Joint Office of Gas Transporters

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UNC Demand Estimation Sub-Committee (DESC) Minutes
Wednesday 04 October 2023
Radcliffe House, Blenheim Court, Warwick Road Solihull B91 2AA and via Microsoft Teams

Attendees

Helen Cuin (Chair)*	(HC)	Joint Office
Sian Wright (Secretary)	(SW)	Joint Office (WWU)

Shipper Members (Voting)

Bhavesh Tailor	(BT)	E.ON
Cosmin Popovici	(CP)	TotalEnergies Gas & Power Ltd
Katherine Uzzell	(KU)	SSE
Mark Linke	(ML)	Centrica
Tom Parker	(TP)	Brook Green Energy

Transporter Members (Voting)

David Mitchell	(DM)	Scotia Gas Networks (SGN)
Murugan Babumohanan	(RL)	National Gas Transmission (NGT)
Neil Stovold	(NS)	Wales & West Utilities (WWU)
Paul O'Toole	(POT)	Northern Gas Networks (NGN)
Sanjeev Loi	(SL)	Cadent Gas

Observers (Non-Voting)

Catarina Casteleiro	(CC)	Shell Energy
Mark Perry*	(MP)	Representative of Xoserve
Michael Maguire*	(MM)	Representative of Xoserve
Penny Griffiths*	(PG)	Representative of Xoserve
Sarah Palmer*	(SP)	E.ON
Simon Bissett	(SBi)	Representative of Xoserve

*at Radcliffe House, Solihull

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.

Please note these minutes do not replicate/include detailed content provided within the presentation slides, therefore it is recommended that the published presentation material is reviewed in conjunction with these minutes. Copies of papers are available at: https://www.gasgovernance.co.uk/desc/041023

1. Introduction and Status Review

Helen Cuin (HC) welcomed everyone to the meeting.

1.1. Apologies for Absence

No apologies. All members present.

1.2. Note of Alternates

None to advise.

1.3. Quoracy Status

The meeting was confirmed as being fully quorate.

1.4. Approval of Minutes (05 July 2023)

The Minutes of 05 July 2023 were approved.

1.5. Approval of Late Papers

No late papers to consider.

1.6. Review of Outstanding Actions

None outstanding.

2. DESC Membership / Meeting Schedule

Mark Perry (MP) welcomed the Members to the Committee. The Alternates were confirmed as follows:

User Members	Organisation	Alternate(s)
Bhavesh Tailor	E.ON	Sarah Palmer
Cosmin Popovici	TotalEnergies Gas & Power Ltd	Mark Hunt TBC
Katherine Uzzell	SSE	Neil Crompton
Mark Linke	Centrica	TBC
Tom Parker	Brook Green Trading	Adam Wilson or Samuel Hill
Transporter Members	**Organisation**	**Alternate(s)**
David Mitchell	Scotia Gas Networks	Ross Edwards or Barrie Gillam
Murugan Babumohanan	National Gas Transmission	Robert Longwe
Paul O'Toole	Northern Gas Networks	Anna Kapeni
Sanjeev Loi	Cadent	Shiv Singh or Ricci Glen
Neil Stovold	Wales & West Utilities	Gregory Hill

MP provided a high-level overview to commence the new DESC cycle, looking at the areas that would be covered over the next 12 months with the presentation pack published here: https://www.gasgovernance.co.uk/DESC/041023

DESC members can find useful information in the presentation pack, including the Terms of Reference for the DESC Committee, what is in scope and the process for appointing users to the Committee. MP noted the key principle for members who join DESC to represent the industry.

MP explained at a high level the timetable and annual cycle of work, commencing with the process of preparing profiles for the next gas year 2024/25, initially reviewing the previous model performance and looking into any ad-hoc work items that might influence how to prepare the profiles for the next year.

MP advised that alongside the annual cycle, there are UNC TPD Section H milestones that DESC have responsibility for, spread out over the next 12 months, the table below lists the milestones and when they are likely to be discussed through the year.

CDSP / DESC Obligations and Timetable: October 2023 to September 2024

Milestone	UNC H Ref	2023			2024								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
DESC Membership confirmed	1.12	✔		✔									
NDM Sampling: Data Collection and Validation	1.6	✔					✔						
NDM Algorithm Performance for Gas Year 2022/23	1.8			✔								✔	
DESC Adhoc Workplan	1.7	✔		✔			✔				✔		
DESC Modelling Approach – EUCs and Demand Models	1.7			✔			✔						
Single Year EUC Demand Modelling	1.7								✔				
Model Smoothing and Draft Gas Demand Profiles	1.7									✔			
Industry Consultation	1.8									✔	✔		
Gas Demand Profiles finalised and Core systems updated	1.9											✔	
Seasonal Normal Review 2025	1.4	✔		✔			✔		✔		✔		

Seasonal Normal Review 2025 will be a key topic for this group over the coming year. It is an activity that is completed every 5 years. This is further discussed in item 5.0.

MP provided a brief overview of the topics due to be covered in future meetings and where votes and approvals may be required. The list of 2024 Meeting dates was shared, these are available in item 8.0 Diary Planning and listed on the Joint Office Website at: https://www.gasgovernance.co.uk/DESC/2024.

MP concluded with useful links and contacts for the Demand Estimation, NDM Nominations and Allocations page and the secure area folder structure for Demand Estimation Data.

3.   **NDM Algorithms Update**

3.1. Gas Year 2022/23

Mark Perry (MP) provided the 2022/23 NDM Model analysis from a DESC perspective, as it was requested last year to keep in touch with what the models were doing and the consequences to the Unidentified Gas Levels (UIG).

MP explained, that this time last year, everyone was very aware of the high gas prices and the conservational impacts last summer and that it was likely to continue.

MP went on to explain the latest UIG levels and trends for 2022/23 and other related items, particularly the AQs which are a big drive.

At the start of the 2022 Gas Year, there was a lot of negative UIG, though that has tailed off over the summer. In terms of the average UIG, there are plenty of instances where negative UIG is happening but not to the same extent it was earlier in the year. The main driver is effectively a significant over-allocation of NDM demand, which in turn sees UIG going into negative to balance it. MP noted that the AQ position has seen a decline by 13% however in recent months that has started to flatten off partly due to less opportunity to conserve energy during the summer months.

MP advised after each monthly AQ calculation, the average AQ values are published for key End User Categories (EUCs), which has been useful for the industry to understand why UIG is what it is, and why it is over-allocating, and publishing this data will continue.

MP explained that a number of the models have summer reductions built in, suppressing for June-September and helping towards that NDM over-allocation. The summer reduction is however, no longer in play.

For full details please refer to the presentation published.

MP asked for feedback on monitoring certain metrics. As this is a high-profile topic that gets regular queries. All agreed the metrics were useful and a regular agenda item was supported for NDM Algorithm Updates.

Katherine Uzzell (KU) questioned the figures shown on Slide 6 of the presentation showing the winter period as quite high post reconciliation, noting that the UIG is considered legitimate and about a 2% average, KU asked if there is a reason why UIG was consistently 3.5-4% over the winter months (and still going up)?

MP explained that when you look at the average, it looks around 2% (link to chart here) ultimately when the reconciliation happens, there will be a pair of readings over a 6 or 12 month period, its not known for certain how that gas has been consumed, it will follow the initial allocation profile, so it is possible, over the year it is averaging just over 2%. For 2022/21 it was 2%. Month-on-month has differences, but over the year it is averaging 2%.

The Committee considered the Post Reconciliation analysis and the average Unidentified Gas (UIG). A full review will be presented at the December DESC meeting.

3.2. Gas Year 2023/24

Penny Griffiths (PG) provided the 2023/24 NDM Model analysis, including a review summary of the activities and reflected on the impacts of the NDM Demand Estimation to UIG.

Following formal approval in July, the new Gas Demand Profiles went live on 30 September 2023

for the D-1 Nominations run. For full details please refer to the [presentation](#) published.

PG provided a view on the look ahead, reiterating the points raised in 3.1 where it is believed there has been an over-estimation of NDM demand and this is likely to continue into the new gas year which will in turn contribute to negative UIG continuing, but not to the extent seen last year.

4.   **DESC Workplan Update**

Penny Griffiths (PG) provided an update on the Standard Workplan items, which included:
- NDM Algorithm Performance for Gas Year 2022/23
- Modelling Approach 2024
- Managing Daily Gas Consumption Data submissions

PG confirmed the 3 items for the Ad Hoc Workplan:
- Model Smoothing Review
- Review Day of the Week Demand Behaviours
- Review Impact of Flexible Power Generation on UIG

PG also provided a summary of the Weather related workplan items:
- Manage Daily Weather Data Service Provider
- Supporting the transition to a UK Link API
- Seasonal Normal Review 2025

The timetable as per item 2.0 was shown for the workplan items. For full details please refer to the [presentation](#) published. Draft Proposals will be brought to the December meeting for approval in March 2024.

Simon Bissett (SB) provided an update on the NDM Sample. SB confirmed emails had been sent out, the deadline for eligible shippers to respond was 06 October 2023. Eligible shippers are those impacted by UNC Modification 0654S and a link was provided for further detail. A good amount of sample data is expected.

SB provided a brief update on the NDM sample Service Provider for Cadent, NGN and WWU. Since the April 2023 implementation, the number of contributing sites in the DNs sample has increased. A full analysis will be completed in October to determine which sites contribute to the algorithm performance. A further update is expected at the December meeting.

Michael Maguire (MM) provided an update on the Weather Data API. MM advised the contract on new API terms between CDSP and WSP is currently being processed and should be completed very soon (once the API in UK Link is implemented).

MM remarked that no changes are expected to the Actual Composite Weather Variable (CWV) calculation.

MM summarised the UK Link 'Dual Running' project, design is complete, currently in build phase, testing due to take place in October, with go-live planned for November. No change to anyone using CWV data, it will still be available at the same time and in the same places.

Penny Griffiths (PG) provided a further overview of the Ad Hoc Workplan Items:

- Review of Model Smoothing Approach (Page 12)

    The primary objective is to assess whether the current model smoothing approach continues to reduce Volatility in the Demand Model and subsequent Gas Demand profiles year on year. Predictability will also be considered. For full details please refer to the [presentation](#) published. Results for this item will be presented at the March DESC meeting.

- Day of the Week Modelling Approach (Page 13)

    The primary objective is to determine if the current grouping of Monday to Thursday non-holidays for baseline modelling purposes is still appropriate.

    PG explained that irregularities had started to be seen, for example on Mondays which could be attributed to the working-from-home trend, where Mondays are looking more like Fridays whilst the middle of the week looked more normal.

New rules will be devised for testing, which can then be used to remodel previous years. Any new rules would need to provide significant improvements.

Results for this item will be presented at the March DESC meeting.

It was suggested that there might not be enough evidence yet, this might be a collection of information piece. PG agreed, noting that it's likely to be a post-COVID effect, but also highlighting that last year was the first year a 'deep dive' into the data had taken place.

- Review Impact of Flexible Power Generation on NDM Modelling Accuracy (Page 14)

    The primary objective is to investigate the impact of Flexible Power Generation Sites on the accuracy of NDM Demand Estimation.

    PG explained these sites tend to turn on when the wind power is low, so it is quite random when they turn on, they are quite high consumption, but usually only for a day. They are impossible to forecast, but they do affect the forecast and UIG.

    The suggested approach is to identify them and where possible obtain daily energy usage figures to assess against the current approach to profiles.

    3 out of 4 DNs have responded to requests so far.

    The results will be presented at the December and March DESC meetings.

MP concluded the DESC Workplan update, hoping what was presented was in line with expectations and invited comments.

Sarah Palmer (SP) welcomed what was presented, stating that it feels in the right space to what was discussed in July, pointing out the algorithm performance patterns (Page 13) and there being an element of trust that the data set will be followed through.

Mark Linke (ML) commented on the variability of UIG, looking at high level UIG it is hiding a lot of noise across the LDZs and weekdays from week to week that really shouldn't have that variability in them.

ML pointed out if it's assumed the AQ is logged in every LDZ the same, it would be expected to see a lot more stability across the LDZs, and we would just be looking to shift the level and get to a more stable number.

ML expressed he didn't think the AQ is going to be the solution to quite a lot of variability. He went on to suggest in August benefited from the summer shutdown being in the profiles which made negative UIG go away, but this doesn't exist as a concept anymore, so we have benefited from it coming out of the NDM, but by implication of not needing them then the profile was wrong, so there is something there needed to find to work out how day on day for the same CWV but an LDZ can get a couple of percentage points. There is something not being picked up in the linearity of the demand response over and above the AQ, because changing the AQ can make one day worse and correct the other one.

MP acknowledged that these are all things that have been talking about as a team when reviewing the UIG daily and agreed there are areas to improve on.

ML observed as all the parameters are interlinked it will be difficult to unpick all these factors to work out what needs to change without knowing what the cause is and without access to more data.

MP stated the CWV formula review will look to pick this up. MP went on to explain one thing he is conscious of when the correction factor switches from positive to negative there are stark changes in UIG levels, which shouldn't be as obvious as it is, so there is scope to improve.

5. **Seasonal Normal Review 2025**

Michael McGuire (MM) provided a recap for information to confirm the scope of the Seasonal Normal CWV (SNCWV) Formula Review and to look at the next steps for the Seasonal Normal Review Cycle (SNRC). For full details please refer to the presentation published.

MM outlined the background of the Seasonal Normal Review which cycles every 5 years at minimum. DESC are responsible for reviewing the CWV formula and the equivalent Seasonal Normal CWV formula (SNCWV). The next review is due to take place on 01 October 2025. MM noted that the latest seasonal normal review basis and CWV formula came into effect on 01 October 2020, and that's the one currently used.

MM presented the Seasonal Review cycle (Slide 5), noting that currently, DESC is in the CWV Defined and Calculated stage.

The workgroup then considered the high-level timeline presented on Slide 6. Currently in the preparatory work stage for CWV formula review, looking at the scope and how that's going to work now the profiles are in place for gas year 2023/24.

MM went on to outline the objectives (Slide 7) which included:
- Present findings of analysis of precipitation data
- Outline the scope and approach of the CWV optimisation
- Provide an update on next steps of the Seasonal Normal Review, including the refresh of the Climate Change Methodology (CCM)

MM provided an update on the objectives, explaining that following the last DESC meeting exploratory analysis of precipitation data has taken place to try and assess whether there's a clear trend not being picked up that's related to precipitation and how that would enhance the CWV. MM explained precipitation data has been sourced from two weather stations Heathrow and Glasgow using the gas years 2015/16 to 2021/22.

MM went on to explain a standalone precipitation term was added to the CWV and trialled with a sample of definitions. This term does not interact with the other weather variables within the formula. Based on the results for the majority it is assumed that the CWV should be reduced. For full details and variables presented please refer to the presentation published.

MM suggested that due to the locality, it was recommended that Precipitation is not included in the scope of the CWV formula review at this stage. This was agreed by the Committee.

MM outlined the scope of the CWV Formula Review (Slide 12). He reminded the Committee that the definition of the CWV is a single day, a single measurement of daily weather in each LDZ, and is a function of actual temperature, wind speed, solar radiation, effective temperature, Seasonal Normal Effective Temperature (SNET), and Seasonal Normal Effective Solar (SNES).

More detail is in section 11 of the NDM algorithms booklet.

The objective of CWV optimisation is to attempt to find the optimum set of parameters which provide the best fit, when plotted using regression models, between the CWV and daily demand in each LDZ.

MM stated the last time that optimization was completed it was using a Microsoft Excel solver function and will be looking to provide a tool with similar analytical tools this time.

MM reminded the Committee of the weather stations that used for optimisation and the resultant CWV definition. It is not expected that any of these will change during the monitoring process. (Slide 14).

Summarising the Demand Data to perform optimization MM explained the 'Aggregate NDM Demand' used. The calculation can be found on Slide 15.

MM welcomed feedback on whether data affected by Covid-19 lockdowns and gas price increases should form part of CWV optimisation datasets.

The Committee considered the use of more recent gas years and changes in behaviour.

Sarah Palmer (SP) suggested there may be a struggle to get a relationship thought appropriate for the future if the industry doesn't use recent past data, not expecting a fundamental shift pattern either from a week usage pattern or a consumption level.

SP pointed out that part of the understanding will be looking at the differences in the periods in terms of their relationship and whether are they significantly different. Noting there may be a need to be flexible with the things that are looked at and reflecting where the changes in

behaviour come from.

MM agreed, commenting more recent gas years are probably a better indicator of what is going to happen going forward. This will be looked at during the optimization, and how individual years vary from one another.

MM summarised the Climate Change Methodology work (Slide 18) explaining it was agreed at the July meeting that DESC (with the MET Office) would be refreshing the Climate Change Methodology with the work taking place between January and July 2024 in time for the Seasonal Normal Review. Regular updates on this will be provided at DESC meetings for the remainder of 2023 and into 2024.

The Committee considered the stakeholder workgroup to work closely with the CDSP and Met Office to oversee the update of the Climate Change Methodology (CCM), Sarah Palmer (SP) and Tom Parker (TP) volunteered.

New Action 1001: DESC Members to consider volunteering for the Stakeholder Workgroup for the Climate Change Methodology (CCM) Project.

MM concluded the presentation by confirming the next steps for the Seasonal Normal Review.

6. Any Other Business

None raised.

7. Communication of Key Messages

No key Message Communication required from today's Meeting.

8. 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 Tuesday 19 December 2023	5 pm Monday 11 December 2023	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 06 March 2024	5 pm Tuesday 27 February 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 24 April 2024	5 pm Tuesday 17 April 2024	Radcliffe House, Warwick Road Solihull, B91 2AA	TBC

		& Microsoft Teams	
10:00 Wednesday 22 May 2024	5 pm Tuesday 14 May 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 03 July 2024	5 pm Tuesday 25 June 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 17 July 2024	5 pm Tuesday 09 July 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 09 October 2024	5 pm Tuesday 01 October 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC
10:00 Wednesday 11 December 2024	5 pm Tuesday 03 December 2024	Radcliffe House, Warwick Road Solihull, B91 2AA & Microsoft Teams	TBC

DESC Action Table						
Action Ref	**Meeting Date**	**Minute Ref**	**Action**	**Reporting Month**	**Owner**	**Status Update**
1001	04/10/23	5.0	DESC Members to consider volunteering for the Stakeholder Workgroup for the Climate Change Methodology (CCM) Project.	December	All Members	**Pending**