Demand Estimation Sub Committee

3.0 Seasonal Normal Review update

6th July 2020

Objective

- Recap of Seasonal Normal Review activities completed in 2019 and 2020

- Update on work performed since last DESC update (April 2020)

- Update on DESC action 0201: information and further detail on the calculations in relation to EUC Seasonal Normal Ratios

- Reminder of Next Steps for remaining Seasonal Normal review activities in Q3 of 2020 ahead of 'go-live' on 1st October 2020

SNCWV 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 Solar radiation (DESC 7th October) and a review of the current SNCWV basis (DESC 9th December)

- As shared at April's DESC TWG meeting, a core set of slides covering the changes to the CWV and SNCWV have now been presented at numerous industry forums

- A third 'Seasonal Normal Review Update' article has been published to the Xoserve website providing further detail for all interested parties.

2020 Modelling Results: EUC Ratios

- In September 2020 the first AQ Calculations effective from 1st October will be performed. To ensure that the AQ population is on a consistent Seasonal Normal basis, all meter points that fail to calculate an AQ will have a ratio applied to the existing AQ.

- The ratios are calculated for each EUC by comparing the ∑SNDt (Seasonal Normal demand for day t) from the new Demand model with the ∑SNDt from the existing Demand model

- This has been performed using the 2020 Gas Demand EUC modelling output to provide a view of the movements in AQs as a result of the new CWV and SNCWV basis

- The values provided in this presentation are draft and will need to be revised to reflect the minor changes to the EUC demand models as a result of using incorrect weather values (expectation is that the SN Ratios presented here will be very similar if not the same)

- Assuming the industry consultation is concluded the ratios presented on 22nd July will become the final values

EUC Ratios: Calculation

- The seasonal normal demand for any given gas day t is defined as:

$$SND_t = P_t * (C_1 + C_2 * SNCWV_t)$$

Where:

- Pt is a multiplicative factor set to 1 for non-holiday Monday to Thursday and potentially a different value on Friday to Sunday or Holiday days.
- C1 is the constant from the non-holiday Monday to Thursday regression of daily demand against CWV
- C2 is the Slope of this regression line, which represents the weather sensitivity of demand for non-holiday Mondays to Thursdays.

- This years EUC demand modelling has been performed with both 'Old' and 'New' CWV definitions, the EUC ratios are calculated by summing the annual SND values for the Model and calculating the ratio between the two sets of results.

Draft EUC Ratios: Bands 1 and 2

- Ratios for all EUC's in Band 1 and 2 are shown below:

	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS
01BND	0.989	0.988	0.985	1.006	0.990	0.995	0.990	0.989	0.992	0.990	1.000	0.998	0.992
01BNI	0.991	0.985	0.985	1.004	0.990	0.990	0.989	0.989	0.993	0.996	0.998	0.995	0.986
01BPD	0.987	0.987	0.990	0.993	0.988	1.010	0.991	0.983	0.989	1.017	1.002	1.013	0.986
01BPI	0.991	0.985	0.985	1.004	0.990	0.990	0.989	0.989	0.993	0.996	0.998	0.995	0.986
02BND	0.993	0.989	0.988	1.004	0.991	0.992	0.995	0.991	0.992	0.994	1.001	0.994	0.989
02BNI	0.992	0.986	0.988	1.001	0.992	0.998	0.991	0.992	0.994	0.996	0.999	0.999	0.982
02BPD	0.987	0.987	0.990	0.993	0.988	1.010	0.991	0.983	0.989	1.017	1.002	1.013	0.986
02BPI	0.992	0.986	0.988	1.001	0.992	0.998	0.991	0.992	0.994	0.996	0.999	0.999	0.982

- Values in Bands 1 and 2 range from a minimum of 0.982 in EUC bands WS:EYY02BNI & WS:EYY02BPI to a maximum of 1.017 in EUC bands SW:EYY01BPD & SW:EYY02BPD

- The average ratio of band 01BND is 0.993

Draft EUC Ratios: Bands 3 and 4

- Ratios for all EUC's in Band 3 and 4 are shown below:

	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS
03B	0.993	0.986	0.990	1.004	0.992	0.994	0.992	0.993	0.994	0.996	1.011	0.999	0.998
03W01	0.998	0.996	0.996	1.002	0.997	0.999	0.998	0.998	1.000	0.998	1.001	0.999	0.998
03W02	0.996	0.990	0.991	0.995	0.994	0.992	0.999	0.995	0.996	0.998	0.997	0.994	0.995
03W03	0.994	0.985	0.986	1.003	0.992	0.991	0.998	0.992	0.994	0.994	0.997	0.994	0.995
03W04	0.994	0.982	0.990	1.009	0.988	0.992	0.986	0.989	0.993	0.990	1.000	0.997	0.993
04B	0.994	0.987	0.988	1.004	0.992	0.995	0.992	0.992	0.995	0.997	0.999	0.993	0.992
04W01	0.998	0.996	0.996	1.002	0.997	0.999	0.998	0.998	1.000	0.998	1.001	0.999	0.998
04W02	0.996	0.990	0.991	0.995	0.994	0.992	0.999	0.995	0.996	0.998	0.997	0.994	0.995
04W03	0.994	0.985	0.986	1.003	0.992	0.991	0.998	0.992	0.994	0.994	0.997	0.994	0.995
04W04	0.994	0.982	0.990	1.009	0.988	0.992	0.986	0.989	0.993	0.990	1.000	0.997	0.993

- Values in bands 3 and 4 range from a minimum of 0.982 in EUC Bands EM:EYY03W04 and EM:EYY04W04 to a maximum of 1.011 in EUC band WM:EYY03B

Draft EUC Ratios: Bands 5 and 6

- Ratios for all EUC's in Band 5 and 6 are shown below:

	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS
05B	0.995	0.989	0.993	1.002	0.994	0.996	0.994	0.994	0.996	1.000	0.995	0.998	0.995
05W01	0.999	0.998	0.998	0.999	1.000	0.998	0.999	0.998	0.999	0.997	1.001	0.999	0.996
05W02	0.997	0.993	0.994	1.002	0.995	0.997	0.995	0.996	1.001	0.998	1.001	0.998	0.994
05W03	0.995	0.988	0.990	1.001	0.993	0.993	0.993	0.993	0.996	0.995	0.999	0.995	0.991
05W04	0.991	0.984	0.985	1.006	0.990	0.992	0.985	0.987	0.991	0.991	1.000	0.997	0.996
06B	0.996	0.995	0.997	1.002	0.995	0.996	0.994	0.995	0.997	1.000	0.998	0.999	0.994
06W01	0.999	1.000	1.000	1.000	1.001	1.000	1.002	0.997	1.000	0.997	0.998	0.997	0.997
06W02	0.999	0.998	0.998	1.001	0.998	0.997	0.997	0.999	1.000	0.998	1.000	0.999	0.999
06W03	0.997	0.992	0.994	1.003	0.994	0.996	0.995	0.996	0.998	0.997	0.999	0.995	0.995
06W04	0.994	0.985	0.988	1.003	0.990	0.992	0.989	0.991	0.994	0.993	0.999	0.994	0.998

- Values in bands 5 and 6 range from a minimum of 0.984 in EUC band EM:EYY05W04 to a maximum of 1.006 in EUC band NO:EYY05W04

Draft EUC Ratios: Bands 7, 8, and 9

- Ratios for all EUC's in Bands 7, 8, and 9 are shown below:

	EA	EM	NE	NO	NT	NW	SC	SE	SO	SW	WM	WN	WS
07B	0.998	0.997	0.998	1.001	0.998	0.997	0.997	0.994	0.997	1.006	0.996	0.999	0.996
07W01	1.000	0.999	0.999	0.999	1.003	1.001	1.003	0.996	1.001	0.996	1.003	0.998	0.994
07W02	1.000	0.998	0.998	1.000	0.999	0.999	0.999	1.000	1.001	1.000	1.000	1.000	1.000
07W03	0.999	0.996	0.997	1.002	0.997	0.998	0.997	0.998	1.000	0.998	1.000	1.000	0.998
07W04	0.995	0.985	0.993	1.003	0.993	1.004	0.990	0.992	0.995	0.996	0.998	1.008	0.990
08B	0.998	0.997	0.998	1.001	0.998	0.997	0.997	0.994	0.997	1.006	0.996	0.999	0.996
08W01	1.000	0.999	0.999	0.999	1.003	1.001	1.003	0.996	1.001	0.996	1.003	0.998	0.994
08W02	1.000	0.998	0.998	1.000	0.999	0.999	0.999	1.000	1.001	1.000	1.000	1.000	1.000
08W03	0.999	0.996	0.997	1.002	0.997	0.998	0.997	0.998	1.000	0.998	1.000	1.000	0.998
08W04	0.995	0.985	0.993	1.003	0.993	1.004	0.990	0.992	0.995	0.996	0.998	1.008	0.990
09B	0.998	0.997	0.998	1.002	0.998	0.997	0.999	0.998	0.999	0.998	1.002	0.997	0.998

- Values in bands 7 and 8 range from a minimum of 0.985 in EUC band EM:EYY08W04 to a maximum of 1.008 in EUC bands WN:EYY07W04 and WM:EYY08W04
- Values in band 9 range from 0.997 to 1.002 and have an average of 0.999

Next Steps

- The system change to the Composite Weather Variable functionality to enable the inclusion of Solar Radiation and Precipitation (XRN4772) will have been implemented on the morning of 27th June

  Key Point: No change will be evident in the calculation of the CWV until 1st October 2020

- Following completion of industry consultation:

  - Final EUC Ratio values will be published on the secured area of Xoserve's website, UKLink docs alongside the other Seasonal Normal files
  - Revised WAALPs for all EUCs using new ALPs, DAFs, CWVs, and SNCWVs to support AQ calculations in September 2020 will be produced and published – this is likely to be of interest for any shippers who replicate AQ calculations.

- Seasonal Normal ratios will be applied to any Supply Meter Points which fail to calculate an AQ in September 2020. This will ensure that effective 1st October 2020, all Supply Meter Points will be on a consistent Seasonal Normal basis.