

**UNC Workgroup 0754R Minutes**  
**Investigate Advanced Analytic Options to improve NDM Demand Modelling**

**Thursday 07 July 2022**

**via Microsoft Teams**

**Attendees,**

Rebecca Hailes (Chair)	(RH)	Joint Office
Mike Berrisford (Secretary)	(MiB)	Joint Office
Ceirán Sheehan	(CS)	Total Energies
Dan Stenson	(DS)	Centrica
Ellie Rogers	(ER)	Xoserve
Joseph Lloyd	(JL)	Correla on behalf of Xoserve
Mark Perry	(MP)	Correla on behalf of Xoserve
Sarah Palmer	(SP)	E.ON
Tom Stuart	(TS)	Wales & West Utilities

Copies of all papers are available at: <https://www.gasgovernance.co.uk/0754/070722>

The Workgroup Report is due to be presented at the UNC Modification Panel by 17 November 2022.

**1.0 Introduction and Status Review**

Rebecca Hailes (RH) welcomed all to the meeting. She noted that the meeting was not quorate since the requirement for 2 Transporters was not fulfilled. Nevertheless, she confirmed the meeting should go ahead since it had been re-scheduled once already and no formal decision were to be taken at this meeting.

**1.1. Approval of Minutes (22 March 2022)**

The minutes from the previous meeting were approved.

**1.2. Approval of Late Papers**

There were no late papers to consider.

**1.3. Review of Outstanding Actions**

**1102:** Xoserve (ER) to review the IP rights of the work done for this Workgroup and confirm this belonged to Xoserve.

**Update:** When RH pointed out that this action had been considered at a previous meeting, parties in attendance agreed the action could now be closed. **Closed**

**0301:** Correla (JL) to provide an indication of how the data set looks like and clarify the difference between using the mean and the median figure.

**Update:** Joseph Lloyd (JL) provided an overview of the 'Action 0301' update presentation during which he drew attention to the key points (by exception), as follows:

Action 0301 – slide 3

JL provided a brief resume of the (historical) background to how the SND calculations are based around 'mean' (rather than 'median') values in the main.

01BND Mean and Median – slide 4

JL advised that the term 'NNGLM' is a reference to the Neural Networks Model.

Action 0301 – Conclusion – slide 8

When Dan Stenson pointed out that utilisation of a median value is better placed to handle and limit erroneous data impacts, JL responded by acknowledging the point before explaining that the team does consider the wider picture when developing the data and undertaking the associated calculations.

Thereafter, parties in attendance agreed the action could now be closed. **Closed**

## 2.0 Introduction to Area 2: Improve Validation Processes

Joseph Lloyd (JL) presented the 'UNC Workgroup 0754R' presentation slides providing a high-level overview of what the discussions will cover.

For a full and detailed update, please refer to the published slides on the meeting page.

### 2.1. Investigate methods to support validation identifying suspicious demand patterns

Joseph Lloyd (JL) presented the 'UNC Workgroup 0754R' presentation slides providing a high-level overview of what the discussions will cover.

For a full and detailed update, please refer to the published slides on the meeting page.

The key points of discussions are captured (by exception) below:

Workgroup 0754R: Investigation Areas – slide 5

JL advised that in respect of the EUC definitions (boundaries), there are 39 EUCs / LDZ.

#### Meeting 6 Re-cap

Meeting 6 Key Discussion Points – slide 7

When asked, there were no adverse comments forthcoming from those parties in attendance at the meeting.

#### Area 2: Improve Validation Processes

Spring 2022 Modelling Validation Outcomes – slide 13

In referring to the validation algorithm chart, when it was suggested that potentially losing circa 60% of the data values could become an issue, JL responded by explaining that zero consumption values could be a fault within data transfer processes which are covered in more detail later in the presentation.

Proposed Advanced Analytics Validation: Focus Areas – slide 15

In summarising the discussion points and feedback being provided, Mark Perry (MP) highlighted the following:

- Tightening of the data rules for sites with missing data could prove beneficial when you have larger sampling datasets (i.e. less concern on final numbers available for modelling);
- Machine learning potentially eases data cleansing concerns;
  - Trade off between smaller amounts of clean data versus larger amounts of data usage (i.e. quality v.s. quantity considerations), and
  - Model weighting factors can change depending upon the scenarios and could involve elements of data 'edge losses' etc.

#### Area 2: Uncertainty Estimator

### 2022 Sample Test Results (Unusual Profile) – slide 21

JL confirmed that whilst the findings are not currently fed back to Shippers, Xoserve are considering the potential next steps, especially when also considering that Xoserve only receive MPR and consumption data (i.e. excluding address information, although there are mechanisms to partially overcome this limitation such as Google maps and post code searches etc.).

### Uncertainty Estimator – Conclusion – slide 22

When asked, Dan Stenson confirmed that Centrica utilises similar analysis and modelling techniques and that furthermore, he supports Xoserve's proposals as presented.

## **Area 2: Individual MPR Regression**

### Individual MPR Regression – Conclusion – slide 30

JL provided a brief explanation of how and what the sub band profiles are comprised of (i.e. cooking loads etc.).

## **Area 2: Winter Zero Consumption**

### Winter Zero Consumption – Example 1 – slide 34

In noting that the data potentially supports DS's 'edge case' concerns, JL suggested that care is needed in assessing whether it is right to remove these from the sample, as this could potentially lead to a skewing of the results.

### Area 2: Summary and Next Steps – slide 36

Referring to the second bullet point relating to a 'Adhoc Workplan', JL advised that this would be included as a new agenda item for consideration at the 19 July 2022 DESC meeting.

When JL advised that any feedback (either immediately or offline after the meeting) would be greatly appreciated, DS advised that he would contact JL directly after the meeting. At the same time, DS thanked JL for all the hard work undertaken in compiling the analysis and providing the presentation.

## **Update on Area 1: Trial Alternative approaches to deriving SND<sub>t</sub>**

### Workgroup 0754R: Area 1 Development Approach – slide 38

JL advised that this follows the format and approach introduced at the 2<sup>nd</sup> Request Workgroup meeting which took place on 12 May 2021.<sup>1</sup>

### Conclusion and Next Steps – slide 40

When DS observed that data sharing related issues exist and that having a sound modelling approach should deliver a better view on the data being utilised, especially improvements that come from improved data quality, MP referred to a previous DESC action (DESC 0901) for which he provided information.<sup>2</sup>

When asked, DS confirmed that subject to other parties following suite, Centrica would be happy to look to provide customer related data in order to support Xoserve – other Shipper parties in attendance, whilst supportive of the basic principle, could not at this time commit to providing the information. It was suggested that for information to come from Shippers directly to Xoserve, a DCC approval would also be needed.

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<sup>1</sup> Please note: A copy of the 12 May 2021 0754R meeting minutes can be viewed and/or downloaded from the Joint Office web site at: <https://www.gasgovernance.co.uk/0754/120521>

<sup>2</sup> Please note: A copy of the 02 March 2022 DESC meeting minutes can be viewed and/or downloaded from the Joint Office web site at: <https://www.gasgovernance.co.uk/DESC/020322>

Concluding discussions, RH suggested that perhaps DESC would be better placed to progress such matters.

### 3.0 Next Steps

RH summarised the key next steps as follows:

- Provision of a progress update to DESC, and
- Development of the 0754R Request Workgroup Report for finalisation at a meeting in September

### 4.0 Any Other Business

None.

### 5.0 Diary Planning

Further details of planned meetings are available at: [www.gasgovernance.co.uk/events-calendar/month](http://www.gasgovernance.co.uk/events-calendar/month)

Workgroup meetings will take place as follows:

Time / Date	Venue	Programme
10:00 am 29 September 2022	TBC	TBC

### Action Table (as at 07 July 2022)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Target Date	Status Update
1102	30/11/21	6.0	Xoserve (ER) to review the IP rights of the work done for this Workgroup and confirm this belonged to Xoserve.	Xoserve (ER)	June Workgroup	Update provided. <b>Closed</b>
0301	22/03/22	2.1	Correla (JL) to provide an indication of how the data set looks like and clarify the difference between using the mean and the median figure.	Correla (JL)	June Workgroup	Update provided. <b>Closed</b>