

UNC Demand Estimation Sub-Committee Technical Workgroup Minutes

Monday 24 May 2021

via Microsoft Teams

Attendees

Alan Raper (Chair)	(AR)	Joint Office
Mike Berrisford (Secretary)	(MB)	Joint Office

Shipper Members (Voting)

Anupa Purewal	(AP)	E.ON
Daniel Stenson	(DS)	Centrica
John Jones	(JJ)	ScottishPower
Louise Hellyer	(LH)	Total Gas & Power
Neil Crompton	(NC)	SSE

Transporter Members (Voting)

David Mitchell	(DM)	SGN
Emma Buckton	(EB)	Northern Gas Networks
Shiv Singh	(SS)	Cadent Alternate
Smitha Coughlan	(SC)	Wales & West Utilities

Observers (Non-Voting)

Andrew Hayes	(AH)	Wales & West Utilities
Joseph Lloyd	(JL)	Correla on behalf of Xoserve
Kiranjit Shergill	(KS)	Correla on behalf of Xoserve
Mark Perry	(MP)	Correla on behalf of Xoserve
Mike Maguire	(MM)	Correla on behalf of Xoserve
Penny Griffiths	(PG)	Correla on behalf of Xoserve
Simon Bissett	(SB)	Correla on behalf of Xoserve

Copies of papers are available at: <https://www.gasgovernance.co.uk/desc/240521>

1. Introduction and Status Review

Alan Raper (AR) welcomed everyone to the meeting.

1.1. Apologies for Absence

None received.

1.2. Note of Alternates

Shiv Singh (Cadent) for Sanjeev Loi (Cadent)

It was noted that in the absence of the National Grid Member, they will be represented by Xoserve.

1.3. Quoracy Status

AR advised that the meeting quorate.

1.4. Approval of Minutes (28 April 2021)

AR suggested, and Members present agreed, to defer consideration of the 28 April 2021 minutes until the 07 July 2021 meeting to reflect the fact that they had only just been published immediately prior to the commencement of the meeting.

1.5. Approval of Late Papers

There were no late papers to consider.

1.6. Review of Outstanding Actions

None.

2. Review of Single Year Modelling Results – Small and Large NDM (2020/21 data)

2.1. Modelling Results - Introduction

Mark Perry (MP) provided an overview of the 'Modelling Results – Introduction' presentation during which discussions focused (by exception) on the following key points:

Modelling Approach – Basis of 2021 Modelling 1 slide 8

It was noted that the Composite Weather Variable (CWV) definitions and Seasonal Normal basis (SNCWV) bullet also includes consideration of solar generational elements.

COVID-19 Impact Timeline slide 17

When asked whether SMART data was being used in the demand models for the analysis period 01 April 2020 to 31 March 2021, MP confirmed the source was a combination of the samples managed by Xoserve and the Distribution Networks along with contributions from Shippers, which would have been collected from SMART meters.

2.2. Modelling Results – Small NDM

Mike Maguire (MM) provided an overview of the 'Modelling Results – Small NDM' presentation during which discussions focused (by exception) on the following key points:

Results – Small NDM – ILF Summary slide 6

MM pointed out that the ILF (Indicative Load Factor) provides an indication of weather sensitivity, before pointing out the two major movements for the NE and NT LDZ 02BNI values of +3.9 and -4.1 respectively.

Results – Small NDM – R² Summary slide 7

MM explained that every individual model relating to I&C EUCs has shown a decrease in values which is believed to be a consequence of the impacts of the various pandemic lockdown(s).

Comparison of Analysis 01BND – LDZ SE slide 12

MM advised that based on the data there is no obvious indication of any underlying bias.

Comparison of Analysis 01BND – LDZ SE slide 13

MM advised that based on the data there is no obvious indication of any underlying concerning trends.

Comparison of Analysis 01BND – LDZ SE slide 14

MM advised that as far as the 'Outliers generally random, however some exceptions can be seen in April 2020 which may be related to Covid Lockdowns and restrictions' statement is concerned, this resulted in less demand being used than was originally predicted.

The three circled values for 20 and 21 April 2020 and 14 May 2020 reflect the scattered data plots in the 'Current Analysis Period '20/21' regression graph on slide 13.

Results – Small NDM 01BND – Charts for LDZ EM slide 17

MM explained that the circled dates displayed within the '*Residual plot – Outliers*' graph (bottom left hand corner) are not necessarily the same dates as those observed for the SE LDZ.

Results – Small NDM 01BND – Charts for LDZ WN slide 18

MM pointed out that this is a small LDZ comprising relatively fewer supply points than others. MM went on to explain that the circled dates displayed within the '*Residual plot – Outliers*' graph (bottom left-hand corner) are again not necessarily the same dates as those observed for the SE or EM LDZs.

Results – Small NDM 01BND Conclusions slide 19

MM pointed out that April 2020 was an exceptionally warm month, which could point towards a potential lower gas usage.

Discussions then focused on the three (3) potential options, with the following points of note being raised:

- As far as two dates (15 and 20 April 2020) within Option 2 are concerned, the first date related to 8 out of 13 LDZ outliers and the second to 7 out of 13 LDZ outliers – in short circa 33% of the available April data points;
- Parties considered various options for the weather sensitive April data set utilised within the modelling, such as;
 - Utilise previous year's April data; or
 - Remove some of the April data points, (some Members felt this would be excessive), or
 - A combination of the above plus removing holiday behaviours from the 2020 data; or
 - Rather than utilise (3) three years of data (2018/19, 2019/20 and 2020/21) for the April period, just utilise (2) two years' worth of data (2018/19, 2019/20). When asked, Joseph Lloyd (JL) pointed out that this might not be a viable option as he believes the model expects data to be present for all 3 years in order to successfully run the process; or
 - Utilise holiday data in the regression modelling for the full (3) three years, with just the April 2020 data missing. Pointing out the potential limitations of this option, JL suggested that assessment of a modelling run would be needed in order to fully appreciate the impacts.
- It was noted that not only was the 'Beast from the East' successfully factored into the 2018 modelling, but the modelling itself has become more flexible in the intervening years.
- Some Members wondered whether the results reflect both the unseasonably warm April and Covid related impacts. MP responded by suggesting that Correla would need to consider the matter outside of the meeting and provide a view in due course as the inference from the data modelled so far, is that the results are a product of the weather rather than Covid (i.e. solar threshold related impacts).

In returning to consider the (3) three Options presented, the consensus view of the Members in attendance was to opt for Option 2 with the caveat that Correla undertakes some additional modelling and analysis to ensure that only an optimised minimum number of outliers are removed.

New Action DESC TWG0501: Reference Small NDM 01BND Option 2 – Correla (PG, MM and JL) to undertake additional modelling simulation runs with the removal of the (2) two outlier sets of data supported with a view on a revised set of optimised modelling data for comparison.

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the (caveated) **adoption of Option 2** for the Small NDM 01BND 2020/21 modelling data.

Results – Small NDM – Band 02BND slide 20

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the **adoption of Option 1** for the Small NDM – Band 02BND modelling data.

Comparison of Analysis 02BND – LDZ SO – Option 1 slide 23

MM suggested that there are indications within the data of a potential underlying trend being present.

Results – Small NDM 02BND Conclusions slide 29

In considering the (3) three options, it was suggested that on the grounds that Options 1 and 2 appear similar, perhaps Option 3 could be viable. However, this was entirely supported by the Committee, with some Members of the opinion that Option 3 would be a potentially a sub-optimal (untested) solution and noted that such a course of action had never been adopted previously.

It was agreed to defer consideration of Option 3 until later in the year once further analysis work could be undertaken, (including data quality assessment), and a more informed decision for future purposes undertaken.

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the **adoption of Option 2** for the Small NDM 02BND modelling data.

Results – Small NDM – 01BNI Summary slide 32

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the *'recommendation that due to the impacts of the COVID-19 pandemic, this year's data for EUC 01BNI is not used to produce EUC Gas Demand models for Gas Year 2021/22'*.

Results – Small NDM – 02BNI Summary slide 39

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the *'recommendation that due to the impacts of the COVID-19 pandemic, this year's data for EUC 02BNI is not used to produce EUC Gas Demand models for Gas Year 2021/22'*.

Results – Small NDM – 03B Summary slide 41

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the *'recommendation that due to the impacts of the COVID-19 pandemic, this year's data for EUC 03B is not used to produce EUC Gas Demand models for Gas Year 2021/22'*.

Results – Small NDM – 04B Summary slide 42

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the *'recommendation that due to the impacts of the COVID-19 pandemic, this year's data for EUC 04B is not used to produce EUC Gas Demand models for Gas Year 2021/22'*.

Results – Small NDM – WAR Band Summary slide 46

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the *'recommendation that due to the impacts of the COVID-19 pandemic, this year's data is not used to produce EUC Gas Demand models for Gas Year 2021/22'*.

Results – Small NDM – Conclusions and Recommendations slide 47

When asked whether ‘DESC TWG are happy to move the Demand Model Smoothing phase for the Small NDM models based on the above approach?’ there were NO adverse comments raised, and therefore **the approach was approved**.

2.3. Modelling Results – Large NDM

Opening the discussions on the ‘Modelling Results – Large NDM’ presentation Penny Griffiths (PG) suggested that once Members have made a decision on the first Large NDM EUC the rest could be agreed accordingly.

Thereafter, discussions focused (by exception) on the following key points:

Results – Large NDM R2 Summary slide 5

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the adoption of the ‘Summary supports rejection of Large NDM I&C models this year’ statement.

Results – Large NDM ILF Summary slide 6

It was noted that the ILFs have moved significantly for the majority of the EUC and LDZ combinations.

Results – Large NDM – 05B Summary slide 9

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the ‘*recommendation that due to the impacts of the COVID-19 pandemic, this year’s data for EUC 05B is not used to produce EUC Gas Demand models for Gas Year 2021/22*’.

Results – Large NDM – 06B Summary slide 15

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the ‘*recommendation that due to the impacts of the COVID-19 pandemic, this year’s data for EUC 06B is not used to produce EUC Gas Demand models for Gas Year 2021/22*’.

Results – Large NDM – 07B and 08B Summary slide 17

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the ‘*recommendation that due to the impacts of the COVID-19 pandemic, this year’s data for EUC 07B and 08B are not used to produce EUC Gas Demand models for Gas Year 2021/22*’.

Results – Large NDM – 09B Summary slide 19

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the ‘*recommendation that due to the impacts of the COVID-19 pandemic, this year’s data for EUC 09B is not used to produce EUC Gas Demand models for Gas Year 2021/22*’.

Results – Large NDM – Conclusions and Recommendations slide 26

When asked whether ‘DESC TWG are happy to move the Demand Model Smoothing phase for the Large NDM models based on the above approach?’ there were NO adverse comments raised, and therefore **the approach was approved**.

Meeting Summary slide 28

MP suggested that in light of the outstanding considerations, (and associated action), under the *Small NDM 01BND Option 2 variants* in item 2.2 above, it might be prudent to undertake some offline discussions, (probably via email engagement so as to meet the next stage of the process on 07 July).

Next Steps slide 29

Discussions centred around reducing the review period (for Stage 2) from circa (3) three weeks to around (2) two weeks in order to enable Correla sufficient time to look at the possible Option 2 variants for *Small NDM 01BND*.

In summary, extend the end date for Stage 1 from 04 June 2021 to 11 June 2021 and compress Stage 2 to 11 June to 25 June. MP explained that, if possible, Correla would endeavour to provide the draft profiles sooner than the proposed 11 June target date.

Members present undertook a vote (by exception) during which there were NO adverse comments raised to the proposed date changes for Stages 1 and 2, therefore the amendments to the dates was approved.

3. Review of NDM Algorithm Update

In providing a quick verbal update, MP explained that this 2021 standing agenda item has been retained as a means under which regular progress updates on *UNC Request 0754R 'Investigate Advanced Analytic Options to improve NDM Demand Modelling'* could be provided.¹

4. Any Other Business

None to consider.

5. Communication of Key Messages

AR advised that the DESC Summary of Key Messages document to be supplied by MP post meeting, would be published on the Joint Office website at:

<https://www.gasgovernance.co.uk/desc/summarykeymessages>

6. Diary Planning

During a brief discussion, Members agreed to hold a meeting of the *UNC Request 0754R 'Investigate Advanced Analytic Options to improve NDM Demand Modelling'* Request Workgroup immediately following the 07 July 2021 DESC meeting – a start / end time for which is predicted to be circa 14:00 – 16:00.

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

Time / Date	Venue	Workgroup Programme
10:00 Wednesday 07 July 2021	Microsoft Teams	DESC
10:00 Wednesday 21 July 2021	Microsoft Teams	DESC
10:00 Wednesday 06 October 2021	Microsoft Teams	DESC
10:00 Tuesday 14 December 2021	Microsoft Teams	DESC

¹ Please note: the last meeting of the Request Workgroup 0754R took place on 12 May 2021 and a copy of the minutes are available to view and/or download from the Joint Office web site at: <https://www.gasgovernance.co.uk/0754/120521>

DESC Action Table (as at 24 May 2021)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
DESC TWG 0501	24/05/21	2.2	<i>Reference Small NDM 01BND Option 2 – Correla (PG, MM and JL) to undertake additional modelling simulation runs with the removal of the (2) two outlier sets of data supported with a view on a revised set of optimised modelling data for comparison.</i>	Correla (PG, MM & JL)	Pending