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# Demand Estimation Sub Committee

## 5.0 Agreement of Adhoc Workplan

### 19 July 2023

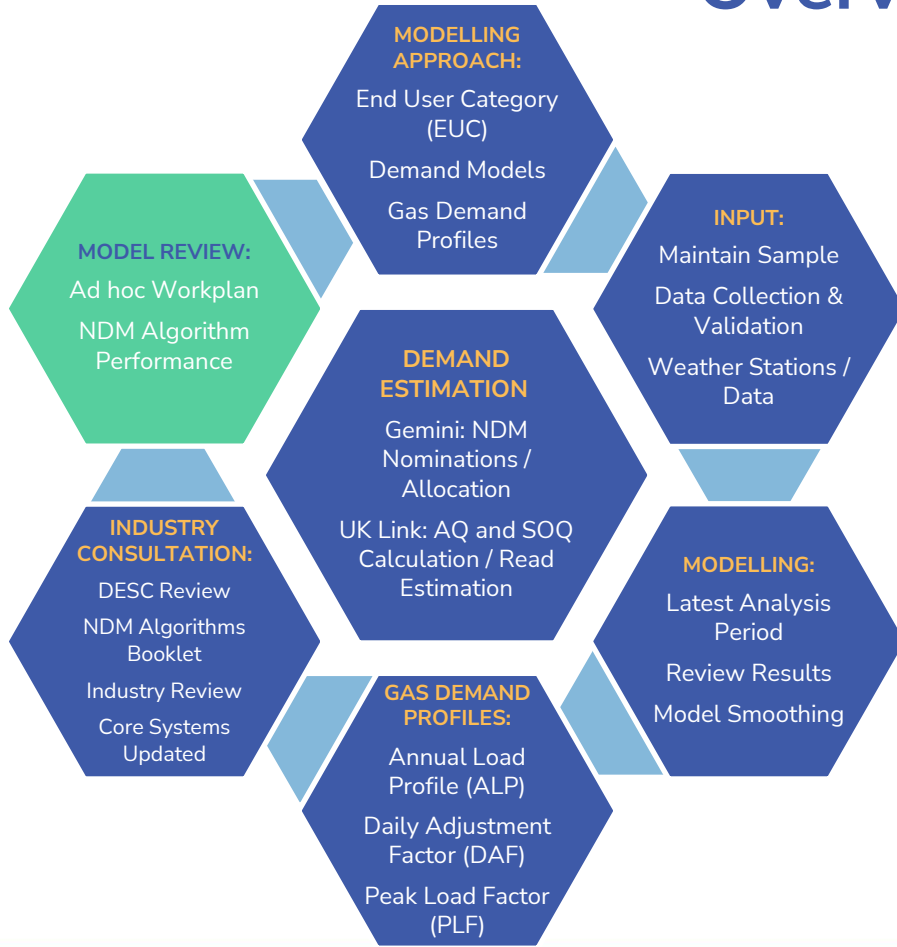
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5.0 Agreement of Adhoc Workplan

# **BACKGROUND, TIMETABLE AND OBJECTIVES**

# 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 **Model Review** phase of the Demand Model cycle

# Background

DESC's annual timetable of work naturally falls into 2 phases and time periods:

- 1. April to September:** Core modelling work for next Gas Year's Demand Profiles – this is fitted around defined industry timescales with limited flexibility
    - Relevant DESC meetings are in April, May and 2 in July
  - 2. October to March:** Review of previous Gas Year's Demand Profiles, Adhoc Workplan and Preparation for Modelling – this period has more flexibility in how the time is utilised
    - Relevant DESC meetings are in October, December and March
- DESC have the responsibility of reviewing the proposed set of activities within the Adhoc Workplan, in addition to the standard work plan items

# CDSP / DESC Obligations and Timetable: October 2022 to September 2023

Milestone	UNC H Ref	2022			2023									
		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 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												✓	
Climate Change Methodology progressed (SN Review 2025)	1.4			✓			✓		✓		✓			

# Objectives

- To agree DESC's Workplan for Autumn / Winter period (October 2023 to March 2024) ahead of next year's modelling process (April 2024 to September 2024)

- As we are unable to complete all the raised suggestions, a vote will be required to choose the workplan items

Vote  
Required

# Autumn Winter 23/24 – Standard Workplan Items (1 of 2)

- NDM Algorithm Performance for Gas Year 2022/23 – (reported at December 2023 DESC)
  - Strand 1 – Weather Analysis
  - Strand 2 – Unidentified Gas (UIG) Analysis
  - Strand 3 – NDM Daily Demand Analysis
  - Strand 4 – Reconciliation Analysis\*

\*Note: Strand 4 has not been reported on before – we intend to explore how we can use Reconciliation data to learn about the performance of the NDM Demand Profiles
- Modelling Approach 2024 – Agreement on methodology for deriving Demand Profiles for Gas Year 2024/25 – (reported at December 2023 and March 2024 DESC)
- Managing Daily Gas Consumption Data submissions – (DN's sample and MOD 654S eligible Shipper data)



# Autumn Winter 23/24 – Standard Workplan Items (2 of 2)

There are a number of Weather related workplan items due to be delivered during this period

- Manage Daily Weather Data Service Provider contract as CDSP transitions from 'file format delivery' to API platform solution
- Supporting transition to a UK Link API, to poll daily weather data for Demand Estimation processes – due to go live in November
- Seasonal Normal Review 2025
  - Progress Climate Change Methodology procurement
  - Preparation of Approach and Solution for delivering CWV Formula Review

# Autumn Winter 23/24 – Adhoc Workplan Item 1 Proposal

## Model Smoothing Review

Objective: To assess whether Model Smoothing approach continues to reduce volatility in the Demand Model characteristics and subsequent Gas Demand Profiles, from one year to the next

- DESC has applied model smoothing as an approach for a number of years in response to shipper concerns about year-on-year variability in Gas Demand Profiles and Peak Load Factors
- The most recent assessment of the continued applicability of demand model smoothing was undertaken in Winter 2020
- Following the review DESC agreed the 3-year methodology was still appropriate, and the next review would be considered as part of DESC's work plan in Autumn 2023
- The analysis feels relevant given the changes in behaviour triggered by recent events such as the pandemic and energy crisis

# Autumn Winter 23/24 – Adhoc Workplan Item 2 Proposal

## Review Day of Week Demand Behaviours

Objective: Investigate if Day of Week Demand Behaviours are still relevant, particularly the grouping of Monday to Thursday as the core demand model

- Assess whether a more accurate demand model exists using different combinations / approaches
- Strand 3 Analysis for Gas Year 2021/22 noted differing behaviour for Mondays in some EUCs
- Additional point of investigation could be to look at the rules regarding weekend effects for Domestic / Non-Domestic
  - For 01BND, all positive weekend factors are allowed, whilst negative values have to be significant at the 95% level or are set to zero
  - For all other EUCs only values that are significant at the 95% level are allowed, the rest are set to zero
- This has been on the workplan since 2015, suggest it is removed if there is no interest at present
  - Any proposed changes in modelling approach may not be accommodated by the current Demand Modelling system design. This would mean the benefits would need to be conclusive

# Autumn Winter 23/24 – Adhoc Workplan Item 3 Proposal

## Review AQ Ranges

Objective: Review the appropriateness of the current AQ Ranges / End User Category Definition

- To consider the general reductions in consumption and if this fundamental shift needs accounting for in our End User Category definitions
- At the DESC meeting on 24 May, DESC Member for E.ON enquired about decreasing AQs and whether DESC may need to consider the general reductions in consumption and if there is a fundamental shift which needs accounting for
- This comment was noted as a potential Adhoc Workplan item for DESC to review
- Consideration needs to be given to what analysis would be required to ensure any proposed changes improve DESC's key objective of reducing modelling error/UIG at allocation, thereby minimising flows of energy at reconciliation

# Autumn Winter 23/24 – Adhoc Workplan Item 4 Proposal

## Review Impact of Flexible Power Generation on UIG

Objective: Investigate data to see if flexible power generation sites are significant contributors to UIG volatility

- At DESC on 24 May, DESC Member for Centrica asked what should be done with the volatile nature of flexible power generation sites which are not going to match a typical weather sensitive profile
- It was suggested some analysis could be undertaken to 'shine a light' on these increasing number of sites and the impacts they are having on NDM modelling error and therefore UIG
  - It would be helpful if Shippers and/or Distribution Networks could assist in identifying sites to allow data to be extracted
- We have sample data for a limited number of Flexible Power Generation sites on which we are able to undertake some analysis

# Other Items on List (for Information)

- Review Supply Meter Point Demand Formula
  - Review is a UNC Section H requirement every 3 years
  - Last review was carried out as part of the 754R workgroup
  - Due for review Winter 24/25
- Investigate use of SIC (Standard Industrial Classification of Economic Activities) Codes to improve I and C Modelling
  - Modelling by business type rather than volume band could produce better fit models
  - No Date Set
- Revisit Band 1 Domestic Modelling
  - Previous review undertaken in Winter 22/23
  - More Smart Meter data would help provide more meaningful results
  - No Date Set

# Conclusion

- Due to time limitations, in addition to the standard work items we can only undertake the Model Smoothing Review and 2 of the other 3 proposed workplan items
  - Review Day of Week Demand Behaviours
  - Review AQ Ranges
  - Investigate Impacts of Flexible Power Generation in NDM on UIG
- DESC to decide on which items to prioritise / remove from list / retain for future consideration

# Next Steps



Adhoc Workplan Analysis Period

Share approach for  
Adhoc Items

DESC Meeting  
4 October

NDM Algorithm  
Performance for Gas  
Year 2022/23  
(Strands 1 to 3)

DESC Meeting  
19 December

Conclude Adhoc  
Workplan Analysis

DESC Meeting  
March 24