

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

Wednesday 07 July 2021

via Microsoft Teams

### Attendees,

Eric Fowler (Chair)	(EF)	Joint Office
Helen Cui (Secretary)	(HCu)	Joint Office
Dan Stenson	(DS)	British Gas
Ellie Rogers	(ER)	Xoserve
Fiona Cottam	(FC)	Correla on behalf of Xoserve
John Jones	(JJ)	ScottishPower
Joseph Lloyd	(JL)	Correla on behalf of Xoserve
Luke Reeves	(LR)	EDF
Mark Perry	(MP)	Correla on behalf of Xoserve
Penny Griffiths	(PG)	Correla on behalf of Xoserve
Sanjeev Loi	(SL)	Cadent
Sarah Palmer	(SP)	E.ON

Copies of all papers are available at: <https://www.gasgovernance.co.uk/0754/070721>

The Workgroup Report is due to be presented at the UNC Modification Panel by 18 November 2021.

### 1.0 Introduction and Status Review

Eric Fowler (EF) welcomed all to the Workgroup.

#### 1.1. Approval of Minutes (12 May 2021)

The minutes from the previous meeting were approved.

#### 1.2. Approval of Late Papers

No late papers submitted.

#### 1.3. Review of Outstanding Actions

**0301:** RHa and MP to seek input from National Grid NTS and/or Xoserve representatives involved with Gemini, regarding impacts of changes to Gemini on this Request Workgroup 0754R.

**Update:** Mark Perry (MP) believed National Grid would need more information on the system changes to understand the potential impacts to Gemini. Ellie Rogers (ER) suggested closing the action and capturing this as a requirement for consideration at a later date. It was agreed to close the action and factor in a consideration of Gemini impacts when considering the solution options. **Closed.**

**0303:** Workgroup to ~~review the~~ consider the UIG taskforce recommendations ~~to review before the next meeting.~~ The recommendations can be found during Workgroup Development at: (<https://www.xoserve.com/services/issue-management/unidentified-gas-uir/#task-force-findings-etc>).

**Update:** EF recognised the value of reviewing the taskforce recommendations to enable a thorough assessment of the options as an ongoing requirement for the Workgroup and suggested rewording the action. MP confirmed this was a useful reference for the

Workgroup. Joseph Lloyd (JL) explained that the UIG taskforce recommendations have been considered, along with other general broader considerations. **Ongoing.**

## 2.0 Approach to Analysis

Mark Perry (MP) talked through a presentation which provided the background to the Request, and an update on progress. This included an update on the Approach to analysis, Data Requirements, the success criteria measures, and system set up.

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

MP provided a brief recap of the key discussion points from previous meetings (page 6), explaining that the main focus for today's meeting would be to look more closely at Area 1.

Joseph Lloyd (JL) provided the Workgroup with an overview of the approaches for each of the areas (see pages 8 - 18).

### Area 1: Trial alternative approaches to deriving SND<sub>t</sub>

JL provided an overview of the objective, approaches, and the options.

JL explained Correla/Xoserve have been looking at how to achieve a more accurate view of SND<sub>t</sub>, in terms of approaches and if this can be achieved with time forecasting or amendments to the existing approach. JL advised that Correla are looking at, what can be learnt from current learning, and looking at what could be built into the approach.

JL provided an overview of the development cycle, to consider the approaches, testing, and evidence. Behind the scenes Correla have looked at what is needed to calculate the ALPs and DAFs and looking at what output is required.

In terms of the test cycle the key will be to look at the modelling error to get the models close to reality as possible and to find the best balance, i.e. what this looks like in percentage terms, volume terms, UIG terms, indicative load factors, and taking into account weather sensitivity.

The Workgroup considered the approach and structure.

Sarah Palmer (SP) acknowledged there will be some unknown paths but the structure looked sensible. SP noted some flexibility may be required to take into account unpredicted changes.

EF asked with regards to the success criteria, if there was any rating or weighting, on aspects which may be more or less important. EF also asked about the degree of transparency for Shippers and the ability to see and understand how things will work. JL recognised the need for transparency and confirmed this is on the forefront of Correla's thought process.

Dan Stenson (DS) concurred that the proposal appeared to be a sensible approach but asked the Workgroup not to be bound by it if during development there becomes a sticking point.

### Area 1: Trial EUC Selection

JL provided an overview of the End User Categories (EUC) which he proposed should be focussed on, these were:

- 01BND - Domestic model, representing nearly 90% of NDM supply points
- 02BNI – I&C Model, representing the second largest I&C consumer group within the Small NDM AQ range (0 to 2,196 MWh pa)
- 05B – I&C Model, representing the largest I&C consumer group within the Large NDM AQ range (2,196 to 58,600 MWh pa)

### Area 1: Trial LDZ Selection

JL provided a proposal to focus on the North West (NW) and South East (SE) LDZs as these along with the proposed EUC selection, represent the total population well for the initial trial runs.

## **3.0 Data Requirements Measures and Success Criteria**

### Area 1: Data Availability for Trial EUCs and LDZs

JL provided a table illustrating the size of the data sets for NW and SE LDZs and EUC bands, 01BND, 02BNI and 05B being proposed. The tables reported the number of validated supply points and provided reassurance there would be sufficient data to use as an input to trialling different approaches.

### Areas 1-3: Data Availability

JL provided an early view of the Data Requirements for weather, gas consumption, and supply point attributes, explaining what other data could be used such as weather types, weather precipitation, Class 3 and Class 4 reads, supply point post codes, and the time frames across the year for example holiday periods and calendar shoulder months.

### Areas 1-3: Success criteria and measures

JL provided an overview of the success criteria and measures, he explained that the Area 1 investigation would be measured against the success criteria to:

- Reduce Demand Modelling Error, particular during the higher volume periods in October to March. It was recognised there needed to be a consideration of the trade-off between model accuracy and volatility;
- Reduction in temporary Unidentified Gas volumes, to reduce errors; and
- To minimise impacts to simulated peak demand, maintaining Peak Load Factors and Peak Day Demand (SOQ) levels.

Dan Stenson (DS) asked if 'absolute errors' could be considered. JL recognised there would be some imperfections in the model, taking into account AQ inaccuracy, meter reads being out of date, and frequency of meter read submissions.

DS welcomed the approach presented.

### Areas 1-3: Resources (no update)

JL confirmed there was very little to update on what was provided at the previous meeting. The slide presented provided an overview of systems set-up, costs and resources.

### Timeline

JL provided a Workgroup Timeline and the proposed focus for the next meeting, to look at the initial results.

The Workgroup were happy with the approach presented and for Corella to develop the models for presentation in September, to look at the initial results. It was acknowledged from September there will be a need for monthly Workgroup meetings.

## **4.0 System set up and familiarisation**

See items 2 and 3. No further discussion.

## **5.0 Next Steps**

JL provided the next steps these were to:

- Develop, Test and evidence the collection processes;
- Document the Area 1 approach;

- Develop the Area 1 model(s); and
- Evaluate and test evidence.

These will form the basis of discussions at the next meeting.

JL welcomed input, feedback and contributions from the Workgroup on the approach, for the next stages. ER suggested the Workgroup review the UIG Taskforce recommendations, to review machine learning and encouraged Shippers to provide any feedback (see Action 0303).

## 6.0 Any Other Business

None.

## 7.0 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 Thursday 09 September 2021	Microsoft Teams	To: <ul style="list-style-type: none"> <li>• Review the Development, Test and evidence collection processes;</li> <li>• Review Area 1 approach;</li> <li>• Develop the Area 1 model(s); and</li> <li>• Evaluate and test evidence.</li> </ul>
October TBC	TBC	TBC
November TBC	TBC	TBC

### Action Table (as at 07 July 2021)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Target Date	Status Update
0301	23/03/21	1.0	RH and MP to seek input from National Grid NTS and/or Xoserve representatives involved with Gemini, regarding impacts of changes to Gemini on this Request Workgroup 0754R	Joint Office (RH) & Xoserve (MP)		<b>Closed</b>
0303	23/03/21	3.0	Workgroup to consider the UIG taskforce recommendations during Workgroup Development ( <a href="https://www.xoserve.com/services/issue-management/unidentified-gas-uig/#task-force-findings-etc">https://www.xoserve.com/services/issue-management/unidentified-gas-uig/#task-force-findings-etc</a> ).	All	Ongoing Requirement	<b>Ongoing</b>