



Demand Estimation Sub Committee

Review of NDM Algorithm

24th February 2021

Review of NDM Algorithm - Background

- The main DESC obligations are defined in Section H of UNC
- Paragraph 2.2.1 describes the current formula for determining Supply Meter Point Demand
 - Supply Meter Point Demand_t = $(AQ/365) * ALP_t * (1 + [DAF_t * WCF_t])$

The above calculation is used daily in Gemini for NDM Nominations and Allocations

- This formula became effective from 1st June 2017 following the implementation of UNC Modification 0432 (Project Nexus – Gas Demand Estimation, Allocation, Settlement and Reconciliation Reform)
- Paragraph 2.2.2 was added as part of the 0432 updates to Section H and states the following:

“The operation of the formula in paragraph 2.2.1 shall be reviewed by the Committee [DESC] every three (3) years”

Review of NDM Algorithm – Background cont.

- The UNC obligation to review every 3 years is new and has not been carried out formally since its introduction as part of UNC Modification 0432
- At the end of September 2020 a third complete Gas Year under the new regime concluded i.e. Gas Years 2017/18, 2018/19 and 2019/20
- The current formula is now a stand alone ‘bottom up’ estimate of NDM demand and is no longer the balancing figure (a role now taken up by Unidentified Gas (UiG)), meaning its accuracy/performance is more open to scrutiny and review
- Analysis completed by the UiG Task Force has focussed on the performance of the NDM Algorithm and has provided findings which suggest an approach which utilises ‘Machine Learning’ could offer improvements to the daily estimation of NDM demand

Examples below:

- Findings 13.2.5 [here](#) and 13.2.6 [here](#)

Objective

- Provide update on latest developments in relation to DESC's UNC Section H obligation 2.2.2 to review the Supply Meter Point Demand Formula (also referred to as the NDM Algorithm)

Review of NDM Algorithm – Industry Discussions Update

- Consultation on the future of NDM Algorithm completed in Q4 of 2020 – summary of results [here](#)
- Key outcome from consultation was a recognition that a review of the use of ‘advanced analytics’ to identify improvements to the NDM modelling process would be welcome as long as the existing key parameters were retained (e.g. ALPs and DAFs)
- DESC Timetable for 2021 is dedicated to the ‘BAU’ activities required for developing Gas Demand Profiles for Gas Year 2021/22
- To keep focus, allow quicker progress and increase visibility, a draft Terms of Reference for a UNC Review Group to explore topic further was discussed at Distribution Work Group on 28th January – available [here](#)
- 0754R – “Investigate Advanced Analytic Options to improve NDM Modelling” will be reviewed at UNC Modification Panel on 18th February
- If approved, the Review Group would expect to run for majority of 2021 with recommendations then being made available to DESC to consider. Earliest any profiles could be influenced is for Gas Year 2022/23 and this will depend on the impact to Xoserve’s and Industry’s systems