# Review of NDM Algorithm Update

Demand Estimation Sub Committee
Technical Workgroup

27/04/2022

# Workgroup 0754R

## Background

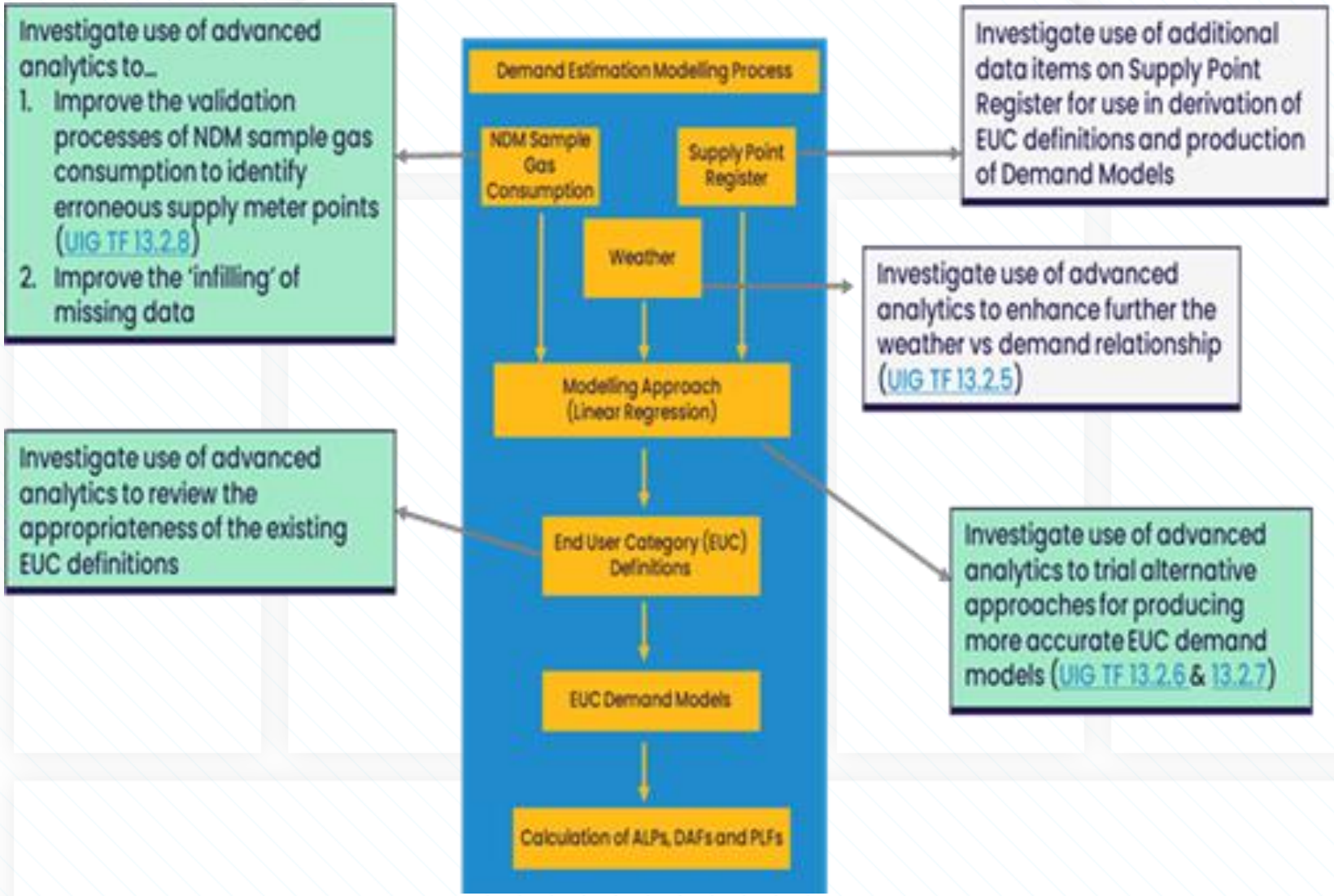
- UIG Task Force produced a number of recommendations to help reduce temporary UIG levels/volatility. This included findings associated with the modelling error within the NDM Algorithm
- DESC is responsible for the NDM Algorithm (UNC Section H) and has an obligation to review it every 3 years (UNC H 2.2.2)
- Prior to moving forward with the above a consultation was performed during Q4 of 2020 to assess the levels of support for making improvements to the NDM Algorithm
- A more detailed view of the background to this Workgroup and current state overview is provided in the March meeting papers here

## Rationale for workgroup

- Supports DESC's UNC obligation to review the NDM Algorithm
- UIG Task Force findings will be explored and progressed
- Clear industry support for investigating advanced analytical approaches
- A Workgroup maintains focus and increases visibility across the industry
- Improved NDM Allocation will result in a reduction in UIG volatility and subsequent Meter Point reconciliation/UIG volumes (temporary)

# Workgroup 0754R: Investigation Areas

- The proposed areas of investigation



# Meeting 6 Re-cap

(22nd March 2022)

# Meeting 6 Key Discussion Points

The main headlines from meeting 6 of 754R were…

- Area 1: Provided an overview of the Indicative Load Factors calculation and the results from applying it to the new approaches
  - The method produced comparable results to current process
  - Results from the Gradient Boosting method requires further investigation – focus will be on the Peak Demand calculation.
- Area 1: Time was spent on understanding the models and their characteristics
  - Results provided for all the test EUCs for Monthly, Day of the Week and Holiday Code trends
  - More investigation required into Day of the Week trends for 02BNI and 05B datasets.
- Area 2 – focusing on using Machine Learning on validation datasets was introduced.
  - The objective and background was presented
  - The proposed areas / methods that will initially be investigated was introduced

# Conclusion and Next Steps

**Conclusion:**

- ILFs can be calculated but further analysis needed for non linear model suitability
- Time has been spent on understanding the models their characteristics and which elements are influencing the shape of demands that are produced
- Further analysis and understanding required if we are to succeed in identifying significant improvements

**Next Steps:**

- Area 1: Investigate Peak Demand calculation for GB model
- Area 1: Investigate the Day of the week trends for the 02BNI and 05B datasets and test it against non-covid datasets.
- Area 1: Try other dummy variables
- Area 2: Investigate methods to support validation identifying suspicious demand patterns
- Preparation for the next meeting on - 28th June 2022