

UNC Demand Estimation Sub-Committee Minutes
Tuesday 14 December 2021
via Microsoft Teams

Attendees

Yvonne Reid-Healy (Chair)	(YRH)	Joint Office
Karen Visgarda (Secretary)	(KV)	Joint Office

Shipper Members (Voting)

Anupa Purewal	(AP)	E.ON
Daniel Stenson	(DS)	Centrica
John Jones	(JJ)	ScottishPower
Katherine Uzzell	(KU)	SSE

Transporter Members (Voting)

Murugan Babumohanan	(MB)	National Grid
Paul O'Toole	(POT)	Northern Gas Networks Alternate
Sanjeev Loi	(SL)	Cadent
Smitha Coughlan	(SC)	Wales & West Utilities

Observers (Non-Voting)

Andrew Hayes	(AH)	Wales & West Utilities
Darrin Prescott	(DP)	Correla on behalf of Xoserve
Cosmin Popovici	(CP)	Total Energies
Jordan Bignell	(JB)	Correla on behalf of Xoserve
Joseph Lloyd	(JL)	Correla on behalf of Xoserve
Mark Perry	(MP)	Correla on behalf of Xoserve
Michael Maguire	(MM)	Correla on behalf of Xoserve
Penny Griffiths	(PG)	Correla on behalf of Xoserve
Simon Bissett	(SB)	Correla on behalf of Xoserve
Simon Geddes	(SG)	National Grid

Copies of papers are available at: <https://www.gasgovernance.co.uk/desc/141221>

DESC 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 are in attendance.

1. Introduction and Status Review

Yvonne Reid-Healy (YRH) welcomed everyone to the meeting.

YRH confirmed that Abbie Shepherd was no longer a DESC member, as Murugan Babumohanan (MB) was now the new DESC member representing National Grid.

1.1. Apologies for Absence

David Mitchell, SGN

1.2. Note of Alternates

No alternates.

1.3. Quoracy Status

YRH advised that the meeting was quorate.

1.4. Approval of Minutes (06 October 2021)

The minutes of the previous meeting were approved.

1.5. Approval of Late Papers

YRH noted there had been one late paper; Strand 3 NDM Sample Analysis and asked if the members would accept the late submission, all agreed.

1.6. Review of Outstanding Actions

DESC 0901: *Reference DCC Pre-Payment Meter related information* – Correla (MP) to investigate what data is retained and whether it is suitable for sharing, and if so, between which parties.

Update: Mark Perry (MP) asked for the action to be carried forward as he was still awaiting information from Xoserve, and he advised that good progress had been made in relation to using the Class 3 information. MP confirmed an update would be available for the 02 March 2022 meeting. **Carried Forward.**

2. NDM Algorithms Performance – Gas Year 2020/21

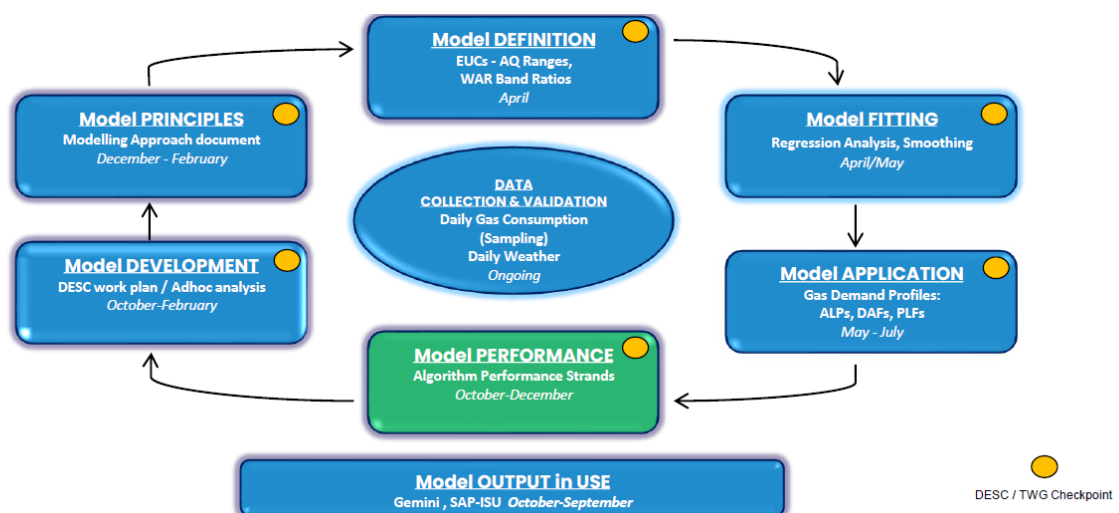
The suite of presentations discussed in the meeting are published on the meeting page and can be accessed via the link: <https://www.gasgovernance.co.uk/desc/141221>

Where there were specific interactions regarding particular slides with the DESC members, these have been captured within the minutes as detailed.

For each area the overview includes the; background, objectives and conclusion summary has been summarised below:

2.1. Strand 1 - Weather Analysis

Michael Maguire (MM) provided an overview of the Strand 1 Weather Analysis,



Background

MM explained the implementation of Project Nexus on 01 June 2017 introduced a revised NDM demand formula, meaning some of the previous Algorithm Performance measures became redundant and discussions took place at DESC meetings during the build up to Nexus implementation, which concluded on the following strands:

- *Strand 1 Weather Analysis*

- *Strand 2 Unidentified Gas Analysis*
- *Strand 3 NDM Daily Demand Analysis*

Objective of NDM Algorithm Performance

MM summarised the objective as defined below:

The purpose of Algorithm Performance is to:

- *Provide confidence in the NDM Supply Meter Demand formula*
- *Identify possible areas of improvement for future demand modelling*

Where possible, the aim of each Strand of analysis is to:

- *Provide statistical measures as well as visual representations*
- *Develop a more flexible process for Algorithm Performance, allowing us to adapt the data summaries we analyse and how results are presented*
- *Carry out 'regional' and 'year on year' comparisons*

Objective of today's session is to review Strands 1, 2, & 3

Supporting document containing full examples and commentary for each Strand to be published by end of year. This will also be used as Section 12 of next year's NDM Algorithms Booklet

MM provided a summary of each slide and where discussion took place in relation to a specific matter this is captured below.

Strand 1 – Weather Analysis

Background

- *The observed Weather conditions on each day and LDZ (expressed as the CWV) influences the NDM gas demand derived by the allocation formula*

Objective

- *Share information on the observed weather conditions for Gas Year 2020/21*
- *Identify periods of unusual weather throughout the Gas Year which may help give further context to further Strands of analysis*

Notes

- *In order to derive charts/ summaries depicting a national view, 'GB CWV' and 'GB SNCWV' values have been derived based on NDM throughput*
- *Gas Year 2020/21 has been the first Gas Year to have utilised the new CWV formula including a Solar Radiation term*

Simon Geddes (SG) wanted clarification regarding the weightings and asked if the weightings given to each LDZ CWV in the composition of the GB CWV were available? Including what were the weightings based on, NDM-demand weighted or something else? Joseph Lloyd (JL) explained that the GB weightings were calculated based on NDM throughput for the five years between October 2014 and September 2019..

Strand 1 - Weather Analysis: Conclusions

MM overviewed the conclusions for Strand 1 – Weather Analysis, as detailed below:

Overall, the observed weather during Gas Year 2020/21 when compared to current seasonal normal by Degree

Day analysis is as follows:

- *Quarter 1 (Oct'20 to Dec '20) was approximately 1.5% cooler than Seasonal Normal*
- *Quarter 2 (Jan'21 to Mar '21) was approximately 3.5% cooler than Seasonal Normal*
- *Quarter 3 (Apr'21 to Jun '21) was approximately 11.9% cooler than Seasonal Normal*
- *Quarter 4 (Jul'21 to Sep '21) was approximately 3.1% warmer than Seasonal Normal*

Top 5 colder than Seasonal Normal days (Lowest WCF), in descending rank:

- 13 Feb 2021, 12 Feb 2021, 11 Feb 2021, 09 Feb 2021, and 10 Feb 2021

Top 5 warmer than Seasonal Normal days (Highest WCF) in descending rank:

- 24 Feb 2021, 31 Mar 2021, 30 Mar 2021, 21 Feb 2021, and 20 Feb 2021

The stand out Periods of unusual weather were:

- November 2020 04 warmest November since Gas Year 1960/61
- May 2021 09 coldest May since Gas Year 1960/61
- September 2021 03 warmest September since Gas Year 1960/61
- February 2021 Contains the five Gas Days with the lowest WCF (in the analysis year), and 3 of the 5 Gas Days with the highest WCF (in the analysis year)
- When interpreting the various strands of Algorithm Performance, it is relevant to recall the weather conditions that

There were no further discussions regarding this area.

For a detailed update, please refer to the published slides on the meeting page.

2.2. Strand 2 Unidentified Gas (UIG) Analysis

Michael Maguire (MM) provided an overview of the Strand 2 - UIG Analysis as detailed below:

Background

Following the implementation of project Nexus on 01 June 2017 Unidentified Gas (UIG) is now the balancing figure in each LDZ for each Gas Day

UIG is calculated using the following formula

- $UIG = Total\ LDZ\ Throughput - Shrinkage - DM\ Measurements - NDM\ Allocation$

As UIG is the balancing figure, modelling error in the estimate of NDM Allocation can be a major contributor to daily UIG levels

Objectives and Approach

MM summarised the objectives approach as defined below:

To analyse UIG percentages for Gas Year 2020/21 by seasons:

- Autumn: Oct'20 to Dec'20
- Winter: Jan'21 to Mar'21
- Spring: Apr'21 to Jun'21
- Summer: Jul'21 to Sep'21

To compare the UIG values for Gas Year 2020/21 with the previous Gas Year 2019/20

Use boxplots and distribution graphs to measure how UIG varies by season and LDZ

2020/21 is the second Gas Year to be affected by COVID restrictions and lockdowns. National Lockdown days throughout this presentation refer to when the nation was under its strictest 'Lockdown' conditions. These periods are defined as:

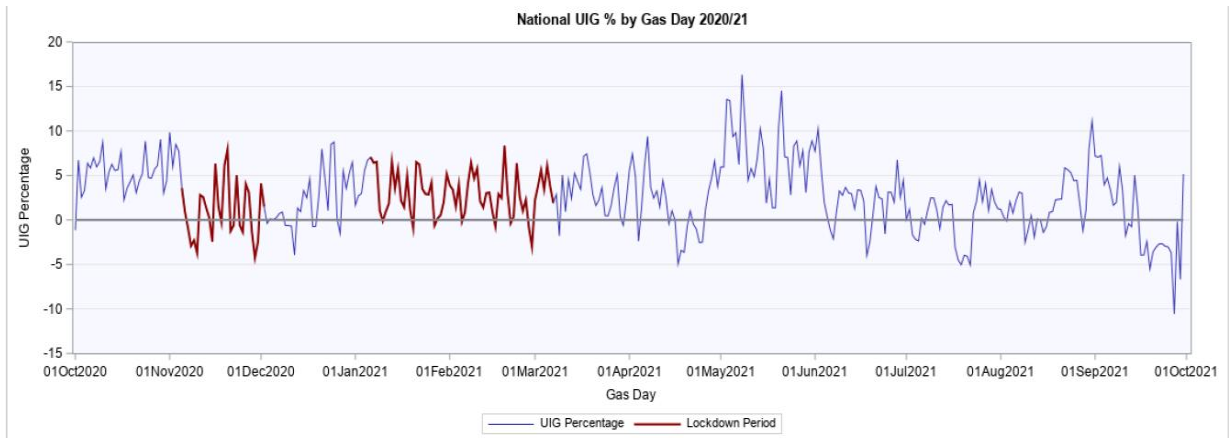
- Second National lockdown: 05/11/2020 to 02/12/2020
- Third National lockdown: 06/01/2021 to 07/03/2021.

Localised lockdowns and different behavioural patterns (e.g., Home Working) will also have persisted outside of this defined period, slide 6 provides an overview of the COVID impacts to Gas Year 2020/21

Note: The causes of UIG on a daily basis are not considered here

Daily Observed UIG

MM overviewed the Daily Observed UIG – National, and provided a summary of the graph as detailed below.



- The National average UIG at D+5 was 2.65%
- UIG percentages during the second National lockdown (Nov to Dec) appear slightly lower than the surrounding months,
- however, this pattern does not appear to be observed for the third National lockdown (Jan to Mar) where values are in line with the surrounding months.
- The effects of COVID are less obvious during the second and third lockdowns than during the first in Gas Year 2019/20,
- possibly due to the AQ position being more reflective of Post COVID behavioural changes.

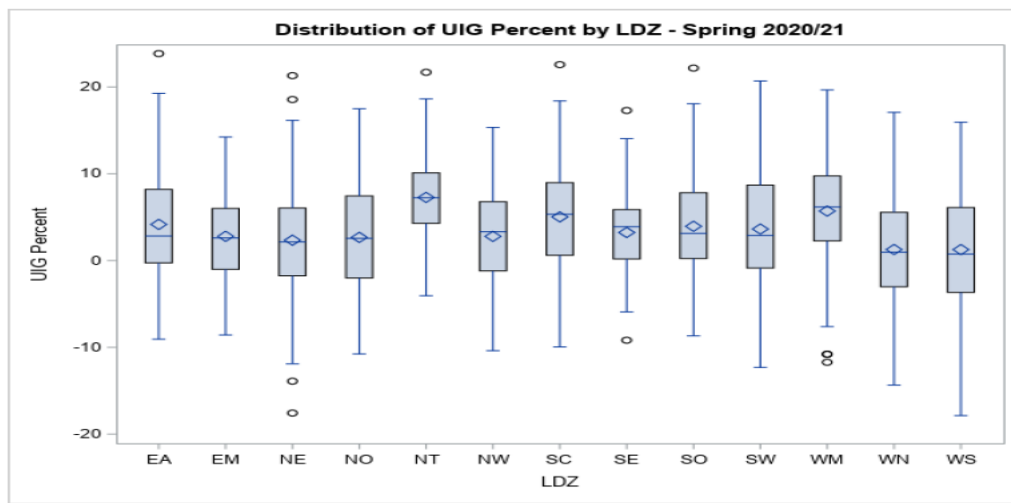
Katherine Uzzell (KU) said that the extremes in the weather affect the UIG and that created fluctuations from both a weather and lockdown perspective.

Murugan Babumohanan (MB) said that he used to be heavily involved in UIG and he found it interesting the affect that lockdown had had, and he wondered if there was a change in the demand profile or if the demand level nationally had also changed, owing to lockdown. JL explained that this was unlikely as it was in relation to what happens in the LDZs, as the rest of the UIG area was out of scope.

MM continued to walk through the subsequent slides.

Distribution of UIG – Spring 2020/21 – slide 18

MM provided a summary of the Distribution of UIG schematic information as below:



Average UIG% by LDZ - Spring												
EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS
4.16%	2.79%	2.34%	2.67%	7.27%	2.79%	5.03%	3.23%	3.95%	3.64%	5.70%	1.27%	1.26%

- Average UIG values for the period April'21 to June'21 range from 1.26% in LDZ WS to 7.27% in LDZ NT
- All 13 LDZs had a positive average UIG During Spring
- Upper ranges during Spring reach closer to 20%, potentially due to colder than usual weather conditions present throughout these months
- The highest recorded daily UIG value was observed in LDZ EA on 8th May 2021, a value of 23.84%
- Average daily (absolute) UIG Volume during Spring was 5.8 GWh

In relation to this slide, Simon Geddes (SG) asked with the GB UIG generally being positive particularly pre-June 2021 (when domestic demand was highest, with May also being an unusually cold month), is this down to continued home-working and domestic load band. Or was it that the AQs had not quite caught up with new working patterns? Or was it DAF related, again in relation to domestic load bands with more working from home, as it seemed to be slightly more positively skewed to colder weather?

JL explained the process was regarding the rolling AQs, as people were asked to submit their own reads at home, so the reads were submitted during the Winter months, and this could be lower if people did not submit them.

In response to SG's comment that ideal UIG value is zero, Mark Perry (MP) explained there will always be an amount of positive UIG which relates to genuine 'real UIG'. The industry view (i.e. the Allocation of Unidentified Gas Expert (AUGE)) is that this is around 2.5%. MP advised that Strand 2 UIG analysis is about looking for evidence of UIG which may have been caused by NDM modelling error.

KU said that she was surprised that when the first strict lockdown hit in April and May 2020, even though the domestic volumes would have been pushed higher, she noted that UIG was still only slightly negative, especially considering it was a lot warmer than average, and she was surprised that this was not more negative as the AQ's would not have reacted yet.

MM continued to walk through the subsequent slides.

Strand 2 Unidentified Gas (UIG) Analysis: Conclusions

MM overviewed the conclusions for Strand 2_Unidentified Gas (UIG) as detailed below:

- Average daily national UIG (at D+5) has increased slightly since Gas Year 2019/20, moving from 1.91% to 2.65%
- The following table shows the daily national average, as well as the highest and lowest average UIG value at an LDZ level by season:

Season	National Daily Average	Lowest absolute average UIG (LDZ)	Highest absolute average UIG (LDZ)
Autumn	3.03%	0.62 % (SE)	4.36% (SW)
Winter	2.98%	1.02% (SE)	5.29% (NW)
Spring	3.93%	1.25% (WS)	7.27% (NT)
Summer	0.70%	-0.38% (NO)	4.44% (WM)

- When compared to other seasons, average daily UIG levels tended to be lower during Summer.
- The shape of the distribution of UIG is similar to the previous gas year. Effects of National Lockdowns were not as evident in Gas Year 2020/21 as they were in 2019/20 when a large number of negative UIG values were observed.

- *Strand 3 to investigate further the accuracy of the NDM profiles during May and September 2021.*
- *Supporting document containing full examples and commentary for each Strand to be published by end of year.*
- *This will also be used as Section 12 of next year's NDM Algorithms Booklet.*
- *Are there any different approaches to analysis in Strands 1 and 2 which would be useful for DESC to see in future?*

MM advised that all the documents in full would be published by the end of 2021 and he stated that if any DESC members had any suggestions on how the Strands 1 and 2 analysis could be improved for them to make contact via the Correla team:

Correla Demand Estimation Box xoserve.demand.estimate@xoserve.com

There were no further general discussions regarding this area.

For a detailed update, please refer to the published slides on the meeting page.

DESC Survey – as detailed in Section 7.0

YRH said that MP and Simon Bissett (SB) had added a link for the DESC Survey into the Chat for members to complete.

MP advised that Correla work on behalf of the DESC and CDSP and that a couple of times a year they do a survey with the last one being in July 2021. MP said that he would appreciate members completing the survey during the meeting.

<https://www.surveymonkey.co.uk/r/WTP7DCD>

2.3. Strand 3 NDM Sample Analysis

Simon Bissett (SB) provided an overview of the Strand 3 – NDM Sample Analysis as detailed below:

Background

An evaluation of the NDM Supply Meter Point Demand formula by comparing actual daily demands for NDM supply meter points with estimates of their daily demands across the range of EUCs

Objective

- *Assess accuracy of the algorithms for Gas Year 2020/21*
- *Identify possible areas of improvement for future demand modelling*

Note:

- *Assessment is made on supply meter points which comprise the Demand Estimation Sample including data provided by shippers*

Analysis has taken the following approach:

- *Daily NDM consumption data obtained for Gas Year 2020/21*
- *Validation applied to all daily NDM consumption data in order to exclude sites with suspicious or erroneous data*

Calculate the Model Error:

Mean Absolute Percent Error (MAPE) —‘overall error’ and Mean Percentage Error (MPE) — ‘overall bias’

MODEL: Allocated using

- *NDM sample derived AQs*
- *2020/21 ALPs and DAFs and*
- *2020/21 Weather Correction Factors (WCF)*

RETRO: Allocated using

- NDM sample derived AQs
- 2021/22 ALPs and DAFs (adjusted today/holiday pattern in 2020/21) and
- 2020/21 Weather Correction Factors (WCF)

Assessments conducted by EUC (bucket bands only) for all LDZs for full year, Summer/Winter and by month

Strand 3 NDM Sample Analysis: Observations and Assumptions

SB overviewed the NDM Daily Demand Analysis for gas year 2022/21, as detailed below:

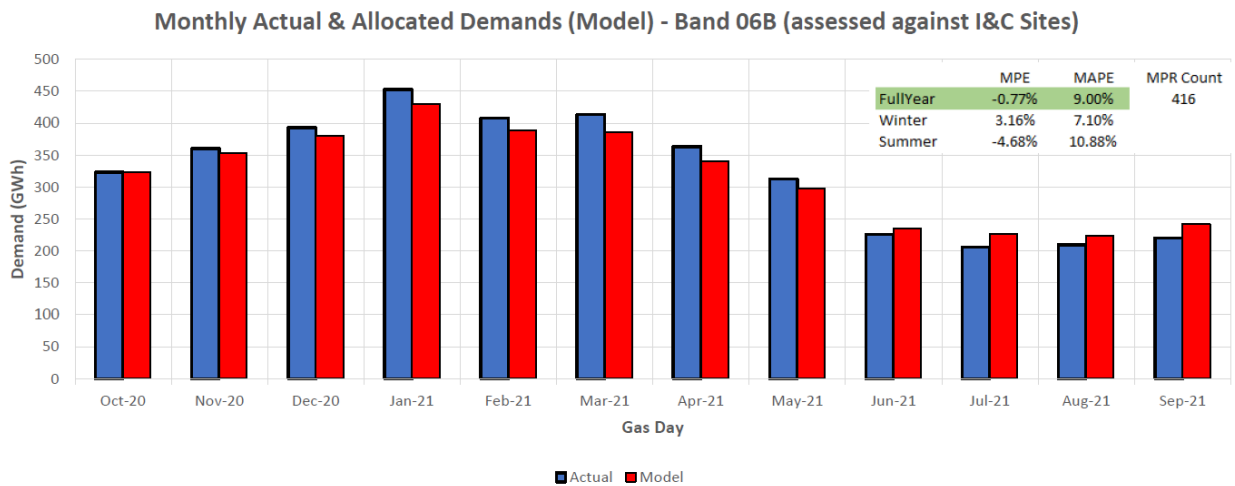
- Analysis includes (where numbers have allowed) a review of the newer EUCs introduced in Gas Year 2019/20 following the implementation of XRN4665
- These EUCs are reliant on the key data held in UK Link being correct, namely Market Sector Codes, Meter Type and Payment Method
- This Gas Year is the first one to be analysed where Gas Demand Profiles based on the new CWV formula/definitions and Seasonal Normal basis have been used in the NDM Supply Meter Point Demand Formula
- The analysis period is impacted by the COVID 19 pandemic and several key date ranges have been observed:
 - Second national lockdown 05/11/20 to 02/12/2020 and Third national lockdown 06/01/21 to 07/03/21
 - Freedom day on 19/07/21
- Additional period of interest include:
 - Strand 1 weather dates Feb 2021 Storm Darcy, colder than normal April and May 2021
 - Strand 2 UIG shoulder period dates October 2020 and May 2021

Charts have been prepared to try and show demand trends in these date ranges

KU asked what the impact was if there was no daily demand in Class 3 if all were in Class 4, from a smearing perspective. SB said that the Correla did recover actual daily values, and they would be a mixture of Class 3 & 4 data, He advised that estimate values can be made from SMART meters where days are missing consumption values, with a maximum of 14 in the summer and winter period. This is only done by the Correla Demand Estimation Team and should not be done by Shippers submitting data. He added if there was a breach in the tolerance then this site was not used.

SB provided a summary of the subsequent slides, and these included the following topics:

- 01BND Results
- 01BPD Results
- 01BNI Results
- 04B and 06B Results
 - **06b Results** - Monthly Actual & Allocated Demands (Model) Band 06B (assessed against I&C Sites)



In relation to the 06B results, KU questioned the actual daily consumption regarding AQ's being charged monthly, especially in relation to COVID-19 and lockdown and then those coming back up again, she did not understand how these figures could be so close in the model. As she thought these would be either much higher or lower. MP said Rolling AQs were not used in Strand 3 analysis and it was the sum of the actual consumption which had been weather corrected, all other parameters were identical to those used in Gemini.

- All EUC's Summary

There were no further general discussions regarding this area.

For a detailed update, please refer to the published slides on the meeting page.

Strand 3 NDM Daily Demand Analysis for all EUCs - Conclusions

SB overviewed the conclusions for Strand 3 Algorithm Accuracy as detailed below:

NDM Daily Demand Analysis headlines:

- *The overall results are reassuring as most models have performed well. Summer has larger modelling error due to reduced overall demands*
- *Less evidence in this year's results of COVID pandemic impacts, although sites impacted may have been removed during validation or already closed down. Alternatively, AQs may now be more representative. In higher EUC bands, loads may be more process and less about space heating*
- *The overall shape of most models are sound but there are areas for improvement, such as shoulder periods and unusual weather events (e.g., large deviation from seasonal normal)*

Analysis of the EUC Profiles:

- *The 01BNI EUC has continued to show it fits the demand pattern better than the traditional 01BND profile*
- *02BND with its 21.31% Full Year MAPE is potentially showing signs of incorrect Market Sector Codes, although the analysis is limited by the small number of sites in the sample (113) for this EUC*
- *01BPD profiles (Mod 451) seems to work well over the Winter period, however it is not so accurate over the summer period. Would benefit from using Class 3 data to derive next year's model?*
- *To fully utilise these new profiles, Shippers must ensure the Market Sector Code flag and Payment Method held on UK Link is correct and up to date for their portfolios*

Strand 3 Modelling Approach - Conclusions

SB overviewed the conclusions for Modelling Approach as detailed below:

- *Modelling Approach for Gas Year 2022/23 (in Spring 2022):*
 - *Strand 3 analysis confirms that new EUC definitions in bands 01B and 02B (including PPM) should continue*
 - *Holiday Code Rules review will provide recommendations on how to handle defined holiday periods e.g., first May Day Bank Holiday*
 - *Prepayment profile to utilise Class 3 data to bring model up to date*
- *Reminder that DESC members will have the opportunity to review and influence the Modelling Approach in 2022*
- *In addition, results presented here can be used as an input/guide to UNC Workgroup 0754R which is looking into methods of improving the modelling performance.*
- *Reminder: Full detailed document will be published providing more results and commentary. This will then be used as DESC's Algorithm Performance Summary (Section 12 of the NDM Algorithms Booklet) which satisfies UNC Section H 1.8.1 (d)*

There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

3. Ad-hoc Workplan Update

3.1. Holiday Codes Review

Penny Griffiths (PG) provided an overview of the background to the Holiday Codes Review as detailed below:

Background

The current Modelling Approach includes a set of rules for determining holiday periods which are then used to calculate Holiday Factors for each of the EUC demand models

- *Appendix 5 of the Modelling Approach document provides the detail of the current Holiday Code Rules*

In summary there are rules for the following periods:

- *Christmas/New Year*
- *Easter (example below)*
- *Easter Period:*
 - *Start: Wednesday before Good Friday; End: Friday after Good Friday*
 - *Easter Codes:*
 - *Code 4 Easter Saturday/Sunday, Code 5 Good Friday/Easter Monday, Code 6 All other days*
- *First May Bank Holiday*
- *Late May Bank Holiday*
- *Summer Holiday*
- *August Bank Holiday*

The current Holiday Code rules have been in place since 2011 and so are overdue a review

In recent year's there have been questions raised in DESC's representations on the draft profiles about the suitability/appropriateness of the holiday periods within the ALPs/DAFs, e.g., length of period for Christmas/New Year and/or First May Bank Holiday

- *EUC demand models are derived from sample data using regression analysis*
- *Regression coefficients (C1 and C2) are derived from sample demands for Mondays to Thursdays*
- *In some EUC demand models a reduction in demand is observed during holiday periods compared with the non-holiday Monday to Thursday demand*
 - *In these cases, it is necessary to carry out modelling of holiday effects by excluding holiday days from the regression*
- *A multiplicative factor for the days assigned in each holiday period is calculated*

- *Holiday factors are calculated from the NDM sample data and therefore cannot be specified in advance of the modelling analysis in the Spring, however rules for defining holiday periods can be reviewed*

PG proceeded to provide an overview of the subsequent slide which included Christmas and Early January 2022, May Bank Holiday, Holiday Codes 5, 9 & 10, and summarised the early conclusions and next steps as detailed below:

Early Conclusions – Code 5

- *Code 5 looks to be not needed for Domestic EUCs and for I&C EUCs appears to be causing the NDM algorithm to under forecast where there are more than 3 working days in the first week of January.*
- *A likely suggested code change is to only have code 5 when there are 3 or fewer working days in the first week of January for England and Wales*
- *Scotland needs more investigation regarding the second Bank Holiday*

Note:

- *Any review of the performance of demand models during holiday periods are naturally less conclusive due to the lack of available data points to review*

Early Conclusions – Codes 9 & 10

- *Code 9 appears to be causing the NDM algorithm to under forecast for Domestic*
- *Code 10 appears to be causing the NDM algorithm to under forecast for I&C*
- *A likely suggested code change is to only apply code 9 to I&C and only apply code 10 to Domestic*

Note:

- *Any review of the performance of demand models during holiday periods are naturally less conclusive due to the lack of available data points to review*

Next Steps

- *Analysis will continue for the other Holiday Codes and will look at the non-holiday Days to see if any need to be added.*
- *Correlia on behalf of Xoserve are looking to agree the Modelling Approach at the March DESC meeting which includes any revisions to holiday codes.*
- *Correlia on behalf of Xoserve will correspond with DESC over email in the new year regarding any proposed changes if necessary.*

There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

3.2. Prepayment EUC (01BPD)

Simon Bissett (SB) provided an overview of the Prepayment EUC (01BPD) as detailed below:

Background

- *In October 2019, 8 new EUCS were introduced to allow separate profiles for Credit, Pre-Payment, Domestic and I&C sites*
- *Unfortunately, no data has been available for Pre-Payment sites and therefore data from MOD451AV was used*
- *The data in MOD451AV identified that profile of a PPM site is flatter than that with a credit meter*
- *This data is now 9 years old, and we have never been able to test any of the Pre-Payment profiles*
- *Currently, there are over 2 million Pre-Payment sites in these EUC Bands*

Objective

- Investigate the use of Class 3 Data as a reliable source for the Pre-Payment EUC (“01BPD”)
- Simulate UIG using a credit domestic Band 1 profile e.g., 01BND for the Pre-Payment population

Prepayment EUCS (01BPD) Conclusions

- It appears that use of Class 3 data could be a valid source for producing a more appropriate EUC demand model
- Data in UK Link for Meter Mechanism and Payment method needs to be up to date and accurate to allow for sites to be:
 - Allocated to the correct EUC and
 - Ensure the Class 3 data used for modelling is reflective of Pre-Payment sites
- The data used from Class 3 shows that the PPM profile remains flatter than that of a standard credit meter (Strand 3 analysis)
- Running a UIG simulation with the PPM sample against a credit “01BND” profile saw an increase in its daily UIG values. This alongside the Strand 3 analysis validates its existence.
- Xoserve still require PPM data from Shippers where possible

There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

4. Draft Modelling Approach 2022 – Gas Year 2022/23

Penny Griffiths (PG) provided an overview of Draft Modelling Approach 2022 as detailed below.

Background – Modelling Approach

- The process for determining the EUCs and Demand Models for the following Gas Year begins with the production of a Modelling Approach document
- The Modelling Approach document provides an overview of the EUC definitions and how the modelling shall be performed, from collecting daily gas consumption data from a sample of NDM supply points through to the industry consultation of the proposed gas demand profiles
- At December’s DESC meeting ‘version 0.1’ of the document is shared, which essentially reflects the previous year’s approach but updated to reflect the new dates
- DESC is asked to formally approve the document at its meeting in the first quarter of each year, ahead of the modelling process starting in the Spring
- For the avoidance of doubt, current discussions at UNC Workgroup 0754R (“Investigate Advanced Analytic Options to improve NDM Demand Modelling”) are not expected to have concluded in time to influence the profiles produced for Gas Year 2022/23. However, any ‘quick wins’ identified by the Workgroup will be included in the current approach if feasible

Objective

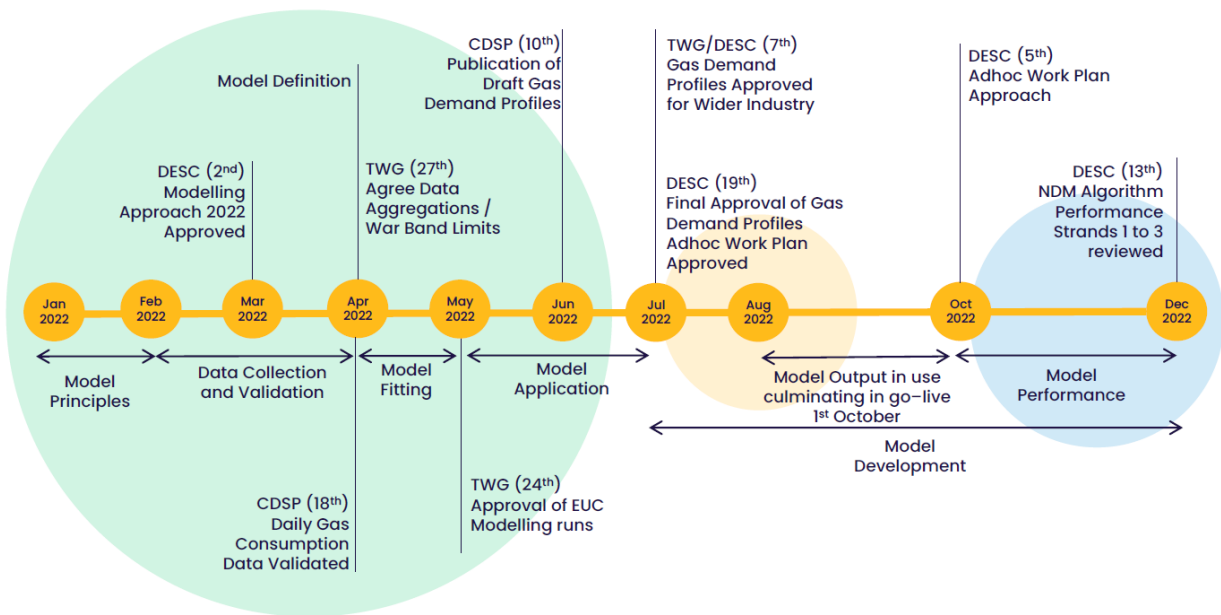
- To commence first round discussions on the high-level principles within the Modelling Approach document, required for the EUC Definitions and Demand Models for Gas Year 2022/23
- To discuss any relevant topics which could influence the approach to next year’s process, e.g., COVID 19 impacts •
- To share high level view of next year’s Demand Estimation timetable

PG provided an overview of the high-level modelling principles, and the COVID-19 impacts as detailed below:

- For the second year running, the Analysis Period will include a significant number of days which will have been impacted by the national and local restrictions as a result of COVID 19

- The impact is likely to be greatly reduced compared to 2020/21 as there have been no full lockdowns during the Analysis Period up to now
- For the 2021/22 gas year it was decided by DESC that only EUC “01BND” would use data from Analysis Period 2020/21
- As it stands our recommendation is to include the data collected for the Analysis Period 21/22. However, the approach can be flexible pending external decisions made during the remaining months of the Analysis Period and the subsequent results shared with DESC in April and May
- The proposed approach to Model Smoothing is shown on the right, picking up the latest Analysis Period for all EUCs, and the two latest used Analysis Periods for Smoothing

Demand Estimation 2022 Timetable



There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

5. NDM Sample Update

Simon Bissett (SB) provided an overview of the NDM Sample Update, as detailed below:

Background

- The Demand Estimation Team are responsible for ensuring there is a representative sample of the NDM population available for:
 - EUC demand modelling and
 - Reviewing demand model performance (Strand 3)
- Traditionally the sample has been sourced from:
 - Xoserve managed sample (Bands 1 and 2) and
 - Transporters managed sample (Bands 2 & 8)
- In recent years, following MOD654S the sample has been boosted by the submission of sampling data from Shippers

Objective

- To provide DESC with a current view of the Demand Estimation sample ahead of next year's Demand Modelling process and provide any relevant updates
- Summarise the quality of data received from MOD654s
- Provide an update on a new source of data
- Provide an update on the Xoserve Managed Sample

NDM Sample – Conclusions

- *Xoserve new sample data handling and validation system allows for regular (monthly) reporting that will take place for all parties submitting data, please review these observations and contact us should any clarification be required*
- *Modification 0654S data is still containing a significant number of data errors, please ensure checks are made before submitting*
- *Class 3 Data has been successfully used in the Sample for this year's Algorithm Performance and has meant that we can test the Pre-Payment models for the first time since they have been introduced. It is proposed that this source will also be used for EUC Demand Model production in 2022*
- *The contract between Xoserve and Technolog will come to an end in April 2022, this data source will be replaced by Shipper Data from Modification 0654S submissions.*

There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

6. NDM Algorithm Review Update

In providing a verbal update which focused on the progress of UNC Request 0754R, Joseph Lloyd (JL) noted the following key items:

- The Workgroup is live and is investigating the latest development in machine learning and undertaking modelling in a different way.
- Validation – and EUCS grouping is due to be investigated.
- Meeting 5 held on the 30 November 2021 was interactive and a 12 month extension was secured for the Workgroup until November 2022 – to allow for more detailed work and the development of improved profiles.
- Key areas; ALPS & DAFS – improved version of current models; refined and changed parameters.
- Greater collaboration working and the option for 'deep dives', being programmatic and objective on the outcomes
- Future meetings to look at how the machine learning can assist with the methodology and EUC boundaries.

JL said that all are welcome to the join the workgroup and the link to webpage is here: <https://www.gasgovernance.co.uk/0754>

There were no general discussions regarding this section.

For a detailed update, please refer to the published slides on the meeting page.

7. DESC Survey

Simon Bissett (SB) provided the link below and DESC Members were asked to complete the survey during the meeting via the link: <https://www.surveymonkey.co.uk/r/WTP7DCD>

8. Any Other Business

8.1. There were no AOB items were raised.

9. Communication of Key Messages

The DESC Summary of Key Messages document will be provided as a post meeting update and will be published at: <https://www.gasgovernance.co.uk/desc/summarykeymessages>

10. Diary Planning

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

Time / Date	Paper Publication Deadline	Venue	Workgroup Programme
10:00 Wednesday 02 March 2022	5pm Tuesday 22 February 2022	Microsoft Teams	DESC
10:00 Wednesday 27 April 2022	5pm Tuesday 19 April 2022	Microsoft Teams	DESC Technical Work Group
10:00 Tuesday 24 May 2022	5pm Monday 16 May 2022	Microsoft Teams	DESC Technical Work Group
10:00 Thursday 07 July 2022	5pm Wednesday 29 June 2022	Microsoft Teams	DESC
10:00 Tuesday 19 July 2022	5pm Monday 11 July 2022	Microsoft Teams	DESC
10:00 Wednesday 05 October 2022	5pm Tuesday 27 September 2022	Microsoft Teams	DESC
10:00 Tuesday 13 December 2022	5pm Tuesday 03 December 2022	Microsoft Teams	DESC

DESC Action Table (as at 14 December 2021)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Target Date	Status Update
DESC 0901	06/10/21	3.	<i>Reference DCC Pre-Payment Meter related information – Correlá (MP) to investigate what data is retained and whether it is suitable for sharing, and if so, between which parties.</i>	Correlá (MP)	02/03/22	Carried forward