Demand Estimation Sub Committee
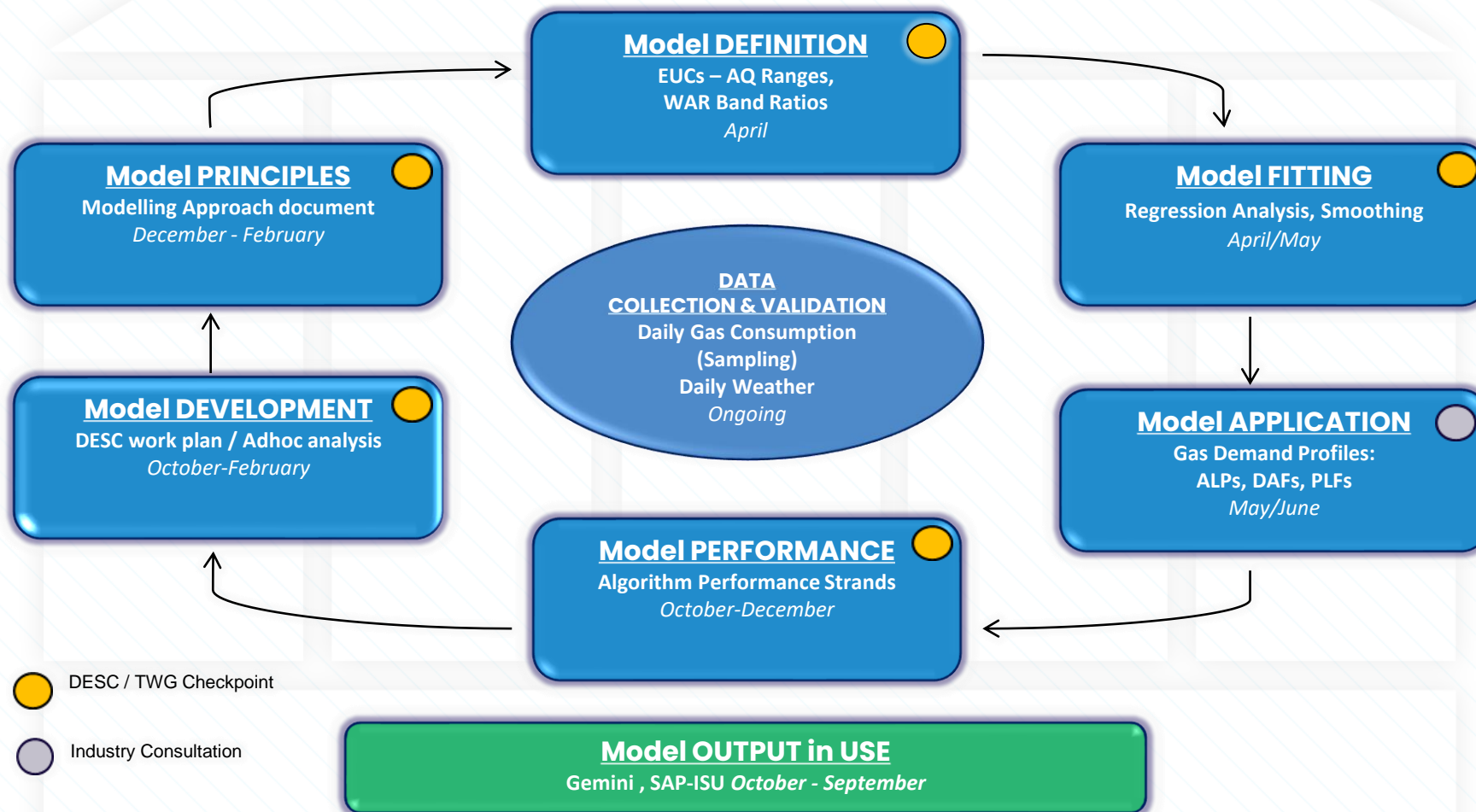
2.0 2022/23 NDM Algorithms Update

5th October 2022

Objective

- Provide DESC with confirmation of the activities that have occurred since the last meeting in July when DESC provided final approval of the Gas Demand Profiles to be used for Gas Year 2022/23

- Discuss impacts of cost of living crisis on NDM demand accuracy for Gas Year 2022/23

Demand Estimation: Background

- An overview of the Demand Estimation process and output can be found here
- This presentation relates to the "Model Output in Use" phase of the Demand Model cycle

Model DEFINITION
EUCs – AQ Ranges,
WAR Band Ratios
April

Model PRINCIPLES
Modelling Approach document
December - February

Model FITTING
Regression Analysis, Smoothing
April/May

**DATA
COLLECTION & VALIDATION**
Daily Gas Consumption
(Sampling)
Daily Weather
Ongoing

Model DEVELOPMENT
DESC work plan / Adhoc analysis
October-February

Model APPLICATION
Gas Demand Profiles:
ALPs, DAFs, PLFs
May/June

Model PERFORMANCE
Algorithm Performance Strands
October-December

● DESC / TWG Checkpoint

● Industry Consultation

Model OUTPUT in USE
Gemini , SAP-ISU *October - September*

Demand Estimation Timetable - 2022

High Level View of Demand Estimation Timetable 2022 - Key Checkpoints															
PHASE	MILESTONE	CHECKPOINT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1. MODEL PRINCIPLES	Modelling Approach 2022 Approved	DESC Meeting			02-Mar									
2. DATA COLLECTION & VALIDATION	Daily Gas Consumption Data validated	Internal				14-Apr								
3. MODEL DEFINITION	Agree Data Aggregations / WAR Band Limits	TWG Meeting				27-Apr								
4. MODEL FITTING	Gas Demand EUC Modelling review	TWG Meeting					24-May							
5. MODEL APPLICATION	Publication of Draft Gas Demand Profiles	Website						10-Jun						
	Gas Demand Profiles Approved for wider industry	DESC Meeting							07-Jul					
	Final Approval of Gas Demand Profiles	DESC Meeting							19-Jul					
6. MODEL OUTPUT IN USE	SAP-ISU and Gemini updated	Internal								14-Aug				
7. MODEL DEVELOPMENT	Adhoc Work-plan approved	DESC Meeting							19-Jul			05-Oct		
8. MODEL PERFORMANCE	NDM Algorithm Performance - Strands 1 to 3 Review	DESC Meeting												13-Dec

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NDM Algorithms Update 22/23

July

- Industry advised DESC had voted to formally approve Gas Demand Profiles

- Ofgem informed that DESC had concluded this year's process

- Xoserve.com updated with ALPs DAFs and PLFs (i.e. available in the public domain)

August

- UK Link system updated in readiness for AQ, SOQ and Read Estimation calculations

- Gemini system updated in readiness for NDM Nomination and Allocation calculations

- EUC Definitions (incl. unique 5-digit no.) provided to Customers on 24th August 2022

September

- News article shared with customers summarising this year's process, including a reminder of new Unidentified Gas (UIG) Weighting Factors

October

- New Gas Demand Profiles Go-Live (first use 30th September for D-1 Nominations run)

Reminder: Where to find Demand Estimation Data

Folder Structure on Secure Website, links to secured area and access request form can be found by following this link

- 18. NDM Profiling and Capacity Algorithms
  - 2022-23 Gas Year
    - 1 Modelling Approach
    - 2 Demand Estimation Sample Data
    - 3 Demand Estimation Parameters
      - a End User Categories and Derived Factors
      - b Demand Model Supporting Files
    - 4 NDM Algorithms Booklet

- Folders highlighted in green will contain the final NDM proposals for Gas Year 2022/23

- The NDM Algorithms Booklet (summary of the end-to-end modelling process) is available in folder 4

NDM Algorithms AOB

Outlook for New Gas Year

- During Gas Year 2021/22, there has been significant over allocation of NDM demand by the Demand Estimation process – this has been caused predominantly by AQs struggling to keep up with 'enforced conservation' due to the rise in wholesale gas prices. Unusually warm weather in the Spring and Summer will also have contributed to this over allocation

- As a result significant negative UIG (at 'closeout') has been an issue for a number of months (see latest News Article for more information Xoserve News | Xoserve)

- Gas Year 2022/23 is highly likely to see the NDM Algorithm continue to over allocate, especially if consumer reactions to high prices result in even more conservation

- The new ALPs and DAFs will not be able to correct this. AQs as the key input to the NDM Algorithm will not able to reflect the latest base level demand

- DESC, as custodians of the profiles, may need to consider intervention as it did in Gas Year 2018/19 when uplift factors were applied to the ALPs and DAFs

Initial Analysis

- Some initial analysis has been carried out with regard to adjusting the ALPs in order to improve the UIG

Simulation using adjusted ALPs – LDZ: WM
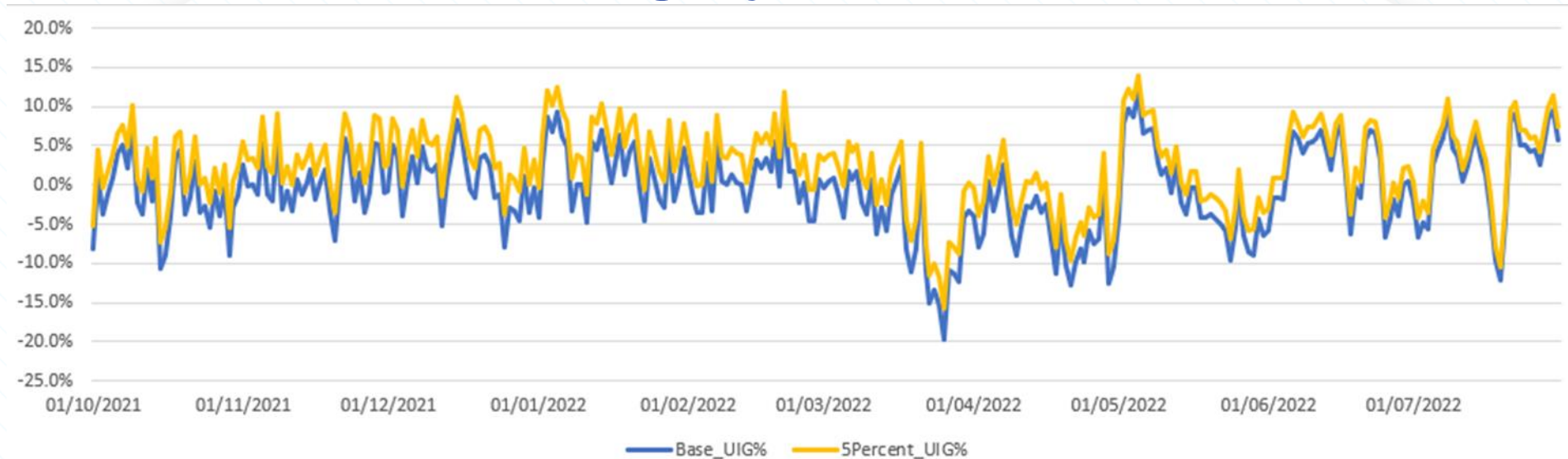
- A 5% 'reduction factor' was applied to the Domestic ALP and Demand attribution then re-run for Gas Year 2021/22 to see what difference it makes to UIG, as expected UIG was less negative
- The reduction factors may help reduced the negative UIG levels but they also increase the positive UIG
- As reads are received and AQs update, the reduction may no longer be appropriate

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DESC Input

- We would appreciate DESC input/views on the following:

  - The current NDM over-allocation and UIG situation

  - What, if any, remedial action DESC can take

  - Any analysis you would like DE to undertake to assist in decision making e.g. simulation of different reduction factors

- Any changes to the ALPs and DAFs would require approval by DESC and updates to the NDM Demand Estimation Methodology document (as done for Gas Years 2018/19 and 2019/20)