Demand Estimation Sub Committee

2.0 Seasonal Normal Review Update

5th October 2020

Objectives

- Provide an update on work performed since last DESC meeting (22nd July 2020) and remaining actions

- Provide a final recap of the Seasonal Normal work completed by DESC throughout 2019 and 2020

Seasonal Normal Review - Update

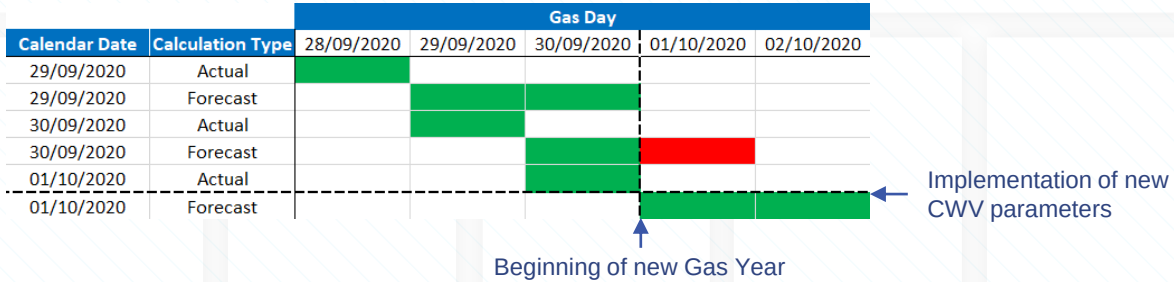
- Revised WAALPs for all EUCs using new ALPs, DAFs, CWVs, and SNCWVs have been calculated and updated in UK Link to support Read Estimation and AQ calculations in September 2020

- Supporting information has been published on the secured area of Xoserve's website (UKLink docs) – this is likely to be of interest for any shippers who replicate AQ calculations

- Seasonal Normal Ratios have been applied to any Supply Meter Points which failed to calculate an AQ in the September 2020 AQ roll process. This will ensure that effective 1st October 2020, all Supply Meter Points will be on a consistent Seasonal Normal basis

Seasonal Normal Review – Remaining Actions

- On the morning of 1st October 2020, following the CWV calculation for gas day 30th September 2020, UK Link systems will be updated to reflect the new CWV parameters, this is represented below:



- Due to the timing of the implementation, the D+1 forecasts performed on 30th September for 1st October will be calculating CWV's on the old basis, for the new Gas Year. As such, there may be a more noticeable difference in the 'day ahead' forecasts and the 'within day' forecasts for Gas Day 1st October 2020 (particularly for LDZ 'SW' where there is also a change in weather station)

CWV Formula Review - Recap

- The main obligations from the Seasonal Normal review process were delivered during 2019. These included a review and revision of the CWV formula to include a Solar Radiation term, and the functionality of a Precipitation term. As a reminder the new CWV formula is below:

$$CW_t = I_1 * E_t + (1.0 - I_1) * S_t - I_2 * \max(0, W_t - W_0) * \max(0, T_0 - AT_t) + S_0 * SR_t + P_0 * P_t$$

$CWV_t = V_1 + q * (V_2 - V_1)$	$if\ V_2 \le CW_t$	(Summer Cut-off)
$CWV_t = V_1 + q * (CW_t - V_1)$	$if\ V_1 < CW_t < V_2$	(Transition)
$CWV_t = CW_t$	$if\ V_0 \le CW_t \le V_1$	(Normal)
$CWV_t = CW_t + I_3 * (CW_t - V_0)$	$if\ V_0 > CW_t$	(Cold weather upturn)

- As well as the revision to the CWV formula, all parameters within the formula have been reoptimized against observed aggregate LDZ NDM demand data. The final optimised values were formally approved by DESC on 7th October 2019 and can be found in section 11 of the NDM Algorithms booklet.

- As a reminder – the NDM Algorithms booklet can be found on the Secured area of Xoserve's website under the following folder:

18. NDM Profiling and Capacity Estimation Algorithms / 2020-21 Gas Year / 4 NDM Algorithms booklet

Seasonal Normal Review - Recap

- The Seasonal Normal Composite Weather Variable (SNCWV) is a parameter used by the gas industry in key calculations where demand is required to be expressed assuming ‘Seasonal Normal weather conditions’

- Following the introduction of Solar radiation to the CWV and subsequent parameter Optimisation, DESC has produced a revised version of the SNCWV in line with it’s responsibilities

- On 9th December 2019, DESC formally approved the new SNCWVs to be used effective from 1st October 2020

Reminder – Where to find Data

- Data and documentation pertaining to the Seasonal normal review process can be found on the Secured area of Xoserve's website, under the following folder:

18. NDM Profiling and Capacity Estimation Algorithms / 2020-21 Gas Year / 5 Seasonal Normal 2020

In this folder can be found the following key documents:

- **'Seasonal Normal Review 2020.pdf'** – Overview of CWV formula change, optimisation and SN calculation
- **'Approach to seasonal Normal Basis 2020.pdf'** – Details on the calculation of the new SNCWV basis
- **'SN20_ALPDAFYYYY.txt'** – Recalculated ALP and DAF values spanning back to gas year 2013/14
- **'SN20_AQ_CONVERSION_FACTORS.xlsx'** – final EUC ratios agreed by DESC on 22nd July 2020
- **'SN20_CWV6019.txt'** – Recalculated CWV values covering period 01/10/1960 – 30/09/2019
- **'SN20_CWV1920.txt'** – Recalculated CWV values covering period 01/10/2019 – 30/09/2020

As well as documents covering new SNET, SNES, and SNCWV values, amongst others.

Conclusion and Next steps

- As of 1st October 2020, the new version of CWV will ‘go live’ with a Solar radiation term, as well as the newly optimised parameters.

- Following the implementation of the new CWV formula and September 2020’s AQ calculation, this concludes work on the Seasonal Normal Review

- As part of Algorithm Performance (December DESC meeting) we will be looking to provide simulated UIG values on the new CWV basis for Gas Year 2019/20, alongside the usual review of UIG values on the current CWV basis.