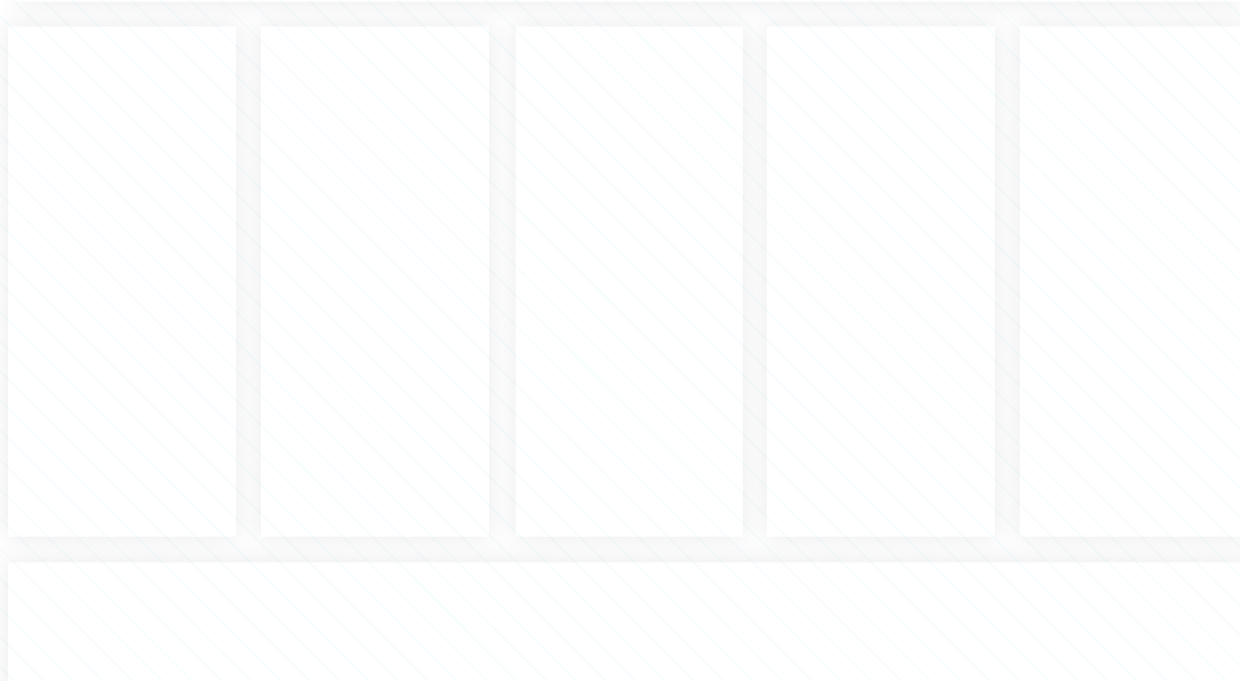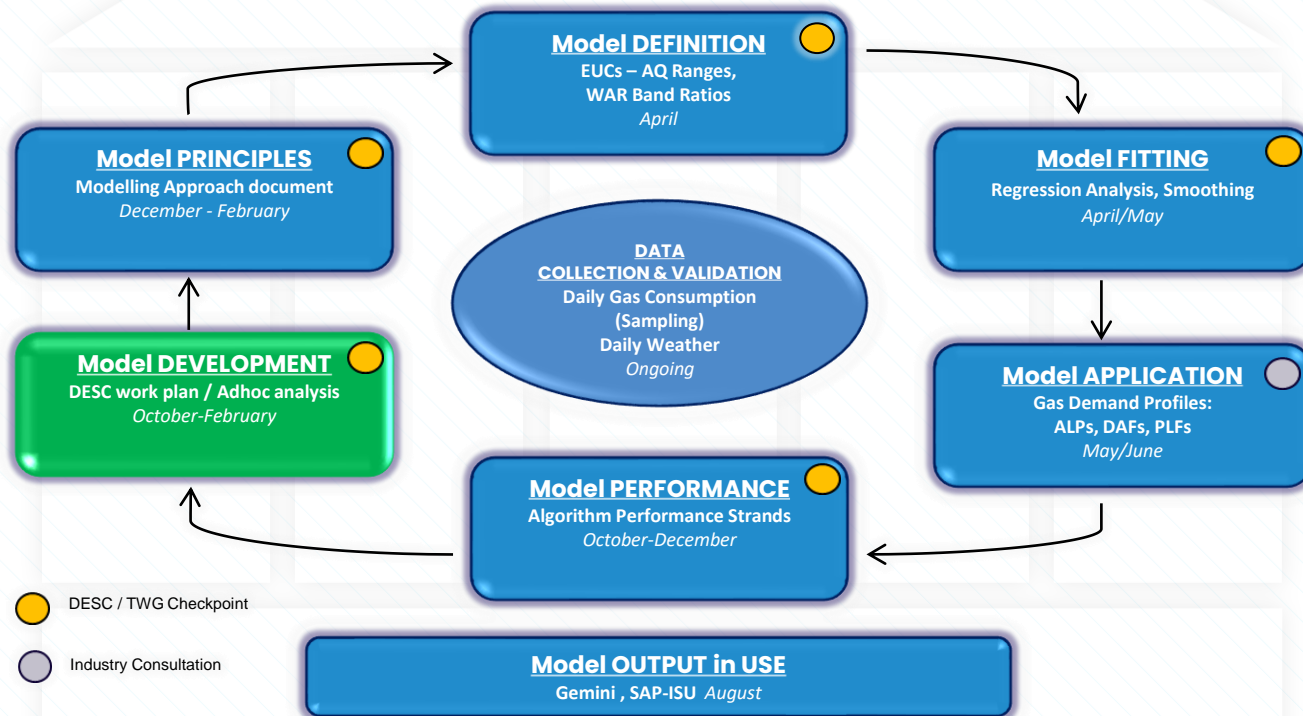# DESC - Agreement of Ad-Hoc Workplan

19th July 2022

# Objective

- To agree DESC's Workplan for Autumn / Winter period (October '22 to March '23) ahead of next year's modelling process (April '23 to September '23)

# Demand Estimation: Background

- An overview of the Demand Estimation process and output can be found [here](#)
- This presentation relates to the "**DEVELOPMENT**" 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 *August*

# 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/TWG meetings in April, May and July (2)

  - **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/TWG meetings 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

- Slide 5 looks back on the progress made on the priorities identified last year

- Slides 6 to 9 summarise the standard work plan items and additional work recommended by Xoserve for the upcoming Autumn / Winter period

# Reminder: Last Year's Adhoc Workplan – 21/22

- DESC approved the following Adhoc Workplan last summer:

  ✓ – Algorithm Performance for Gas Year 2020/21 (3 Strands of analysis)

  ✓ – Modelling Approach 2022 preparations (for Gas Year 2022/23):

    ✓ • Holiday Codes Analysis – Investigate model performance from recent periods. Possible split in rules by I&C/Dom/LDZ
    ✓ • Focus on Prepayment EUCs (e.g. 01BPD) and their use in 2022/23
    ✓ • Finalise Modelling Approach document

  ✓ – Support Workgroup 0754R: "Investigate Advanced Analytic Options for improvements to NDM Demand Modelling"

  ✓ – Complete upgrades to Demand Estimation Team systems for Handling and Validating sample data (to improve management of growing MOD654S submissions)

# Autumn / Winter 22/23 – Standard Work Plan Items

- NDM Algorithm Performance for Gas Year 2021/22 – (Reported at December '22 DESC)

  - Strand 1 – Weather Analysis
  - Strand 2 – Unidentified Gas (UIG) Analysis
  - Strand 3 – NDM Daily Demand Analysis
  - **Strand 4 – Reconciliation Analysis\* - Note: This 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 2023 – Agreement on methodology for deriving Demand Profiles for Gas Year 2023/24 – (Reported at December '22 and March '23 DESC)

- Managing Daily Gas Consumption Data submissions – (DN's sample and MOD 654S eligible Shipper data)
  - Supporting XRN5143 - Discharge of Cadent, WWU and NGN NDM sampling obligations by the CDSP

- Managing Daily Weather Data Service Provider and CWV calculation
  - Supporting XRN5472 - Creation of a UK Link API to consume daily weather data for Demand Estimation processes

- Seasonal Normal Review 2025 kick-off – develop timeline/plans/approach for next Seasonal Normal Review cycle (particularly any Climate Change Methodology requirements)

# Autumn / Winter 22/23 – Adhoc Work Plan Item 1 - Proposal

- Review of existing cleansing and validation processes/ rules for managing submissions of daily gas consumption data, prior to its use in Demand modelling and/or NDM Algorithm Performance (Strand 3)

  - There have been minimal changes to these rules over the past decade e.g. Spike Tolerances, Zero consumptions, Missing Reads etc

  - Analysis considered as part of UNC Workgroup 0754R has revealed some potential new checks around the NDM demand data which could be beneficial

  - Sampling data sets for modelling Band 1 Domestic ("01BND") and Band 2 I&C ("02BNI") are currently stratified to ensure they match the population distribution. We'd like to consider applying this to other large EUC groupings such as "01BNI" and "01BPD"

  - Objective is to ensure validation process applied continues to strike the balance of removing data errors and ensuring sufficient sampling points available to prepare demand models

  - New sample data handling system provides more flexibility for making changes, if deemed beneficial

  - Expect to report at October, December and March DESC meetings with any proposed changes / recommendations in place for Spring 2023

  - Any suggestions from DESC on data cleansing operations are always welcome ?

# Autumn / Winter 22/23 – Adhoc Work Plan Item 2 - Proposal

- Review of existing End User Category (EUC) definitions

    - DESC implemented the first set of changes to the EUC definitions 3 years ago (from Gas Year 2019/20), this introduced new categories that uses the Market Sector Code (MSC), Meter Mechanism and Payment Type

    - Domestic Band 1 (0 to 73.2 MWh pa) i.e. "01BND" represents a large proportion of the NDM market. Our proposal is to review the sub bands within this AQ range to check if the profile remains homogenous or are there more distinct profiles existing ? e.g. is there a cooking only band which we are applying a weather sensitive profile too

    - Large NDM (>2,196 MWh pa): Do we need 273 Large NDM EUC models for 12% of the NDM population, when we have 234 for 88% of the NDM population ?

        Our proposal is to investigate whether a better approach to managing these Large EUCs exists

    - Any recommendations from this review would need to prove they are better than existing arrangements e.g. reduced modelling error and improved NDM algorithm performance

    - Expect to report at October, December and March DESC meetings.

        Where possible any proposed changes / recommendations in place for Spring 2023

# Autumn / Winter 22/23 – Adhoc Work Plan Item 3 - Proposal

- Review of existing meeting material (documents, presentations, charts, tables, statistics etc) shared with DESC and TWG during the year to

  - ensure the output remains informative and engaging to DESC (and the wider industry)

  - assess whether there are more efficient ways of presenting the analysis e.g. executive summary presented to DESC and supporting document containing the detailed analysis (rather than all packaged in one presentation) ?

  - ensure we are fully exploiting the functionality available to us in the Demand Modelling system

- We will share ideas we have on this during the next few DESC meetings but we do welcome your feedback on this, we have added an extra question on this matter as part of our annual DESC survey

- Expect to report at October, December and March DESC meetings with any proposed changes / recommendations in place for Spring 2023

# Summary

- There is a full packed schedule of work for the Demand Estimation team to tackle in the Autumn and Winter period, these would be further fleshed out at the next meeting of DESC in October

- The work plan will also include any support activities associated with UNC Workgroup 0754R which is due to report in November 2022

- Are DESC happy to approve the proposed set of workplan items ? (as set out on slides 6 to 9)