

**UNC Workgroup 0712S Minutes**  
**Amending the oxygen content limit in the Network Entry Agreement**  
**(NEA) at the St Fergus SAGE plant**  
**Thursday 09 January 2020**  
**at Elexon, 4th Floor, 350 Euston Road, London, NW1 3AW**

**Attendees**

Alan Raper Chair)	(AR)	Joint Office
Karen Visgarda (Secretary)	(KV)	Joint Office
Adam Bates	(AB)	South Hook Gas
Alex Neild*	(AN)	Storengy UK
Andrew Pearce	(AP)	BP
Angela Fletcher*	(AF)	Ancala Midstream
Anna Shrigley	(AS)	Eni Trading & Shipping
Anna Stankiewicz	(ASt)	National Grid
Ashley Adams	(AA)	National Grid
Bill Reed	(BR)	RWE
Chris Wright	(CW)	ExxonMobil
Christiane Sykes	(CS)	Shell
David Adlam	(DA)	Cadent
David Cox*	(DC)	London Energy Consulting
Debra Hawkin	(DH)	TPA Solutions
Edd Fyfe*	(EF)	SGN
Emma Buckton*	(EB)	Northern Gas Networks
Jeff Chandler*	(JC)	SSE
Jennifer Randall	(JR)	National Grid
Julie Cox	(JCx)	Energy UK
Kamila Nugumanova	(KN)	ESB
Kamla Rhodes	(KR)	Conoco Phillips
Lea Slokar	(LS)	Ofgem
Malcolm Montgomery	(MM)	National Grid
Nick Wye	(NW)	Waters Wye Associates
Paul Youngman*	(PY)	IUK
Phil Hobbins	(PH)	National Grid
Richard Fairholme*	(RF)	Uniper
Shiv Singh*	(SS)	Cadent
Steve Pownall	(SP)	Xoserve
Steven Britton*	(SB)	Cornwall Energy
Terry Burke	(TB)	Equinor

*\*via teleconference*

Copies of all papers are available at: <http://www.gasgovernance.co.uk/0712/090120>

The Workgroup Report is due to be presented at the UNC Modification Panel by 21 May 2020.

## 1.0 Outline of Modification

Alan Raper (AR) explained that this Modification had been discussed in detail at the pre-Modification stage and that prior to the formal submission at the December Panel, National Grid had already commenced work on the oxygen penetration analysis.

Angela Fletcher (AF) then introduced the Modification and explained SNSL was seeking to bring new Norwegian gas volumes into the National Grid via the St Fergus SAGE gas terminal. She explained that OMV Gas Marketing and Trading GmbH's Norwegian affiliate was co-owner of these gas volumes, and OMV Gas Marketing and Trading GmbH, as a UNC shipper, was therefore seeking the Modification while SNSL's gas licence application progresses. She said processing this gas to meet the current GS(M)R (1996) defined Incomplete Combustion Factor ("ICF") specification would require ballasting with nitrogen gas. She added the available the Pressure Swing Absorption ("PSA") nitrogen generation units produce nitrogen with a minimum 99.5% vol. purity. Analysis of SAGE Terminal export composition showed that this will result in an Oxygen content range of 50 to 70 ppm (0.005 to 0.007 mol%) in gas exported to the NTS.

The 10ppm limit as currently applied will prevent the SAGE terminal from being able to process these new gas volumes. AF said she believed this limit was unnecessary and restrictive to the SAGE terminal's ability to access new gas supplies for the UK.

Phil Hobbins (PH) provided an overview of the 'Amending the Oxygen Limit in the NEA at the St Fergus SAGE Plant' presentation, the full presentation can be viewed at:

<http://www.gasgovernance.co.uk/tx/090120>

PH explained that National Grid NTS annually performed a two part process to inform the long term (10 year) adequacy, utilisation and development needs of the NTS pipeline network, together with an Industry consultation via Future Energy Scenarios (FES) to help to define scenarios of future flow into and out of the NTS, including modelling of gas flows within the NTS network which may arise from these future scenarios. The results of this analysis are summarised in the Gas Ten Year Statement

PH said the results of the 2019/20 cycle of this modelling were examined for the Ancala entry point for gas years: 2019/20, 2025/26 and 2030/31.

He drew attention to the heat map which showed the ranges of penetration of Ancala gas into the NTS under peak and low demand conditions for the 2019/20 network.

- Peak scenario uses FES forecast under which Ancala gas comprises ~15ppm of total St Fergus supplies
- Low demand scenario assumes Ancala gas comprises ~25% of total St Fergus supplies (equal to the 2019 summer average)

Assumptions:

- Ancala entry flows contain 100ppm of oxygen content
- NSMP and Shell entry points flow with no oxygen content

PH said therefore, post-comingling in the NG terminal, ~15ppm (peak case) and ~25ppm (low demand case) of oxygen would enter the NTS pipelines at St Fergus

He then overviewed the heat map which showed the ranges of penetration of Ancala gas into the NTS under peak and low demand conditions for a combination of the 2025/26 and 2030/31 networks

- Ancala gas is forecast to contribute ~14% to total St Fergus supplies

Assumptions:

- Ancala entry flows contain 100ppm of oxygen content

- NSMP and Shell entry points flow with no oxygen content

Therefore, post-comingling in the NG terminal, ~14ppm of oxygen content would be expected to enter the NTS pipelines at St Fergus

### Conclusions

PH explained that over the next 10 years, penetration of Ancala gas into the network was expected to be greater in summer than winter

Ancala gas was expected to be consumed / comingled with other NTS supplies as it travelled south such that:

- Under a peak scenario, Ancala gas is not present beyond the north of England
- Under a low demand scenario, a small percentage of Ancala gas would penetrate to southern areas

PH said the Proposer did not expect the oxygen content to exceed 70ppm in reality

The conclusion to the analysis was that the incremental increase in oxygen content, that may arise from the proposed NEA amendment, would have a relatively small impact on the network as a whole.

A brief general discussion took place in relation to the analysis presented and specifically in relation to the heat maps. The consensus of the Workgroup was that it would be useful if the views of downstream users could be captured as part of the reporting stage and it was suggested that a specific question could be included as part of the consultation.

It was also felt that it would be useful to understand what the cumulative, maximum oxygen content could be from this and previous incremental increases. To aid further understanding, PH agreed to re-investigate to see if this modelling could be provided.

**New action 0101:** National Grid (PH) to investigate producing an aggregated heat map showing the cumulative effect of the maximum oxygen impact levels on the network.

AF confirmed Julie Cox's (JCx) view that if the IGEM change relating to ICF was completed prior to 2021, this Modification would no longer be required. However, even if the gas specification did change, an amendment to the NEA would still be required. It was agreed that a revision to the ICF element of gas specification, would be a broader issue.

## **2.0 Initial Discussion**

### **2.1. Issues and Questions from Panel**

None raised.

### **2.2. Initial Representations**

None received.

### **2.3. Terms of Reference**

The standard UNC Workgroup Terms of Reference will apply and is available at [www.gasgovernance.co.uk/mods](http://www.gasgovernance.co.uk/mods)

## **3.0 Next Steps**

AR confirmed that the Workgroup Report would be completed at the February meeting using the information available, in readiness for submission to the February Panel.

## **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	Workgroup Programme
10.00 06 February 2020	Radcliffe House, Blenheim Court, Warwick Road, Solihull B91 2AA	Detail planned agenda items. <ul style="list-style-type: none"> <li>• Further consideration of Oxygen penetration heat map analysis</li> <li>• Completion of Workgroup Report</li> </ul>

**Action Table (as at 09 January 2020)**

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
<b>0101</b>	09/01/2020	1.0	National Grid (PH) to investigate producing an aggregated heat map showing the cumulative effect of the maximum oxygen impact levels on the network.	National Grid (PH)	<b>Pending</b>