance.co.uk/desc> ‘Provision of NDM Sample data UNC H1.6.11’.

RH asked, in her additional role as Chair of Performance Assurance Committee (PAC), would the Demand Estimation Team ever consider publishing which Shipper's data has passed validation to encourage others to provide good sampling of data. SB advised there is only one Shipper that should be providing data that is not and this will be included in the next PAC Report.

**Slide 12 - Action 0201: Xoserve (SB) to provide comparison of sample composition across the I&C EUC Bands from 2020 to 2021**

In order to satisfy this action SB advised that the impacts of COVID-19 means that sample points are likely to have dropped EUC Bands in comparison to the validated datasets from 2020. He proceeded to provide a view of Consumption Bands on UK Link compared to those derived from Sample AQ and clarified that, as expected, there are a number of sites in 2021 that are lower in EUC Bands than in 2020.

**2.2. Small NDM – Proposed EUC Modelling Runs/WAR Band Limits**

SB explained that Small NDM is the main component of the overall NDM:

- Band 1 (0 73.2 MWh pa) constitutes nearly 3/4 of overall NDM (on an AQ basis)
- Bands 1 to 2 (0 293 MWh pa) constitutes nearly 4/5 of overall NDM
- Bands 1 to 4 (0 2196 MWh pa) constitutes nearly 9/10 of overall NDM
- Large NDM is very much a minority component of overall NDM

SB highlighted that, due to the impacts of COVID-19 and subsequent reductions in AQ, there has been an increase in the number of supply points in Bands 1 to 2 (AQ and SP Count).

**Slide 15 – Proposed EUC Bands/Consumption Ranges for Small NDM**

**Band 1: 0 - 73.2 MWh pa**

- Prepayment Domestic
- Non-Prepayment Domestic
- Prepayment I&C
- Non-Prepayment I&C

**Band 2: 73.2 - 293 MWh pa**

- Prepayment Domestic
- Non-Prepayment Domestic
- Prepayment I&C
- Non-Prepayment I&C

**Band 3: 293 - 732 MWh pa**

**Band 4: 732 - 2,196 MWh pa**

Referring to the TW\_B\_SAMPLE\_POP\_SMALL\_280421 spreadsheet (provided to Members), SB went on to provide the proposed aggregations for EUC Band 1 and highlighted where the team have not been able to source enough sample points to derive an EUC demand model for the Domestic Pre-Payment consumer base. He therefore asked if there are Shippers that might be able to provide Pre-Payment data to please do so.

SB advised that whereas lots of domestic data has been proved, there is nothing specific to Pre-Payment. He explained that this is an area where the team struggle year on year.

When asked, SB explained that a SMART meter can in Pre-Payment mode, but this relies on data being accurately updated on UK Link.

SB advised that data from *Modification 0451 - Individual Settlements for Pre-Payment & Smart Meters*, has been used historically, but that is quite old data now.

SB confirmed that it is recommended to use individual LDZ analysis for Band 1 non-Pre-Payment.

**Slide 16 - Small NDM Consumption Bands: Review of EUC Band 1**

| EUC Bands: Range                                    | Comments on 2020/21 data Proposed Aggregations | Final Aggregations for 2019/20       |
|---|--|--------------------------------------|
| <b>Band 1 PPM Domestic:</b><br>0 to 73.2 MWh pa     | Sample size issues -No model viable            | Sample size issues -No model viable  |
| <b>Band 1 Non-PPM Domestic:</b><br>0 to 73.2 MWh pa | Individual LDZ analysis for all LDZs           | Individual LDZ analysis for all LDZs |
| <b>Band 1 PPM I&amp;C:</b><br>0 to 73.2 MWh pa      | Sample size issues -No model viable            | Sample size issues -No model viable  |
| <b>Band 1 Non-PPM I&amp;C:</b><br>0 to 73.2 MWh pa  | Individual LDZ analysis for all LDZs           | Individual LDZ analysis for all LDZs |

### Slide 17 - Pre-Payment EUC Demand Models

SB advised the current EUC demand model uses consumption data that was provided to support *Modification 0451AV - Individual Settlements for Pre-Payment & Smart Meters*, this data is almost 10 years old and is not sustainable in the long-term. Because the team have been unable to source enough sample points to derive an EUC demand model for the Domestic Pre-Payment customer base, it is recommended rolling forward the current version (i.e. 0451AV) and to add this topic to the Adhoc Workplan in order to investigate how DESC wish to address this going forward.

### Slide 18 - Small NDM Consumption Bands: Review of Bands 2-4

SB showed onscreen the table with the proposed aggregations for Bands 2-4 and highlighted that for Band 2 Non-Pre-Payment Domestic, both National and 2 LDZ Group will be run. The results of these two will be presented to the May DESC TWG where Members can decide on their preference.

### Slide 20 - Winter Annual Ratio (WAR) Band EUCs

SB explained the higher AQ Bands, where meter points are monthly read, have a standard EUC plus 4 differential EUCs based on ratio of winter consumption to total annual consumption.

Sites with adequate read history are allocated automatically to a WAR Band, based on system calculation during AQ review.

The WAR value of a supply point is defined as the actual consumption in the months December to March divided by the new supply point AQ.

Since the numerator is actual demand and the denominator is weather corrected annual consumption, WAR values change from year to year.

The limits defining WAR band EUCs are those applicable to the most recent winter (in this case winter 2020/21).

### Setting WAR Thresholds

SB explained that when setting WAR Thresholds, DESC's approach is to aim for a 20%:30%:30%:20% split of sample numbers on a national basis. There are practical limitations due to the actual distribution of WAR values of individual sample supply points in the consumption band.

SB clarified this will relate to the spreadsheet issued to see if they can match the 20%:30%:30%:20% split.

### Slide 21 - Movement in WAR Thresholds in 2021

SB advised that WAR Thresholds are affected by December to March weather experience, Winter 20/21 was generally colder than 2019/20, so thresholds would be expected to increase this year.

Due to the potential 'disconnect' between (i) Winter Consumptions calculated during the lockdown period and (ii) the Aqs calculated during 2021 when sites start to increase consumption, it is

possible that sites for a period of time may be assigned to unsuitable WAR Bands during EUC assignment later this year, until all of the COVID related impacts unwind.

**Advice from the AQ Focus Group**

The WC calculation is undertaken in May, with the results communicated to Shippers in the May .NRL file (specifically T50 & T51 records). SB highlighted that any challenges to these new/proposed values should be raised between 11 August and 10 September 2021 to be effective from 01 October 2021.

In terms of the WC value that should be requested, it is recommended to request a value in line with the ratio of a site’s normal WAR band based on the current/latest Rolling AQ

There is a training pack on the WAR Band process and how to correct the WC if required here: <https://rise.articulate.com/share/bCEE2L9iTJDupMjLYgdUCyYCUjMdnEfA#/>.

Mark Perry (MP) advised that this analysis has strayed into an area outside of the Demand Estimation Team remit though it was felt to be justified. Members generally concurred.

**Slide 22 - Small NDM WAR Bands: Review of Bands 3-4**

SB explained the table below:

| <b>EUC Bands: Range</b>                                   | <b>Comments on 2020/21 data Proposed Aggregations</b>   | <b>Final Aggregations for 2019/20</b>                         |
|---|---|---|
| <b>Band 1:</b> 0 to 73.2 MWh pa                           | Not generally Monthly read no WAR Bands   |   |
| <b>Band 2:</b> 73.2 – 293 MWh pa                          | Not generally Monthly read no WAR Bands   |   |
| <b>Band 3 and Band 4 (combined):</b><br>293 – 2196 MWh pa | Individual LDZ for most LDZs except WN being combined with NW. This is the same as the final aggregation last year.<br>(Table B.11) | Individual LDZ for most LDZs except WN being combined with NW |

When Members were asked for feedback, Anupa Purewal (AP) advised she had a look at the data set and tables provided and could not come up with any better ratios than those provided.

**2.3. Large NDM – Proposed EUC Modelling Runs/WAR Band Limits**

**Slide 24 - Proposed EUC Bands / Consumption Ranges for Large NDM (>2,196 MWh pa)**

MP clarified the proposed EUC Bands and Consumption Ranges for Large NDM sites and confirmed that Bands 5 to 8 each have 1 Consumption Band and x4 WAR Bands:

- Band 5: 2,196 to 5,860 MWh
- Band 6: 5,860 to 14,650 MWh
- Band 7: 14,650 to 29,300 MWh
- Band 8: 29,300 to 58,600 MWh
- Band 9: >58,600 MWh (1 Contingency Band for sites which should be DM)

MP noted that underlying demand modelling can be done based on more broadly aggregated bands. DESC agreed in Spring 2014, as part of the adhoc analysis of EUC Definitions, that the bands 14,650 to 29,300 MWh pa (Band 7) and 29,300 to 58,600 MWh pa (Band 8) could be merged for modelling purposes if necessary. He added that Large NDM remains very much a minority component of overall NDM.

**Slide 25 - Large NDM Consumption Bands: Review of Bands 5-9**

MP presented the recommended proposed aggregations as shown below:

| EUC Bands: Range  | Comments on 2020/21 data Proposed Aggregations                            | Final Aggregations for 2019/20  |
|---|---|---|
| <b>Band 5</b><br>2,196 to 5,860 MWh pa                          | Individual LDZ for most LDZs except WN being combined with NW             | Individual LDZ analysis (NW/WN combined)  |
| <b>Band 6:</b><br>5,860 to 14,650, MWh pa                       | Individual LDZ analysis with WN combined with NW and WS and combined WS   | Individual LDZ for most LDZs except WN combined with NW and WS being combined with SW |
| <b>Band 7 and Band 8 (combined):</b><br>14,650 to 58,600 MWh pa | Individual LDZs with the following WS/SW, EA/NT, SE/SO and NW/WN combined | Individual LDZs with the following WS/SW, EA/NT, SE/SO and NW/WN combined             |
| Sample size issue<br><b>Band 9:</b> >58,600 MWh pa              | National  | National  |

**Slide 27 - Large NDM WAR Bands: Review of Bands 5-8**

MP presented the recommended proposed aggregations as shown below:

| EUC Bands: Range  | Comments on 2020/21 data Proposed Aggregations          | Final Aggregations for 2019/20                          |
|---|---|---|
| <b>Band 5</b><br>2,196 to 5,860 MWh pa                          | 5 LDZ group   | 5 LDZ GROUP with SC as an individual LDZ                |
| <b>Band 6:</b><br>5,860 to 14,650 MWh pa                        | 3 LDZ group (SC/NO/NW/WN, NE/EM/WM & EA/NT/SE/WS/SO/SW) | 3 LDZ group (SC/NO/NW/WN, NE/EM/WM & EA/NT/SE/WS/SO/SW) |
| <b>Band 7 and Band 8 (combined):</b><br>14,650 to 58,600 MWh pa | 2 LDZ group (SC/NO/NW/WN/NE/EM/WM & EA/NT/SE/WS/SO/SW)  | 2 LDZ group (SC/NO/NW/WN/NE/EM/WM & EA/NT/SE/WS/SO/SW)  |
| <b>Band 9:</b> >58,600 MWh pa                                   | N/A - No WAR Bands                                      |   |

In Summary MP advised next steps:

- Demand Estimation Team will start EUC demand modelling based on today’s decisions (28-Apr to 14-May).
- Demand Estimation Team will look to publish EUC demand modelling results for DESC TWG to review before the next meeting. (17-May to 21-May).
- DESC TWG meeting where EUC demand modelling results will be presented and discussed. (24-May).
- Demand Estimation Team to prepare draft profiles for Gas Year 2021/22. (25-May to 04-Jun).

Committee Members thanked SB for taking them through the information supplied and agreed with the suggestions made.

**3. Review of NDM Algorithm Update**

MP advised the intention is to keep DESC in the loop of any relevant discussions at any of the newly established *Review Workgroup 0754R - Investigate Advanced Analytic Options to improve NDM Demand Modelling* meetings and advised that progress updates will be provided at DESC and DESC TWG meetings throughout 2021.

## DESC Obligation

MP advised the main DESC obligations are defined in TPD Section H of Uniform Network Code and that paragraph 2.2.1 describes the current formula for determining Supply Meter Point Demand (SMPD<sub>t</sub>), which is used daily in Gemini for NDM Nominations and Allocations:

$$\text{Supply Meter Point Demand}_t = (\text{AQ}/365) * \text{ALP}_t * (1 + [\text{DAF}_t * \text{WCF}_t])$$

MP advised this formula became effective from 01 June 2017 following the implementation of *Modification 0432 - Project Nexus Gas Demand Estimation, Allocation, Settlement and Reconciliation Reform*.

Paragraph 2.2.2 was added as part of Modification 0432 updates to Section H and states the following:

The operation of the formula in paragraph 2.2.1 shall be reviewed by the Committee [DESC] every three (3) years

The UNC obligation on DESC to review every 3 years is new and has not been carried out formally since its introduction. At the end of September 2020, a third complete Gas Year under the new regime concluded i.e. Gas Years 2017/18, 2018/19 and 2019/20.

## UNC Workgroup 0754R

MP advised that analysis completed by the UIG Task Force focussed on the performance of the NDM Algorithm and provided findings which suggested a more accurate figure could be acquired with the utilisation of 'Machine Learning' and could offer improvements to the daily estimation of NDM demand.

As a result, it was proposed to establish a UNC Workgroup 0754R to investigate advanced analytical approaches; this was approved by UNC Modification Panel on 18 February 2021.

This Workgroup 0754R would:

- Support DESC's UNC obligation to review the NDM Algorithm.
- Explore and progress UIG Task Force findings.
- Provide Industry support for investigating advanced analytical approaches following recent industry consultation.
- Maintain focus and increases visibility across the industry, whilst DESC performs its core functions of preparing profiles for the next Gas Year.
- Improve NDM Allocation will result in a reduction in UIG volatility and subsequent Meter Point reconciliation/UIG volumes.

## UNC Workgroup 0754R – Update 1

The first Workgroup meeting took place on 23 March 2021 and mainly focused on the background and rationale, scope, and suggested areas to investigate.

The minutes and the slide pack presented are available here: <https://www.gasgovernance.co.uk/0754/230321>.

The next meeting is scheduled for 12 May 2021.

## 4. Any Other Business

### 4.1. User Representative Appointment Process

RH wished to note that the User Representative Appointment Process would be commencing during May with a reminder for organisations to update their Single Points of Contacts (SPoCs) and by 01 July an invitation will be issued to these SPOC contacts for nominating representatives for the various Committees and Panel.

### 4.2. Invitation to the meeting

Dan Simons (DS) asked as to why he did not receive the invitation to this meeting.

**New Action 0401:** Joint Office (RH) to investigate why the invitation for this meeting was not issued.

**Post Meeting Note:**

RH has investigated this and concluded there was a technical fault that prevented the invitation being issued. **Action Closed.**

**5. Communication of Key Messages**

RH advised that the Key Messages supplied by MP post meeting, would be published on the Joint Office website and could be accessed via the link: [www.gasgovernance.co.uk/desc/summarykeymessages](http://www.gasgovernance.co.uk/desc/summarykeymessages).

The DESC TWG agreed the following information to be included in the Key Messages:

- Confirmation that the main business for the meeting was to seek agreement on how the demand modelling will proceed.
- It is recognised that WAR Bands are not going to be straightforward this year and there is no ideal solution.
- In the event that the data does not look viable, the DESC TWG Terms of Reference indicates that the WC process can be utilised in such circumstances and refer back to last year's modelling, this is the back-up process and is allowed for.
- Note that there has been a COVID-19 impact this year.

MP clarified that the next DESC TWG is 24 May 2021 and that his team plan to provide any material by Friday 14 May 2021.

[www.gasgovernance.co.uk/desc/summarykeymessages](http://www.gasgovernance.co.uk/desc/summarykeymessages)

**6. 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 Monday<br>24 May 2021        | Microsoft Teams | DESC TWG            |
| 10:00 Wednesday<br>07 July 2021    | Microsoft Teams | DESC                |
| 10:00 Wednesday<br>21 July 2021    | Microsoft Teams | DESC                |
| 10:00 Wednesday<br>06 October 2021 | Microsoft Teams | DESC                |
| 10:00 Tuesday<br>14 December 2021  | Microsoft Teams | DESC                |

**Action Table (as of 28 April 2021)**

| Action Ref    | Meeting Date | Minute Ref | Action   | Owner             | Status Update |
|---------------|--------------|------------|--|-------------------|---------------|
| DESC 0201     | 24/02/21     | 4.0        | Xoserve (SB) to provide comparison of sample composition across the I&C EUC Bands from 2020 to 2021. | Xoserve (SB)      | <b>Closed</b> |
| DESC TWG 0401 | 28/04/21     | 4.2        | Joint Office (RH) to investigate why the invitation for this meeting was not issued                  | Joint Office (RH) | <b>Closed</b> |