Demand Estimation Sub-Committee Minutes
Tuesday 05 November 2019
Teleconference

Attendees

Alan Raper (Chair)	(AR)	Joint Office	
Karen Visgarda (Secretary)	(KV)	Joint Office	

Shipper Member

John Jones	(JJ)	Scottish Power	Voting Member
Louise Hellyer	(LH)	Total Gas & Power	Voting Member
Mark Jones	(MJ)	SSE	Voting Member

Transporter Member

David Mitchell	(DM)	SGN	Voting Member
Paul O'Toole	(PT)	Northern Gas Networks	Voting Member
Simon Geddes	(SG)	National Grid	Voting Member

Xoserve Representatives

Mark Perry	(MP)	Xoserve	Non-Voting
Mike Maguire	(MM)	Xoserve	Non-Voting

Observer

Leyon Joseph	(LJ)	SGN	Non-Voting
Loraine O'Shaughnessy	(LO)	Joint Office	Non-Voting
Luke Reeves	(LR)	EDF Energy	Non-Voting
Fiona Speak	(FS)	Npower	Non-Voting

Apologies

Jason Blackmore	(JB)	British Gas	Voting Member
Emma Buckton	(EB)	Northern Gas Networks	Voting Member
Gurvinder Dosanjh	(GD)	Cadent	Voting Member

Copies of papers are available at: http://www.gasgovernance.co.uk/DESC/051119

1. Introduction and Status Review

AR welcomed everyone to the meeting and confirmed the meeting was quorate.

1.1. Apologies for Absence

Please refer to the above table.

1.2. Note of Alternates

Paul O'Toole for Emma Buckton
Simon Geddes for Toby Thornton

2. Seasonal Normal Review 2020

2.1. Approval of the Seasonal Normal Composite Weather Variable (SNCWV) Methodology

Mark Perry (MP) presented a review of '*Seasonal Normal Review 2020: High Level Approach to SNCWV calculation'* presentation and introduced Mike Maguire (MM) who was also presenting the material.

MP provided the Committee with a reminder of DESC's UNC Section H obligations, in terms of advising the UNCC on re-calculations of Seasonal Normal CWV. He also reiterated that the next main milestone was to deliver a revised set of SNCWVs for the DESC members to vote upon at the 09 December 2019 meeting.

MP then provided some background to the current SNCWVs approach and explained that in 2014 the DESC procured a Climate Change Methodology (CCM) and a series of datasets for the gas industry weather stations, including future temperature projections for the period 2015 to 2025 (deliberately covering 2 Seasonal Normal Review periods)

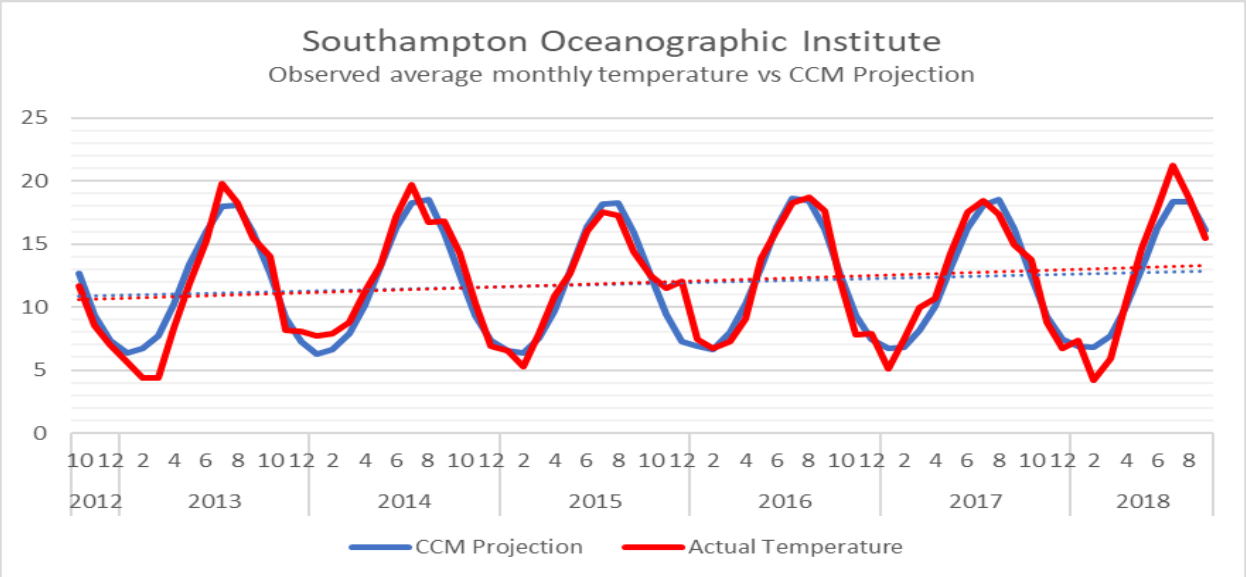
He added that, in addition to the projections, the historical weather dates were adjusted to a 'base year' of 2011/12. He explained that the increments, along with adjusted historical weather were used to calculate a set of CWVs for the period 01 October 1960 to 30 September 2012. MP explained that the average values of CWV for each day, along with a smoothing approach, derived the SNCWV values being used today.

Mike Maguire (MM) then overviewed the proposed approach for SNCWV explaining that it was the intention to follow a similar approach to that used in 2014 however using a different set of increments from the future projections.

He provided a brief explanation of the Climate Change Methodology (CCM) comparison example schematic from the Southampton Oceanographic Institute, as below and overviewed the actual vs projected temperature;

- *Replications of CCM validations performed on the Projected datasets show that the methodology has performed well, with a high correlation (0.95 – 0.97) between projected and observed average monthly temperatures.*

- *In addition, approximately 10±5% of observations fall outside of the model-derived 5th - 95th percentile confidence interval, the results agree with theoretical expectations and suggest that the model-derived percentiles are representative of the distribution of observations.*



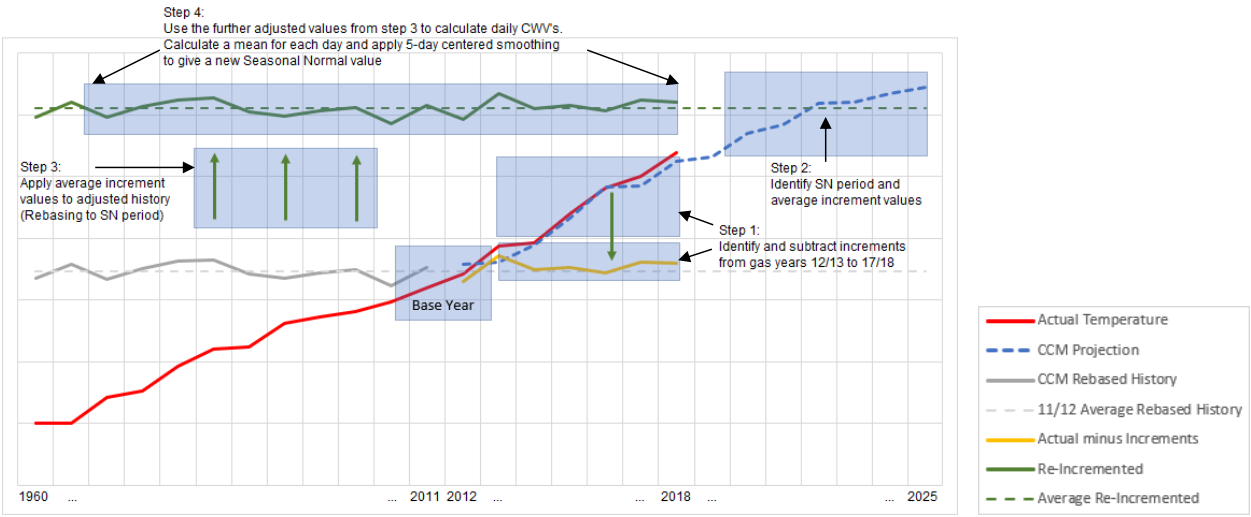
MM explained that these metrics had been used by Xoserve for comparison purposes, as detailed in the table below by each LDZ, which showed that all the weather stations still maintained a high correlation and fell within the ranges as described in the CCM.

LDZ	Temperature Weather Station	Correlation between the Projected and Observed average monthly values	Percentage of Hourly observations which fall outside of the model-derived 5th to 95th percentile Confidence Intervals
NO	Albemarle	0.9597	11.97%
WM	Birmingham Winterbourne	0.9575	10.33%
SC	Glasgow Bishopton	0.9607	10.42%
EA, NT, SE	London Heathrow	0.9564	9.73%
EM, NE	Nottingham Watnall	0.9612	10.13%
NW, WN	Rostherne No2	0.9556	13.18%
SO	Southampton	0.9576	8.26%
WS	St Athan	0.9561	8.07%
SW	Yeovilton	0.9528	11.73%

Proposed Approach for SNCWV

MM then provided a detailed explanation of the schematic below which overviewed the proposed methodology for recalculating the Seasonal Normal, including the defined steps as referred to, beneath the schematic.

The visual below displays the proposed methodology for recalculating the Seasonal Normal.



- *In 2014 the Increment values produced in the CCM dataset were derived from a Projected temperature series minus an average 2011/12 base year. Therefore, subtracting the Increment values from the projected series would rebase the projections to a 2011/12 level.*

- *In 2019 the Actual observed temperature values seen since 2011/12 have a strong correlation with the projected series, it should follow that removing the Increments from the actual temperature values will also rebase them to a 2011/12 level.*

- *Step 1 – Subtract CCM increments from the Actual observed temperatures, thus rebasing Gas Years 2012/13 to 2017/18, to a 2011/12 level in line with the CCM output. There will now exist datasets for all weather stations which have a temperature history spanning 1960/61 to 2017/18, all at a common base level of 2011/12.*

- *Step 2 – Identify a set of average increments required to rebase the entire history. This rebased history will be used in the calculation of rebased CWV histories and subsequent derivation of the Seasonal Normal Basis, it is therefore required to lie between gas years 2020/21 and 2024/25 inclusive*

  MM said following on from the aforementioned review of the current Seasonal Normal basis, the proposed approach was to replicate the previously used methodology which was to average increment values across the entire target period (GY 2020/21 to GY 2024/25)

- *Step 3 – Now that a set of increments have been identified, the values are added to the entire dataset which will re-base it to an appropriate level to be used in derivation of the Seasonal Normal Basis. This is done by adding the hourly values of the increments to the history which has been recalculated at the end of step 1*

- *Step 4 – Recalculate a set of revised historical CWVs for the period GY1960 to GY 2017/18 using the rebased Temperatures from the end of step 3 and the unaltered Windspeed and Solar Radiation history (using recently approved infill methodology)*

  Note: Precipitation is not included in this calculation as it will not initially be included in the CWV calculation from Gas Year 2020/21 – more DESC analysis needed

  Calculate the mean CWV value for each day for the 58-year history to produce an initial Seasonal Normal profile and smooth using a 5-day centred moving average (in line with previous approach)

Approval

DESC were then asked to vote to approve the new parameters and for Xoserve to continue with their work on the Seasonal Normal Review process.

All DESC members present agreed and approved the approach. The vote was passed unanimously.

MP thanked the DESC for their approval and he explained that a revised version of the DESC approach to derivation of Seasonal Normal Basis document would now be produced, which would detail every step followed in re-calculating the Seasonal Normal.

He added that as no objections had been received in relation to the proposed Solar Infill methodology that was discussed in the October DESC meeting, the complete Solar history would now be calculated for every weather station and the details of the infilled data would be published on the secure area of the Xoserve website.

MP reconfirmed that the revised SNCWVs for use from GY 2020/21 would be presented for approval by the DESC members at the meeting on 09 December 2019.

3. Any Other Business

None

4. Diary Planning for 2020

Monday 10 February 2020

Monday 27 April 2020

Tuesday 19 May 2020

Wednesday 08 July 2020

Wednesday 22 July 2020

Monday 05 October 2020

Monday 07 December 2020

Further details of planned meetings are available at: https://www.gasgovernance.co.uk/events-calendar/month

Time / Date	Venue	Workgroup Programme
10:00 Monday 09 December 2019	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Standard agenda, plus • Evaluation of Algorithm Performance for Gas Year 2018/19 • Modelling Approach – Spring 2020 • Seasonal Normal Review Update • Communication of Key Messages