

UNC Demand Estimation Sub-Committee Technical Workgroup Minutes

Monday 10 June 2019

via teleconference

Chris Shanley (Chair)	(CS)	Joint Office
Kully Jones (Secretary)	(KJ)	Joint Office
Anupa Purewal	(AP)	E.ON
Fiona Cottam	(FC)	Xoserve
Fiona Speake	(FS)	RWE npower
Jason Blackmore	(JB)	British Gas
John Jones	(JJ)	Scottish Power
Joseph Lloyd	(JL)	Xoserve
Josh Mallet	(JM)	npower
Louise Hellyer	(LH)	Total Gas & Power
Neil Crompton	(NC)	SSE
Toby Thornton	(SG)	National Grid
Sallyann Blackett	(SBI)	E.ON

Copies of all papers are available at: <https://www.gasgovernance.co.uk/desc/100619>

1. Introduction and Status Review

Chris Shanley welcomed everyone to the meeting.

1.1. Apologies for absence

None received.

1.2. Note of Alternates

None received.

1.3. Approval of Minutes (13 May 2019)

The minutes from the previous meeting held 13 May 2019 were accepted subject to the minor changes sent in by Xoserve being made.

1.4. Review of Outstanding Actions

Action 0501: PAC to promote the need for accurate MSC data to enable the correct assigning of MPRNs to EUC Bands in the DESC modelling and the settlement system.

Update: CS reported that Neil Cole has requested that this be added as an agenda item to the 11 June 2019 PAC meeting. **Closed**

2. Seasonal Normal Review

2.1. Consideration of the use of additional weather variables

Jason Blackmore (JB) provided two papers to support this agenda item:

- A paper titled *CWV+ Description* which set out the details of an approach that could be used to incorporate solar radiance into the existing CWV calculation.
- A presentation titled *Trial results of CWV+ definition* which provided results from CWV+ and also 2015 V1, V2, q parameters.

JB briefly reminded the Workgroup of the components of the CWV calculation before explaining how solar radiance is included. He stated that CWV+ would include:

- Actual Solar (*ASD*) – Computed by the sum of hourly solar radiance observations over the gas day. Same hours as temperatures are used.
- Seasonal Normal Solar (*SNSD*) – Sum of the hourly seasonal normal solar observations from the Climate Change Methodology (CCM) data sets. Same hours as temperatures are used.

In terms of measuring solar he explained that the aim was for CWV+ to be higher than CWV on bright days to provide lower demand and where there was no solar effect then CWV+ would equal CWV. He briefly walked Workgroup through the solar measurement and solar transformation charts shown on page 2 of his paper before inviting comments on the suggested approach. In particular, he sought views on whether the information provided would help to support the Workgroup reach a decision for the next meeting on 08 July 2019 when a decision was needed.

New Action 0601: DESC Technical Workgroup members to provide comments on the proposed CWV+ calculation (CWV+ Description paper) by email to British Gas (JB) by 12 June 2019.

JB then provided a walkthrough of the trial results for the CWV+ definition (see presentation). He indicated that E.ON and npower had provided comments since the last meeting (slide 3) supporting the focus on Solar and looking at other parameters (Rainfall) at a later date. He then explained the differences between the CWV and CWV+ approaches (slides 4 and 5).

A visual impact of the solar term on CWV by LDZ NT for years 2015, 2016 and 2017 was shown on slide 6.

In terms of the approach, JB explained that the initial aim was to keep the existing method as much as possible so the optimised parameters for each of the years is averaged across all the years. He briefly highlighted the pros and cons of this approach explaining that with the current approach the results are less prone to over fitting, but the disadvantage is that it is time consuming as it requires an optimisation for each of the 7 years. He then sought Workgroup comments on an alternative approach which would be to optimise on the total SSE across all years thus reducing the amount of optimisation time needed by 7 times.

Joseph Lloyd (JL) considered this to be an interesting approach and asked if there was any benchmarking or if there were any quirks between the methods. In response, JB indicated that trial results had been produced for one LDZ and the results did not show anything significant. He suggested using the solar definition to allow assessment before deciding if any more changes are needed. He added that the aim is to show like for like results to allow comparison of the approaches to assess which works best.

Toby Thornton asked a question about the amount of effort required and JB responded to say that it takes a day for each LDZ and therefore could reduce the time required to 1-2 hours for each LDZ.

New Action 0602: DESC Technical Workgroup members to provide feedback on the new approach (outlined in slide 7) to optimise on the total SSE across all years by 12 June 2019.

JB then explained that there is a trade-off in MAPE results between summer and winter months. He added that there were two choices for benchmarking CWV. The first was to keep 2020 parameters and the second was to keep 2015, V1, V2, q parameters. He added that with the first approach there would be some trade-off in results across winter and summer months and with the second approach provided a lower variance of results as measured in MAPE. JB recommended option 2 before seeking Workgroup comments.

JB also indicated that as measured in R2 the models are similar. He showed Workgroup slide 11 which provided a summary of R2 in table format showing the change impact.

Workgroup participants also reviewed the CWV+ results (slide 13), JB indicated that the use of the solar definition helps to explain between 3-12% of the error. A brief discussion took place on the use of the parameters, with Sallyann Blackett (SBI) suggesting that the way parameters are used needs to be looked at. JB said the build up of the parameters could be assessed but the current approach was looking to make as few changes as possible. He said the option would be to either optimise all

parameters or add in just the CWV+ parameter and sought views on how important the variance between summer and winter months was.

SBI suggested it was not certain that the right parameters were being optimised and asked if there should be different parameters for summer and winter.

JB re-iterated that agreement was needed on the definition and suggested more regular updates of CWV+ so it can be reviewed incrementally over time.

There was broad agreement with adopting the CWV+ approach and the new solar definition could be significant with acceptance that there may be some issues in relation to variances for winter months.

JB suggested that it would be helpful to have views on whether to keep 2020 or 2015 parameters.

SBL indicated that from a principle point of view the best approach is to use the optimised 2020 parameters first and then add the solar definition. Other members agreed that although this approach may not deliver the best results from a MAPE perspective it seemed appropriate to use the latest parameters.

New Action 0603: DESC Technical Workgroup members to provide any further views on whether to retain the 2015, V1, V2, q or 2020 parameters (supported by DESC TWG) to benchmark CWV by 12 June 2019 .

A brief discussion then took place on timescales in the context of Xoserve system changes and the 08 July 2019 decision date. JL explained that the 08 July decision date is to allow time for Xoserve to consider the system implications. Fiona Cottam (FC) added that Xoserve need to understand the structure of the formula as well as the data sources. JL indicated that Xoserve do not currently have a data source for the solar information.

SBI suggested that there needs to be agreement that there will be a solar definition added to the formula as the solar component is increasing the accuracy of CWV.

CS summarised the discussion indicating that the DESC Technical Workgroup provided support for using the 2020 optimised parameters including solar. Feedback is needed as soon as possible and preferably by 12 June 2019 on the results provided so far or suggestions for alternative options.

2.2. Review of SNCWV

JL introduced and provided a walkthrough of the presentation titled *Seasonal Normal Review 2020: SNCWV Review*.

JL reminded Workgroup of the milestones, highlighting that agreement is needed on 08 July on the CWV formula for the next period (Gas Year 2020/21) and that the parameters need to be confirmed for use in the CWV formula on 07 October 2019, with the revised SNCWV values being confirmed at the 09 December 2019 meeting.

He reiterated that the purpose of today's meeting was to allow British Gas to present the latest results of their investigations in relation to the use of additional weather variables in the calculation of CWV and based on the feedback to enable consideration and a decision on the CWV definition. Alongside this consideration is also needed on the proposed analysis for reviewing the current SNCWV.

He re-capped that SNCWV provides a benchmark to compare to actual weather experienced (CWV) and that UNC Section H 1.4.6 allows DESC the opportunity to utilise the output from the "Climate Change Methodology" (CCM). He added that previous engagements with the Met Office have enabled a long-range forecast to be put in place up to 2025.

Since the current calculation which became effective on 01 October 2015, there have been 4 complete gas years to enable comparisons to be made. Degree day analysis has been used.

JL shared the proposed assessment (through slides 8 and 9) which investigates the 'levels' and 'shapes' of the current SNCWV using LDZ 'NE' requesting feedback to enable a full set of results to be produced for all LDZs for the July meeting.

JB observed that the degree day differences show some variability and asked how much variability there would be over all LDZs?

JL indicated that the degree day calculation for the recent 4 complete gas year's daily average values indicates that NE was approximately 1.28% warmer than Seasonal Normal.

Slide 11 illustrates the degree day difference for all LDZs for the last 10 complete gas years and shows a similar trend for the majority of LDZs with NW, Scotland, and Wales South slightly cooler than the seasonal normal.

JL re-capped that the results of the CWV formula review will be a major input into the data required for the derivation of the SNCWV and based on earlier discussions if DESC confirm that the CWV formula requires additional weather variables, consideration will need to be given to how a seasonal normal view is established.

JL highlighted that there are now more recent climate studies available, for example UKCP18 and suggested that as a minimum Xoserve should seek re-assurance that the values used to produce the current CCM output are still valid as it includes temperature projections up to 2025.

In response to a question from JB on what information other studies could provide, FC suggested that perhaps some 'rule of thumb' guidelines could be provided plus some commentary on how much difference is being predicted between previous studies and new ones like UK CP18. She added that it would be helpful to assess if the findings are in the same range and what implications if any there are for the continued use of CCM. This is important because a decision is imminent on what will be adopted.

Louise Hellyer (LH) asked if there was time to incorporate any changes at this late stage. There was broad support for Xoserve to investigate further the implications of new studies such as UKCP18 recognising that there may be limitations in terms of capacity to use any new information because of the short timescales.

FC indicated that a challenge will be to understand if the current information for the next 5 years provides a good prediction. She highlighted that Xoserve publish actual forecast data on their website in a secure location showing daily amounts by day, year and weather station.

In response to a question from CS, FC confirmed that Xoserve are not dependent on the British Gas analysis in order to provide information for the next meeting on 08 July 2019. However, whilst the determination of the SNCWV is dependent on the final CWV formula the work to develop these can be carried out in parallel.

JL concluded his presentation by confirming the next steps as follows:

- British Gas will continue with analysis of the existing CWV formula in line with feedback from DESC TWG members.
- The new CWV formula for the next period will be confirmed at the meeting on 8th July 2019.
- Xoserve will review the output from CCM to start preparing for impacts of the CWV formula conclusions and to complete the review of existing SNCWV based on example results provided today.

3. Adhoc Work Plan Review

This agenda item was not discussed.

4. Communication of Key Messages

This agenda item was not discussed.

5. Any Other Business

5.1. Change May Bank Holiday Day 2020

FC highlighted that the Government have changed next year's early May bank holiday which will be moved back by four days for the whole of the UK to coincide with the 75th anniversary of VE Day. This change has potential implications for the profiles that have recently been sent out as they are based on current bank holidays.

There are potential implications for ALPs and DAFs. FC suggested that the options are to either do nothing or amend the forecast in some way for 2020. LH indicated that the do-nothing option may require information from Xoserve to help parties adjust their own forecasts/processes. Xoserve are keen to understand the impact in order to assess if the profiles need to be amended and new profiles issued. She requested that DESC members provide feedback to the email that will be issued by Xoserve on this matter.

New Action 0604: Xoserve (FC/JL) to issue a communication to DESC and DESC TWG members on the impact of the change of date to the early May Bank Holiday 2020. Members are asked to provide a response asap.

6. Diary Planning

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

Workgroup meetings will take place as follows:

Time / Date	Venue	Workgroup Programme
10:00 Monday 08 July 2019	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Standard agenda, plus <ul style="list-style-type: none"> • Final decision on the CWV formula • 2019/20 NDM Algorithms: Review TWG responses • Seasonal Normal Review Update • Communication of Key Messages
10:00 Monday 22 July 2019	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Standard agenda, plus <ul style="list-style-type: none"> • 2019/20 NDM Algorithms: • Response to Industry Representations • Weather Station Review • Review Adhoc Workplan • Seasonal Normal Review Update • Communication of Key Messages
10:00 Monday 07 October 2019	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Standard agenda, plus <ul style="list-style-type: none"> • NDM Sample Update • Seasonal Normal Review Update • Communication of Key Messages
10:00 Monday 09 December 2019	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Standard agenda, plus <ul style="list-style-type: none"> • Evaluation of Algorithm Performance for Gas Year 2018/19 • Modelling Approach – Spring 2020 • Seasonal Normal Review Update • Communication of Key Messages

Action Table (as at 10 June 2019)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
DESC TWG 0501	13/05/19	2.0	PAC to promote the need for accurate MSC data to enable the correct assigning of MPRNs to EUC Bands in the DESC modelling and the settlement system.	Joint Office (CS)	Closed
DESC TWG 0601	10/06/19	2.1	DESC Technical Workgroup members to provide comments on the proposed CWV+ calculation (CWV+ Description paper) by email to British Gas (JB) by 12 June 2019.	ALL	Pending
DESC TWG 0602	10/06/19	2.1	DESC Technical Workgroup members to provide feedback on the new approach (outlined in slide 7) to optimise on the total SSE across all years by 12 June 2019.	ALL	Pending
DESC TWG 0603	10/06/19	2.1	DESC Technical Workgroup members to provide a view on whether to retain the 2015, V1, V2, q or 2020 parameters to benchmark CWV.	ALL	Pending
DESC TWG 0604	10/06/19	5.1	Xoserve (FC/JL) to issue a communication to DESC and DESC TWG members onto assess the impact of the change of date to the early May Bank Holiday 2020. Members are asked to provide a response asap.	Xoserve(FC/JL) /ALL	Pending