

UNC Workgroup 0849R Minutes
Commercial Framework Review to Enable Hydrogen Blending
Wednesday 28 February 2024
via Microsoft Teams

Attendees		
Rebecca Hailes (Chair)	(RHa)	Joint Office
Niamh Holden (Secretary)	(NH)	Joint Office
Megan Bray (Proposer)	(MB)	National Gas Transmission
Alexis Birchall	(AB)	Northern Gas Networks
Amy Howarth	(AH)	Storengy
Andy Clasper	(AC)	Cadent
Anna Shrigley	(ASh)	ENI Global Marketing & Trading
Anne Jackson	(AJ)	REC Code Manager
Alexander Webb	(AW)	Cadent
Ben Hanley	(BH)	Northern Gas Networks
Bethan Winter	(BW)	Wales & West Utilities
Charlotte Gilbert	(CG)	BU-UK
Chris Wright	(CW)	Exxon Mobil
Dave Lander	(DL)	Dave Lander Consulting
David Addison	(DA)	CDSP
David Mitchell	(DM)	SGN
Edward Allard	(EA)	Cadent
Jeff Chandler	(JC)	SSE
Joel Martin	(JM)	SGN
Joseph Leggett	(JL)	Interconnector
Julie Cox	(JCx)	Energy UK
Mariachiara Zennaro	(MZ)	Centrica
Mark Field	(MF)	Sembcorp
Matthew Newman	(MN)	National Gas
Michael Payley	(MP)	CDSP
Michelle Niits	(MN)	CDSP
Nick King	(NK)	CNG Services
Phoebe Finn	(PF)	Statera Energy
Oorlagh Chapman	(OC)	Centrica
Radhika Rajendran	(RR)	CDSP
Richard Fairholme	(RF)	Uniper
Richard Pomroy	(RP)	Wales & West Utilities
Ritchard Hewitt	(RHe)	Hewitt Home & Energy Solutions
Sally Hardman	(SH)	SGN
Steve Britton	(SB)	Cornwall Insight
Tommy Isaac	(TI)	KPMG
Tom Stuart	(TS)	Wales & West Utilities
Tracey Saunders	(TSa)	Northern Gas Networks

Victoria Robinson	(VR)	DESNZ
<p><i>The Workgroup Report is due to be presented at the UNC Modification Panel by 19 September 2024.</i></p> <p><i>This Workgroup meeting will be considered quorate provided at least two Transporter and two Shipper User representatives are present.</i></p> <p><i>Please note these minutes do not replicate/include detailed content provided within the presentation slides, therefore it is recommended that the published presentation material is reviewed in conjunction with these minutes. Copies of all papers are available at: https://www.gasgovernance.co.uk/0849/280224</i></p>		

1. Introduction and Status Review

Rebecca Hailes (RHa) welcomed everyone to the meeting.

1.1 Approval of Minutes (22 November 2023)

The minutes of the previous meeting were approved.

1.2 Approval of Late Papers

No late papers were reported.

1.3 Review of Outstanding Actions

Review of National Gas Transmission Action Tracking List (please refer to the Issues and Actions Tracker published here: <https://www.gasgovernance.co.uk/0849/280224>. Megan Bray (MB) led a review of the Actions Tracking List as follows:

1 - CCGTs

Check CCGT's are included in Progressive Energy study looking at Hydrogen.

MB advised that herself and Julie Cox (JCx) are to discuss the methodology for H2 acceptability, and the outputs of this work are to be shared with industry upon completion and any issues identified will be considered for framework changes.

RHa queried whether there was a timeline in place for the completion of this work. MB advised that a decision hasn't been made yet so it was hard to say when the work will likely start, and they are waiting on the submission of safety evidence.

JCx argued that it was more about operability and that it needs to be done on a site-by-site basis and is not always about safety. MB confirmed that a final report is to be drafted and an update would be provided at the next meeting.

Richard Fairholme (RF) supported JCx's recommendation, stating that it needs to be looked at from both a safety and market perspective, RF suggested that learnings could be taken from the EU. MB confirmed that they would need to look at the gas specifications across interconnectors and this could be looked into at the same time.

Jeff Chandler (JC) advised that the EU have a 2% hydrogen blend cap and are able to burn that hydrogen content.

Joseph Leggett (JL) advised that there is a minimum level that they have to accept across border points and they are therefore limited in different ways.

Victoria Robinson (VR) stated that there is a level which is set out in the regulations, and a bilateral agreement would be needed if any EU Member State wanted to go above 2%. MB noted that there would be a more detailed update on EU policy later in the meeting.

2b- GCOTER

Will climate change have an impact on the temperature factor included in GCOTER?

Dave Lander (DL) provided an update on the impact of climate change. Please see minute reference item 2.0 for full update. In summary there will be a need to monitor progress with Real Time Settlement Methodology and whether this will obviate the need for consumer billing based on a single, fixed, volume conversion. If no, this may require further consideration as a separate piece of work.

3a- Existing NExA gas specifications

Check there are no direct gas specifications included in existing exit agreements. If 0.1% Hydrogen content is specifically referenced, this will need to be changed through appropriate method developed and agreed within this review group.

MB advised that this had been completed by DNs and Transmission, National Gas, SGN, WWU and Cadent confirmed they had completed the check and identified no direct H2 content reference. No change required.

JCx stated that NExAs do refer to GS(M)R, and noted that changes to GS(M)R might result in multiple specifications. JCx queried how the location of these specifications would be handled. MB advised that they have this down as an issue, MB noted that if this was the case then Network Access Agreements would need to be reviewed. MB confirmed that Issue 20 includes this on the tracker.

JCx questioned how this would be managed from a regulatory/legislative perspective. Joel Martin (JM) stated that it links to standard offtake requirements. MB confirmed that this would be captured within Issue 20.

3c- Hydrogen content in combined entry/exit agreements (IEA/CSEP)

Check whether specific H2 content is referenced within IEA's/ CSEP and consider aspects / interactions with the Offtake Arrangements Document (OAD) and Independent Gas Transporter Arrangements Document (IGTAD).

MB confirmed all existing combined connection agreements will need to be reviewed and will most likely require an amendment within the Gas entry provisions section for H2 content. This will need to be reviewed on a case by case basis including engagement with necessary parliamentary authorities prior to a blend being received/ injected.

4- Safety Case/data sheets

Check whether NExA safety case and data sheets reference Methane specifically.

MB advised that if they referenced Methane they would need to be updated to cover a blended gas. MB confirmed the HSE would need to consult on GS(M)R changes which would provide end consumers with an opportunity to comment / feedback on the H2 20% aspects. HSE would then need to make a decision on how to best manage the safety risk. Although the UNC has a valuable role in educating industry parties, the earlier any issues are highlighted the better (i.e. not awaiting HSE Safety Case related decisions). Therefore earlier industry engagement on this matter is crucial.

JCx advised that power stations have safety cases also not just NExAs and that it would be a site safety case for a power station. MB advised that she would change the wording to remove NExA in the title of this action.

5a- GT License exemption for Hydrogen DFO (NTS)

Check if Delivery Facility Operator (DFO) injecting Hydrogen into NTS as a pre-blend would require a GT License exemption. Liaise with Ofgem for clarification and refer to consultation (Gas Transporter Licence Exemption for Onshore Production of Gas) Exemption applies for pipeline up to 16.093km.

MB confirmed that she had spoken to Ofgem who suggested that the exemption would need to be reviewed on a case-by-case basis to consider the exemption conditions.

5b- GT License exemption for Hydrogen DFO (DN)

Check if DFO injecting Hydrogen into Distribution Network as a pre blend, would require a GT License exemption.

MB confirmed that she had spoken to Ofgem who suggested that the exemption would need to be reviewed on a case-by-case basis to consider the exemption conditions.

6- European Interconnection Document

Review EID to check if/where there may be cross over and requirement for amendments to manage both imports from and exports to interconnected TSO's.

MB confirmed that KPMG did complete a review of all the documents but until there is a clear view, it is difficult to say how the EID needs to be changed. MB confirmed that they will continue to review within Phase 2 as there are some areas of uncertainty. National Gas Transmission is to arrange internal workshop to review the processes and relevant changes required to UNC. Then engage with relevant stakeholders to agree on provisions.

Ritchard Hewitt (RHe) queried whether the output of the review conducted is publicly available. MB confirmed that it wasn't currently but there was information within the slide pack.

7a- Managing the H2 blend cap (decrease in H2 availability)

If H2 blend percentage needs to remain consistent, how could a loss in H2 supply be managed?

MB advised that the Government-specified role for blending as reserve offtaker would lead to variable blend, as hydrogen availability would vary.

7b- Managing the H2 blend cap (when limited NG to blend)

MB confirmed a "Non-fault curtailment process" is to be reviewed in phase 2 work.

8a- Clarification on the role of H2 Blending into networks (reserve offtaker or maximised production)

MB confirmed for distribution level blending: Reserve offtaker for electrolytic and CCUS projects to manage 'volume risk'. Blending may also have value in strategically enabling electrolytic

hydrogen producers to support the wider energy system, beneficial for electrolytic hydrogen producers located behind electricity network constraints using excess renewable electricity that would otherwise have been curtailed.

MB also confirmed the potential role of blending into Transmission network is yet to be outlined.

8b-Reserve offtaker role provisions

MB confirmed this is to be further explored in phase 2 (development of blending delivery model) non-fault curtailment.

9- Gas Quality changes in existing and new NTS NEA's

10- Gas Quality changes in existing and new DN NEA's

MB confirmed these are both to be further explored in phase 2 under information flows.

13- Blend variability

Potential impacts to connected end users may be worsened by variability, therefore understanding who this could impact, why and the costs and times for necessary mitigating solutions required need to be considered.

MB advised that further site-specific assessments are required to assess the impacts of blend variability, before necessary mitigation modification costs and timelines are concluded.

VR advised that this was one of their key evidence gaps and the inoperability impacts, and how that compares at distribution and transmission level, mitigations would need to be considered to get a sense of magnitude.

14- H2 blend purchased on OCM

Would SO need to know when they are purchasing H2 on OCM?

MB confirmed that she had checked with the Transmission National Control Centre, who advised it would depend on capacity allocation on whether it would be utilised. MB advised that further review would be needed following an answer on how it will work.

JCx stated that people would they have no idea what they were trading, Jcx suggested that the only way they would, would be by buying hydrogen through certification.

The Workgroup discussed the process of purchasing hydrogen through certification. VR noted that the idea is that the certificates follow the hydrogen but with blending it is very difficult, VR stated that the benefits and negatives of certification would need to be looked into.

JCx questioned whether any workgroups were looking into this. VR advised that DESNZ were looking into international operability but would take this away.

Workgroup Actions Tracking List

0701: Action 2 – GCOTER: Guv Dosanjh (GD) to provide a link to the report that is looking at gas temperature on the HyDeploy project.

Update: Carried Forward.

0703: National Gas Transmission (MB) to seek a view from Ofgem and the Department of

Energy (DESNZ) if Deblending and CCGT compatibility is in the scope of this Request.

Update: MB confirmed that this is still under review. MB explained that blend tests had been completed at Future Grid and the results were due to be submitted later this year. Once these had been submitted, they would have a better idea of the needs of deblending, and therefore a better understanding of whether its compatibility is within the scope.

Action: Carried Forward.

0801: *Reference IEA/CSEP/NExA to UNC Interactions – National Gas Transmission (MB) to consider aspects/interactions with the Offtake Arrangements Document (OAD) and Independent Gas Transporter Arrangements Document (IGTAD).*

Update: Carried Forward.

0802: *Reference HyDeploy Report – National Gas Transmission (MB) to double-check with the GDNs whether the report is available to publish and/or share with review Workgroup parties.*

Update: Carried Forward.

0804: *Reference Existing Trading Regime and potential gas blending variability – National Gas Transmission (MB) and CNG Services (NK) to discuss the various gas variability options and how these would potentially impact the current trading regime.*

Update: MB confirmed that both her and Nick King (NK) had a discussion and that outputs of this conversation were captured within the tracker.

Action: Closed.

0805: *Reference Hydrogen Blending (Trading) – National Gas Transmission (MB) to seek a view from National Gas Transmission Control Centre personnel as to whether they believe that the SO would want to know that they are buying H₂.*

Update: Relates to Action 14 on Action Tracker. Conclusion noted on Tracker.

Action: Closed.

0806: *Reference Hydrogen Blending / Commingling Models – National Gas Transmission (MB) to provide examples of various commingling models and also confirm what NGT requirements might be.*

Update: Carried Forward.

1101: 5a) GCoTER – National Gas Transmission (MB) to confirm if the global warming effects have been taken into consideration.

Update: Dave Lander (DL) provided the Workgroup with an update on the effects of global warming and climate change. See Item 2.0

Action: Closed.

1102: Joint Office (RHa) to update the Workgroup Report ready for publication for the Next Meeting on 09 January 2024

Update: Carried Forward.

2. Climate temperature increase and potential impact of GCOTER

DL provided an overview to the Workgroup of the likely impact of global warming on the accuracy of the volume conversion factor (G(COTE) regulations).

DL explained that the existing model was used for the Gas Energy Measurement, an Ofgem Study in 2014, and the approach was taken to add 0.5°C, 1.0°C, 1.5°C to every temperature in order to calculate the impact on mean error in GB annual energy. DL noted that this ignores local variation and all outcodes are affected equally.

RHa requested clarification on the meaning of outcode for the benefit of the Workgroup. DL explained that outcode referred to the first part of a postcode, noting that the second part typically has 5,000-meter point reference numbers, which highlights the model's granularity.

DL presented the Workgroup with two charts, one which showed the change in mean error in GB annual energy with increased UK temperature. The second used to UK Met Office average temperatures predictions to show the change in UK average temperature with reference to 2011.

Richard Pomroy (RP) questioned whether the charts were based on annual figures, noting that there are significant Seasonal effects on UIG. DL advised that the study conducted looked at more than annual figures, it looked into how error in daily energy varies throughout the year. DL advised that it must be decided whether the impact is going to be significant or not. If it is decided that it is significant, then a more detailed review is needed. DL noted that the charts are a shortcut method to determine whether the impact is worth worrying about at this stage.

DL advised that the increase in temperatures would see a move from net under-billing to a similar net over-billing over the next 30-40 years and noted that there will be a change in relation to the bias in the equation.

DL questioned whether it would be worthwhile carrying out extra work, as there will most likely going to be a move to a net zero bias. DL questioned whether future billing arrangements may obviate the need for consumer billing based on a single, fixed, volume conversion factor. If not, then an amendment may need to be considered. DL advised that a decision needs to be made on what billing will look like in the next 20 years or so.

Please see the published slides for further information.

3. KPMG Phase 1 – Commercial Framework Review Outputs

Tommy Isaac (TI) provided the Workgroup with an in-depth overview of KPMG's Hydrogen Blending Implementation Programme process and took the Workgroup through a summary of their approach for Phase 1; key findings from Phase 1 and the indicative process and timeline for the forthcoming Phase 2.

TI explained that there was a two-stage process in order to implement Hydrogen Blending. The first step would be to amend the compliance framework that gas networks have to adhere to, so the structure is such that blending can legally happen, setting a foundation for growing the blending market.

These amendments would then have to be implemented into the Change Management Programme, whereby the processes would be changed to be able to implement blending.

TI explained that during Phase 1, Five pillars of activity were identified that collectively would allow Britain's network to become hydrogen blend-ready:

1. Policy
2. Safety Evidence
3. Market Frameworks
4. Operational Readiness
5. Project Pipeline

A review had been conducted across each pillar to produce a detailed transformation plan.

TI took the Workgroup through the outcomes of each review area. TI noted that in respect of Safety evidence, based on the time taken for previous comparable legislative processes, initial

outlined plan has changes coming into force from Q4-26, following a 1-year industry notice period.

JCx questioned whether there was already another DESNZ process in place. VR explained that they would need to do a cross check to ensure that it doesn't have any material impact on existing DESNZ processes but noted that the timelines set out by KPMG sound reasonable.

JCx asked whether the timeline included the 1-year industry notice, TI confirmed that it was included, noting that it was similar to the programme required to change the Wobbe Index limits. JCx queried whether people would be able to start making changes to the system within the notice period. TI explained that it wasn't designed to build out infrastructure early, it was purely to inform those who would be affected by the change that it was coming.

JCx noted that the first blend would be quite some time away, arguing that it would not be ready straight after the legislation has been passed and hoped that the notice period would give industry some time to start thinking about implementation.

TI advised that they would no longer be blending under an exemption regime and that having the market frameworks ready would mean they were well under way in terms of readiness, but the legislation could only be changed at political will, which forms a hard timeline.

JCx asked whether HSE had considered or given indications as to whether they will consider exemptions. TI advised that they have a statutory obligation to consider exemptions but are currently not promoting them as they form a resource constraint. VR noted that she did not see exemptions as a solution to blending, TI agreed, stating that they are also not seen as a resolution to implementing new policy.

TI explained that there would be an initial design phase for Market Frameworks, in which they design a blending model and a set of drafted UNC modifications, these modifications would be worked through with the Joint Office. TI noted that the process for deciding the final delivery model needs to be collaborative and involve input from wider industry.

TI shared the Phase 2 timeline with the Workgroup and explained that the design phase would be carried out over the next 12-month period. TI advised that it would go through a legitimate process and be refined through a series of defined working groups.

JCx requested further clarification on the Market Frameworks development process and argued that it needs to be helpful for those who it effects, particularly hydrogen producers. JCx suggested that it may need some strategic oversight to ensure that the new frameworks are used (and usable) when created and not disregarded.

TI agreed that the results need to be able to form a platform on which investment can build and noted that the concern raised by JCx was legitimate, TI noted that KPMG recognises this within the plans put forward in Phase 2a. TI explained that they really wanted to drive meaningful engagement as there are aspects which are going to affect all parts of the supply chain. TI advised that they need to be able to achieve the objectives of the market and therefore all views and considerations need to be taken on board.

JCx questioned how this can be achieved, arguing that the sooner producers are given more information the better. TI advised that they had built in a consultation period, in which there would be ongoing stakeholder engagement throughout and a formal consultation at the end.

JCx queried what Legal drafting within the timeline referred to, TI advised that this was in relation to the UNC and clarified that the working groups would not make decisions but refine the plan which would then have to go through the formal UNC process. The point of Phase 2a is to try and develop the model so by the time it enters the UNC process it is fully developed, and nothing

is left uncertain.

JCx expressed her concern, noting that the UNC process is never smooth and provides due challenge. JCx asked whether KPMG thought of having the working groups as part of the UNC process.

TI advised that they were looking to involve all parties affected and principles would be agreed within the working groups, TI noted that whether these working groups would form part of the UNC process had not been agreed.

JL queried who would ultimately make decisions. TI explained that there would be 4 working groups made up of bodies within the blending delivery model, to cover off areas of impact that were identified in phase 1. JL questioned whether this had been confirmed or was a suggestion, TI advised that this was for the networks to confirm.

RHe advised that when discussing networks, they were only talking about DN networks and they must continue to reinforce this clarification (“distribution networks” not transmission networks) as capacity is sold on the NTS in a very different way, noting that it needs to be clear what they are seeking to change. TI advised that they were trying to cover all considerations associated but appreciated the word of warning and stated that they were aware this is going to be a complicated process.

RHe queried whether the process was going to be taken forward by National Grid ESO. TI imagined there would be some interface with National Grid ESO, but this was to be confirmed.

JCx expressed her concern surrounding the uncertainty of the process, especially considering that it the timeline had already commenced. TI agreed that there was a lot of uncertainty but that this is what they were trying to address and hopefully reduce over time.

The Workgroup discussed the effectiveness of implementing the programme to work on both the requirements of Transmission and Distribution networks concurrently. JCx noted that it may not be helpful to do Transmission and Distribution together, as in some ways the framework for Transmission already exists, which is not the case for Distribution and there is more to do.

VR argued that there is a need to consider it in the round, as there could be interactions between the two and it is therefore helpful to consider them together. RF argued that they were driving for a different solution which might be the problem.

TI explained that there is not a single solution for both, but they wanted to consider all of the networks together and didn't want to frame up a programme which didn't include Distribution.

Charlotte Gilbert (CG) noted that although there is potential for consolidation, it goes further than distribution, stating that the Independent Networks (IGTs) need to be considered as well.

RHa queried whether there was a date by which KPMG expect contracts to be signed. TI advised that this is not something that could be disclosed within this forum.

RHa advised the Workgroup Participants that they will need to consider the resources needed to drive these changes through.

Please see the published slides for further information.

EU Policy Updates – Slide 11 & 12

Workgroup asked when the expected implementation date of the agreed regulations within the EU Gas Package would likely be and relevant timelines for required derogations from the EU network codes and guidelines. This isn't necessarily specific to blending but more a scenario

where UK network codes may diverge from EU. More information can potentially be brought to the next workgroup.

MB took the Workgroup through the EU Policy Updates and advised that following the Gas Package publication, they had discovered that there isn't a cap for blending across Member States, however there is a safety net for any disagreements on blend qualities. MB advised that a blend could be agreed with TSOs, and it could be discussed as to whether they are looking to blend and when or vice versa.

MB noted that the Belgium TSO has already introduced a 2% blend cap and that they are actually seeing blending happening more in Transmission. MB advised that lots more engagement and conversation is needed to determine the process for blending.

VR thanked MB for her overview, stating that it was helpful as DESNZ were trying to understand what Europe were doing and their process set up for blends. VR assumed that the position of TSOs is driven by government policy in their countries. VR advised that there was work going into DESNZ to delve into this further, from a timeline perspective they expected it to be a 24-month period until they will be blend ready.

MB advised that in 2 years, the blending process implemented within the UK would need to apply and align with the EU.

The Workgroup discussed the enforcement and derogation deadline. JL expressed his concern in respect of applying for stuff which isn't yet enforced, suggesting that a derogation rule could be included within each network code which may help.

RF argued that if the UK has a higher percentage blend allowed, it could raise questions of competitiveness, RF also noted that costs would need to be allocated and discussed. VR advised this was something that DESNZ were looking into, regarding mitigations on remedies in place. VR explained that they must decide what the right decision is for the UK and the cost of implementing and not implementing.

RHe raised a concern that any mismatch would have a significant impact on trading in and out of the UK and it is important to remain aligned. RHe also argued that it is not just about cost, there is also a physical restriction to install this equipment required in the space available.

VR noted RHe's point in respect of alignment but argued that they shouldn't be in a position to have to align, they have to consider the implications and the factors which may be beyond our control.

Post Meeting Note (from Megan Bray):

The Gas Package requires final approval from the EU Parliament and Commission therefore the regulations will likely be enforced prior to the elections in April/ May this year (National Gas Transmission will continue to monitor this and update accordingly.)

EU Network codes and guidelines should be applied to entry points from and exit points to third countries 24 months after enforcement of the Gas Package. Where divergence is unavoidable, the UK can choose to raise a derogation however this must be raised within 18 months of the Gas Package enforcement.

It is not clear yet whether this 18-month window for derogations will be extended for scenarios where the EU network codes/ guidelines are updated after the original enforcement date.

4. Development of Interim Workgroup Report

The Workgroup discussed the progress of the Interim Workgroup report. RHa confirmed that the Report was a work in progress and suggested that its review be carried forward to the next meeting. The Workgroup agreed that it would be discussed in the following meeting. RHa confirmed that an interim report would be constructed based solely on the slides and minutes from the Workgroup meetings to keep Panel informed and that she would work on this with the Proposer. Once drafted it would be published on the 0849R page.

JCx raised a concern in respect of the pause on meetings, considering the discussions throughout the meeting all focused on considerable uncertainty. JCx asked who would sign off on the final scope for Phase 2 as they were already 2 months into the timeline for the next Phase. MB stated that it was funded through Distribution and Transmission, so assumed they would have to sign off. JCx asked whether it was innovation funding, MB advised that she was unsure. Bethan Roberts (BR) advised that it was Network funded and didn't believe it was innovation funded.

RHa advised that there will likely be a meeting in June or July and didn't expect that to change as it needed to be reported to Panel in September.

The Workgroup discussed the need for more clarity and consideration. MB suggested that an exemption-based approach could be taken following a Safety Case. VR stated that this would depend on the output of the Safety Case, noting that there may need to be mitigations put in place to make it safe. VR argued that they have to understand the costs and implications, stating that there is nothing to stop producers from putting in exemption requests.

JCx reflected on discussions from the meeting and asked whether there was anything the Workgroup could be doing in the meantime, suggesting that different specifications in different parts of the network could be looked into.

MB advised that she didn't think they would be looking into this but could follow up with a specific plan based on power generation statistics.

New Action 0201: National Gas Transmission (MB) to provide the Workgroup with a specific plan based on power generation statistics.

MB suggested that another Workgroup could be added to discuss other areas to be focused on before June/ July.

Anne Jackson (AJ) asked whether the implications on consumers should be considered. RHa advised that the Workgroup was focused on the commercial element of blending but the impact on consumers could be fed into the Modification text at a later date.

The Workgroup discussed the need for the delivery of the blending model to be a UNC activity. MB agreed to take this away as a formal action.

New Action 0202: National Gas Transmission (MB) to consider whether delivering the Blending Model should be a UNC activity.

5. Next Steps

- Workgroup 7 will review the Interim Workgroup Report.
- Networks need to appoint a supplier to manage the next phase of work
- National Gas Transmission to share an updated plan moving forward with 0849R once final sign off for Phase 2 is complete.
- National Gas to confirm whether in the interim there is other materials/actions which the Workgroup can pursue.

6. Any Other Business

Post Meeting Note – learning from EU based Directly connected offtakers

Following the meeting, MB advised that following RHa’s comment around any learnings we can take away from European projects on their direct connects acceptability of hydrogen blends, that it might be useful to include links in the minutes to two studies completed by GNI and Marcogaz which include details on this.

[20231002-Methodology-document-of-H2-transformation-cost-study-final-3.pdf \(marcogaz.org\)](#)

[22304-GNI-HyEnd-Report_v5.pdf \(gasnetworks.ie\)](#)

Both reports have similar outputs to the study Progressive Energy has completed on behalf of National Gas Transmission on industrial end user acceptability, being that in general, most industrial appliances are compatible with blends up to 20% however some level of modifications may be necessary. To assess the level of modifications (including timings and costings) site specific assessments will be required.

7. Diary Planning

Further details of planned meetings are available at:

<https://www.gasgovernance.co.uk/0849>

Time / Date	Paper Publication Deadline	Venue	Workgroup Programme
TBC	TBC	Microsoft Teams	• TBC

0849R Action Table

Action Ref	Meeting Date	Minute Ref	Action	Reporting Month	Owner	Status Update
0701	18/07/23	1.3	Action 2 – GCOTER: Guv Dosanjh (GD) to provide a link to the report that is looking at gas temperature on the HyDeploy project.	Sept 2023	Guv Dosanjh (GD)	Carried Forward
0703	18/07/23	3.0	National Gas Transmission (MB) to seek a view from Ofgem and the Department of Energy (DESNZ) if Deblending and CCGT compatibility is in the scope of this Request.	Sept 2023	National Gas Transmission (MB)	Carried Forward

0801	02/08/23	1.3	<i>Reference IEA/CSEP/NExA to UNC Interactions</i> – National Gas Transmission (MB) to consider aspects/interactions with the Offtake Arrangements Document (OAD) and Independent Gas Transporter Arrangements Document (IGTAD).	Sept 2023	National Gas Transmission (MB)	Carried Forward
0802	02/08/23	2.	<i>Reference HyDeploy Report</i> – National Gas Transmission (MB) to double-check with the GDNs whether the report is available to publish and/or share with Review Workgroup parties.	Sept 2023	National Gas Transmission (MB)	Carried Forward
0804	02/08/23	3.	<i>Reference Existing Trading Regime and potential gas blending variability</i> – National Gas Transmission (MB) and CNG Services (NK) to discuss the various gas variability options and how these would potentially impact the current trading regime	Sept 2023	National Gas Transmission (MB) & CNG Services (NK)	Closed
0805	02/08/23	3.	<i>Reference Hydrogen Blending (Trading)</i> – National Gas Transmission (MB) to seek a view from National Gas Transmission Control Centre personnel as to whether they believe that the SO would want to know that they are buying H ₂ .	Sept 2023	National Gas Transmission (MB)	Closed
0806	02/08/23	3.	<i>Reference Hydrogen Blending / Commingling Models</i> – National Gas Transmission (MB) to provide examples of various commingling models and also confirm what NGT requirements might be.	Sept 2023	National Gas Transmission (MB)	Pending
1101	22/11/23		5a) GCoTER – National Gas Transmission (MB) to confirm if the global warming effects have been taken into consideration	January 2024	National Gas Transmission (MB)	Closed
1102	22/11/23		Joint Office (RH _a) to update the Workgroup Report ready for publication for the Next Meeting on 09 January 2024	January 2024	Joint Office (RH _a)	Carried Forward
0201	28/02/24	4.	National Gas Transmission (MB) to provide the Workgroup with a specific plan based on power generation statistics.	TBC	National Gas Transmission (MB)	Pending
0202	28/02/24	4.	National Gas Transmission (MB) to consider whether delivering the Blending Model should be a UNC activity.	TBC	National Gas Transmission (MB)	Pending