



Demand Estimation Sub Committee

2.0 NDM Algorithms Update Gas Year 2022-23

1st March 2023

Overview



- An overview of the Demand Estimation process and output can be found [here](#)
- Annual modelling cycle of activities are represented in diagram opposite
- This presentation relates to the “Demand Estimation” phase where the Gas Demand Profiles are now being used

CDSP / DESC Obligations and Timetable: October 2021 to September 2022

Milestone	UNC H Ref	10/21	11/21	12/21	01/22	02/22	03/22	04/22	05/22	06/22	07/22	08/22	09/22
DESC Membership confirmed	1.12	✓											
NDM Sampling: Data Collection and Validation	1.6	✓						✓					
NDM Algorithm Performance for Gas Year 2021/22	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											✓	

Objectives

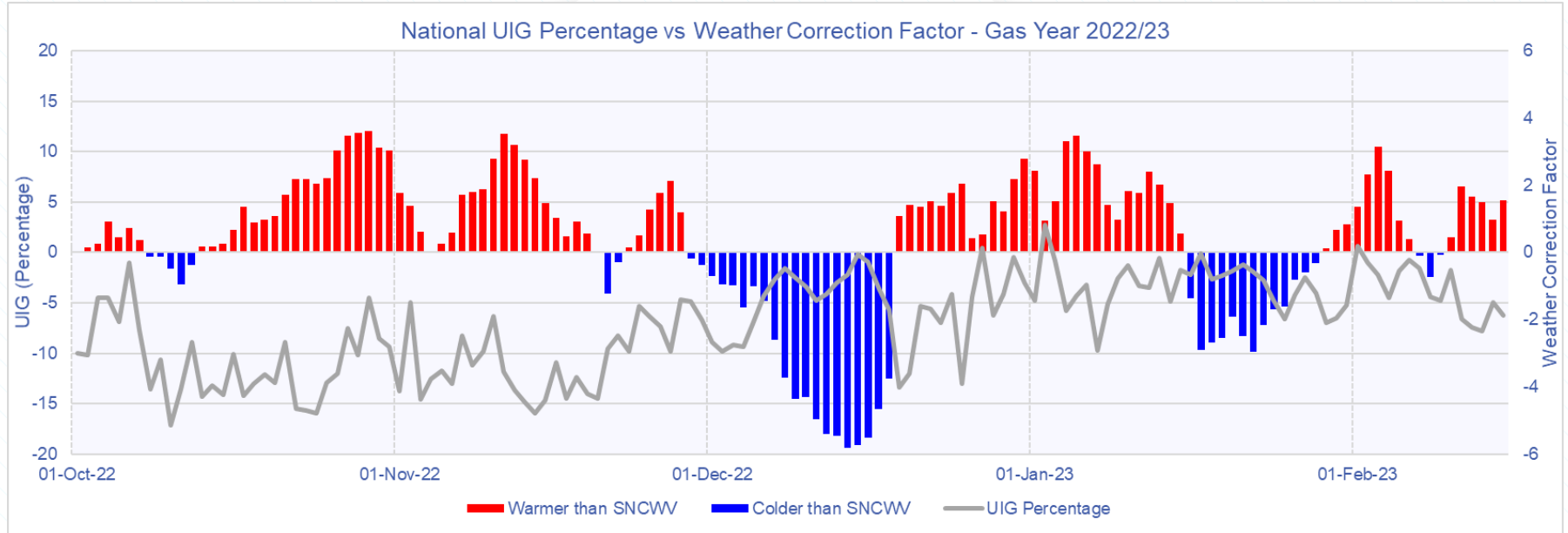
- Objective 1:
Reviewing latest UIG levels/trends for Gas Year 2022/23, following discussion at October's DESC, and the request to keep this as a regular agenda item for DESC to review whilst there continues to be significant NDM over-allocation
- Objective 2:
Confirm how DESC wants to treat the additional Bank-Holiday in May 2023 (King's Coronation) which was announced after the NDM profiles for Gas Year 2022/23 were finalised and systems updated

VOTE
REQUIRED

Background – Objective 1: Gas Year 2022/23 Review

- During Gas Year 2021/22 there was a significant overallocation of NDM demand by the Demand Estimation process
- This had been caused predominantly by AOs not reflecting the latest 'base level demand', due to the step change in behaviour caused by increase in wholesale gas prices
- At the start of Gas Year 2022/23 and ahead of the upcoming winter, DESC discussed potential options to mitigate the NDM over allocation, including applying factors to the Annual Load Profile (ALP)
- At the October meeting DESC concluded that this was not the correct approach and focus should be on the root cause i.e. AO, however agreed it should be reviewed at future meetings

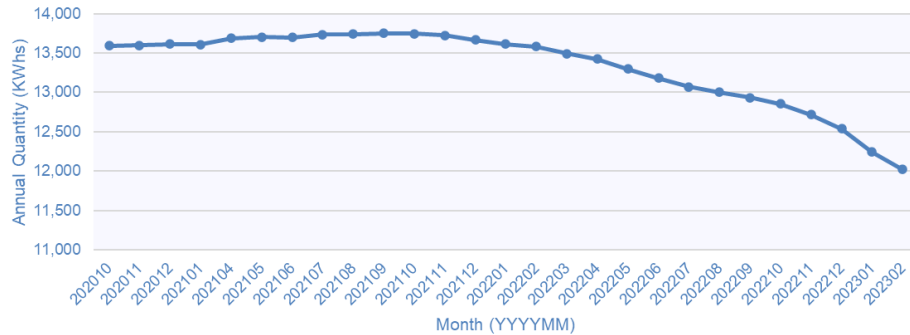
Analysis – Objective 1: Gas Year 2022/23 Review



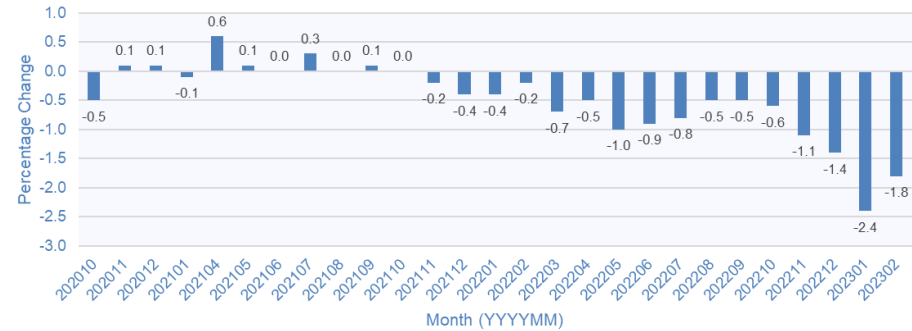
- Unidentified Gas (UIG) levels during Gas Year 2022/23 consistently below zero, continuing the trend observed during 2nd half of Gas Year 2021/22 (Avg. UIG: -7% upto mid Feb 2023)
- Existing assumption that it is being caused by changes in end consumer behaviour (particularly Domestic) is supported by Reconciliation values and AQ levels

Analysis – Objective 1: Gas Year 2022/23 Review

Average Annual Quantity for 01BND - National



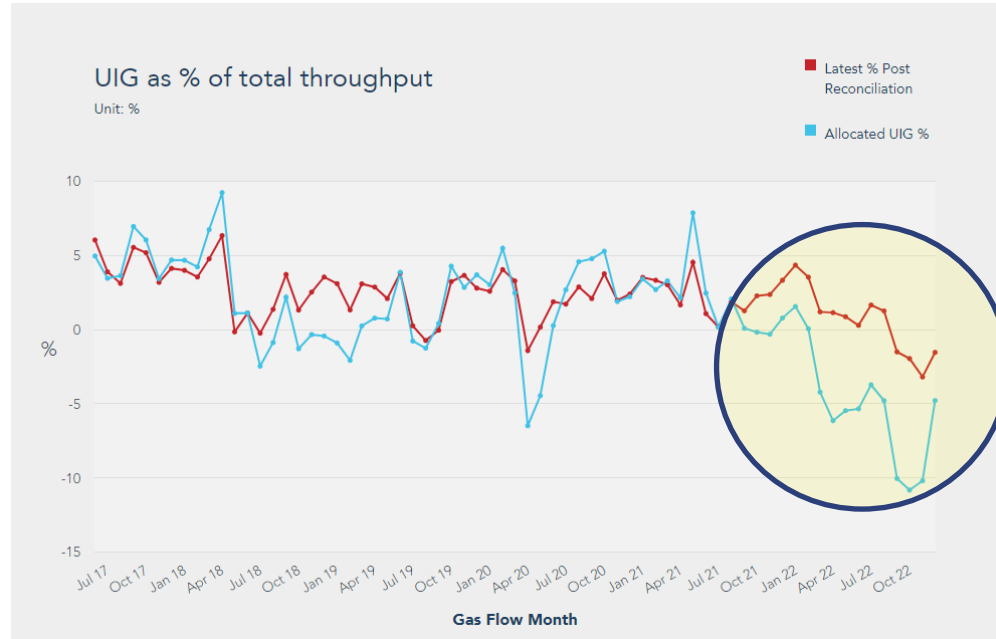
Annual Quantity % Change for 01BND - National



- Avg. AQs for Band 1 Domestic Non-Prepayment (“01BND”) continue to decrease every month (over 12% in past 12 months)
- Current trend with Domestic AQ is unprecedented with no sign yet of the levels ‘flattening off’
- As pointed out at December DESC, during this extended period of NDM overallocation and negative UIG, the Demand Estimation team shall provide an updated view each month of the latest average AQ data/trends across the EUCs (i.e. charts above) on the [secure area of UK Link Docs](#):

Location: Folder 18. NDM Profiling and Capacity Estimation Algorithms / UIG / Average AQ

Analysis – Objective 1: Gas Year 2022/23 Review



- Meter Point Reconciliations processed on the Amendment Invoice (AMS) continue to create large credit reconciliations and therefore debits to UIG
- This is highlighted by shaded area above which estimates the UIG% post reconciliation (red line on chart above) – link to online chart [here](#)

Conclusions – Objective 1: Gas Year 2022/23 Review

- Month on month the average negative UIG is dropping (see table opposite), suggesting the updated AQs from the monthly calculations are having an impact, however NDM overallocation/negative UIG is likely to continue until the industry sees AQ levels stabilise and upto date reads are received for the majority of the population
- Suggest DESC continue to ‘check in’ and monitor Gas Year 2022/23 during Spring and Summer DESC meetings
- Impacts of changes in behaviour, as a result of price sensitivity, are likely to be observed in this year’s Demand Modelling processes when preparing the profiles for Gas Year 2023/24 – something to discuss further under Agenda item 4.0

Month	Avg. UIG (%)
Oct'22	-10.7
Nov'22	-10.5
Dec'22	-5.2
Jan'23	-3.37
Feb'23 (upto15th)	-3.66

Background – Objective 2: Extra Bank Holiday

- On 6th November the government announced an additional Bank Holiday on Monday 8th May to mark the coronation of King Charles III
- This holiday is in addition to the Bank Holiday already scheduled for 'May Day' on Monday 1st May
- As per DESC's demand modelling approach, the Gas Demand Profiles contain holiday factors for the May Day period, namely Saturday 29th April to Monday 1st May inclusive
- Without DESC intervention the profiles for Saturday 6th to Monday 8th May will reflect a 'normal weekend'

Analysis – Objective 2: Extra Bank Holiday

- At the DESC meeting in December, options were discussed, including updating the ALP and DAF profiles for the relevant Bank Holiday weekend (6th to 8th May 2023) using the Holiday Code 9 factors from the previous May Day Bank Holiday weekend
- Reminder of Avg. Factors for Non-Domestic EUCs for Holiday Code 9 below:

EUC Band	01	02	03	04	05	06	07	08
Avg. Holiday Factor	0.84	0.83	0.80	0.79	0.76	0.70	0.80	0.80

- Based on figures above, typically the Bank Holiday reduction is c.20% over the 3 days.

Reminder: The Holiday Factors are calculated at EUC level and are available in modelling support files – EUCHOL22S.txt and EUCHOL22L.txt

- DESC did not express a strong view to update the existing profiles but were asked to consider the options and decide in March meeting

Recommendation - Objective 2: Extra Bank Holiday

Option 1 – Update ALP DAF Profiles (used in NDM Allocation only) for Gas Year 2022/23 to reflect extra Bank Holiday

- + NDM Allocation for Domestic / Non-Domestic sectors likely to be more accurate for Bank Holiday weekend
- Industry will need to amend systems to reflect new values where they use ALPs/DAFs to replicate NDM allocation (i.e. Gemini). Version used for AQ would not be changed

Option 2 – Do Nothing i.e. leave 6th to 8th May as 'normal' weekend

- + Industry will not need to amend systems to reflect new values
- + Any under/over allocation likely to be smaller than current 'price sensitivity differences' and of course ultimately reconciliation will correct
- NDM Allocation for Domestic / Non-Domestic sectors likely to be less accurate for Bank Holiday weekend

Recommended