Stakeholder Justification Paper - Blending

Stakeholder Justification Paper – Blending	
Output/Commitment Title Lower carbon emissions by supporting the replacement of up to 20% (by volume) of the gas we transport with low carbon hydrogen.	
Detail	Upskill colleagues, develop new policies, procedures, and processes, and actively seek out opportunities to connect hydrogen producers to our network, new safety cases, changes to GSMR and Thermal Energy Regs and new settlement arrangements and systems.
Targets (more stretching than GD2?)	Prepare to receive up to 20% blended hydrogen. Higher ambition – expect to be able to connect blended hydrogen projects in GD3. We also expect to continue to connect biomethane plants, as covered in our biomethane SJP.
Strategy Document/ Business Plan Section	BP: Supporting Net Zero – BP: Workforce & Supply Chain Resilience Strategy
Cost & Bill Impact	
Proposed Funding	Most activity is expected to be funded via UIOLI NZARD and innovation allowances. If more significant changes are required, for example widespread installation of sensors, we would anticipate applying for net zero Reopener funding.
Benefits & risks	
Summary of benefits	Benefits: Supporting the decarbonisation of the gas network, in line with broader environmental sustainability goals and stakeholder expectations. Direct financial benefits: Supporting growth of hydrogen production Societal benefits: Reduced carbon and other emissions and improvement to local environments.
Summary of risks	If we do not explore all solutions for decarbonisation including blending it will take longer for the UK to reach net zero targets and ambitions. There will be no clear decision from government on blending until 2026 at the earliest and we anticipate later timescales for implementation of revised GSMR legislation to allow higher levels of blend in the gas we transport, and for thermal energy regulations to be updated to allow us to manage a broader range of CVs (Calorific Values). Use of reopener mechanisms for activity beyond the immediate scope of this business plan depends on further decisions from government and the regulator but timing could be an issue
Stakeholder voice - Golden thread	
Engagement method (what and who)	Methods: Citizens Panel, Critical Friends Panel and Business Panel, Local Area Energy Plan (LAEP) consultations, workshops, consumer (domestic, SME) qualitative and quantitative research, trials and pilots, meetings with DESNZ and Advisory Groups. Review of published evidence from national, devolved, regional and local stakeholders. Customer (hydrogen producer) contacts and enquiries. Stakeholders: We have engaged with stakeholders to gather feedback covering various aspects of the transition to net zero and decarbonisation, including blending up to 20% hydrogen into the gas network. Various Authorities - Local Authority officers, Council members, other local government organisations, major energy users, organisations with local knowledge of specific energy system components (e.g., developers, housing associations), community energy organisations, local organisations active in net zero and decarbonisation efforts, transport sector organisations, transmission network operators, growth deal organisations, landowners, national parks, further education institutions, public bodies or national organisations with regional influence, and trade organisations. General and Vulnerability Specific Stakeholder - Business representatives, Local Enterprise Partnerships (LEPs), consultants, Citizens Advice, NEA (National Energy Action), charity organisations, Consumer Engagement Groups (CEG), Citizens' Panels, vulnerability groups,

	consumer bodies, fuel poverty organisations, energy industry representatives, and research institutions involved in energy system research and development Energy Industry Representative - Distribution Network Operators (DNOs), Gas Distribution Networks (GDNs), Energy Systems Catapult (ESC), National Grid ESO, and energy suppliers. We continue to engage closely with the National Energy System Operator (NESO), Ofgem, Welsh and UK Government and specifically DESNZ and will continue to review published evidence and develop our plans in line with stakeholders' expectations.
Stakeholder Views (what they said, regional differences and how we responded)	Opinions, views: National Government has announced its intention to support hydrogen blending in distribution networks. It recognises the importance of early sight for industry on how hydrogen blending should be implemented. They see blending up to 20% hydrogen into the existing gas network as a measure to help bring forward early hydrogen production, but not as a preferred long-term solution. Local Authorities see a role for WWU in helping to secure investment for projects within their Local Area Energy Plans (LAEPs) and in disseminating information about the national direction of travel for hydrogen. They call for deeper partnerships with local authorities to support local energy plans and address consumer confusion and apprehension about the transition to hydrogen. General Stakeholders and Customers generally support hydrogen blending as an early demand driver for the hydrogen economy, attracting investment in hydrogen infrastructure. However, they have concerns about public nervousness around new technology, the need for further upgrades to pipes, and the impact on potentially sensitive consumers, where adaptations may be needed for them to receive a blend. Research Institutions emphasise the need for further research and engagement to clarify the feasibility and future of hydrogen blending. There is a call for more detailed information on the technical and economic implications of hydrogen blending. Energy Networks believe introduction of hydrogen blending into the distribution network would necessitate a thorough review of operational practices. The ongoing HyDeploy project is crucial for assessing the implications on operational procedures, equipment, and assets within the gas distribution system. A collaborative project to develop a fuller implementation plan for blending is kicking off shortly. Xoserve are engaged to consider impacts on industry systems. Hydrogen Producers are already contacting our Green Gas Connections team to ask about capacity and timescales for hydrogen blending to be made possible in specific locations where they operate in our network. In summary, while there is broad support for hydrogen blending as a means to stimulate the hydrogen economy, there is further work to do to fully understand industry changes required to implement a blending regime. Collaboration, public education, and transparent communication are seen as critical to by stakeholders to understand the implications of any changes. Associated facts: Hydrogen blending at levels up to 20% could reduce carbon emissions from gas consumption by up to 7-8%. The UK government supports the development of both green and blue hydrogen, with the aim of producing 5 GW of low-carbon hydrogen by 2030. Hydrogen blending up to levels of 20% would require no significant changes to the existing PE (Polyethylene) gas network and existing household appliances. Regional differences: There are notable regional differences in the approach, expectations, and level of awareness regarding the long term role of hydrogen, but general support for hydrogen blending as a relatively low regrets measure.

1. South and South West Wales:
    - Approach: Hydrogen is seen as a crucial component for achieving net zero in industrial applications, with significant emphasis on decarbonising heavy industries.
    - Expectations: The Cardiff Capital Region focuses on creating a coordinated, place-based plan that avoids duplication of efforts, aims to save money, and realises additional social benefits.
    - Level of Awareness: Initial work includes setting up governance frameworks and refining stakeholder mapping to ensure comprehensive engagement and effective decision-making.
2. South West England:
    - Approach: Stakeholders stress the importance of increasing public awareness and transparency around low-carbon technologies like hydrogen and electrification.
    - Expectations: There is a recognition that both hydrogen and electrification will be part of the future energy mix.
    - Level of Awareness: Public awareness and transparency are key focus areas.
3. North Wales:
    - Approach: There is significant interest in exploring hydrogen and biomethane as key components of the energy mix, particularly for decarbonising transport and heating.
    - Expectations: WWU is involved in the development of a Local Industrial Decarbonisation Plan which will identify further options.
    - Level of Awareness: Stakeholders are actively exploring hydrogen and biomethane options.

Options considered: Blending policy is likely to be dictated by national changes, and connections will depend on commercial demand within WWU's operating areas.

How we responded: Considering the policy and targets being set by government, the heavy involvement of hydrogen blending in LAEPs and the general desire for more in-depth information on new technologies and heating solutions relating to hydrogen blending, WWU are opting to increase its ambition in this area and proactively seek out hydrogen producers and opportunities for connections into the gas network.

We contribute to projects looking at implementation of Blending collaboratively with networks including the soon to be kicked off project with KPMG, UNC Mod 0849R and the Real Time Settlement Methodology project.

We are also working with customers who are already approaching us about the potential to inject hydrogen into locations on our network and want to know more about capacity availability and timescales.

We engaged with 1,401 consumers, including domestic, business consumers and future bill payers, to consider their acceptability of this commitment. The findings revealed that 92% of domestic consumers and 93% of business consumers accepted this commitment.

Performance	
GD2 Performance, Benchmarking/ Industry comparison	There is currently no regime for blending hydrogen in gas networks, so all activity tin this space will be above and beyond GD2. Implementation plans are expected to be collaborative across all GB networks.
Deliverability & Whole Systems Impact	
Deliverability & viability implications	Management of biomethane entry connections, with very positive customer feedback, provides confidence that we can manage hydrogen blending connections. Implementation plans will be further developed through industry projects by the end of GD2. The main delivery risks are associated with government policy decisions, the HSE's timeline for review of industry evidence on the case for changing regulations to support blending in the distribution system and the development of appropriate mechanisms to manage increased diversity of CVs across our network

Triangulation scorecard

Our engagement scoring methodology leverages the information from the HM Treasury's Magenta Book, Quality in Qualitative Evaluation framework and various weighing methodologies used by networks to assess how much impact each piece of evidence should have on their decision-making process.

Each piece of evidence is given a score between 0-2 against a scoring criteria including *Relevance to topic, Level of stakeholder knowledge, Quality of engagement, Rigour of feedback collection* and *Credibility of analysis and interpretation*.

The table below outlines how the evidence used to produce this document scored against each criteria and its overall score. An average and modal score is then provided, which is associated to a grading system that demonstrates the feedback robustness and quality.

	Score					Final Score
Document Name	Relevance to Topic	Level of Stakeholder Knowledge	Quality of Engagement	Rigour of Feedback Collection	Credibility of Analysis and Interpretation	
06.03.24- SGN Response to GD Annex PUBLIC_Redacted	2	2	2	2	2	10
10_POINT_PLAN_BOOKLET	2	2	2	2	2	10
11920 CR Plus SWIC Explainer Doc A4 64pp v9	2	2	2	2	2	10
2022 Energy Networks Annual Innovation Report	2	2	2	2	2	10
20240605_Draft Technical Report_Denbighshire	2	2	2	2	2	10
20240617_LAEPTechnical_Report_Wrexham	2	2	2	2	2	10
3037 LCT Tracker W4 Report WWU FV	2	2	2	2	2	10
3039 LCT Tracker W5 Report WWU FV2	2	2	2	2	2	10
3564 WWU Customer Business Priorities FV2	2	2	2	2	2	10
3636 WWU Customer Priorities Report_Debrief_v3	2	2	2	2	2	10

Appendix 1 – SSMC Response NGN	2	2	2	2	2	10
Biodiversity Stakeholder Meeting Report 28.06.24	0	2	2	2	2	8
Cadent RIIO-3 SSMC Response Overview Document Final	2	2	2	2	2	10
Cadent RIIO-3 SSMC Response_GD Annex Final	2	2	2	2	2	10
Ceredigion LAEP Draft A	2	2	2	2	2	10
consultation-just-transition-framework	2	2	2	2	2	10
DAR – IM – 220509 – UK HYRES introductory workshop	2	2	2	1	2	9
DAR - IM - 220511 - Future leap - The Future of Hydrogen South West Event - Burgess Salmon offices Bristol	2	2	2	1	2	9
DAR - SR - 220915 - DAR Ofgem Local Energy Institutions Workshop	2	2	2	1	2	9
DAR – Welsh Government Hydrogen Trials meeting	2	2	2	1	2	9
Digital.utility.co.uk (2024: The year of the LAEP)	2	2	2	2	2	10
ENA External Stakeholders Insight Report v1.1	2	2	2	2	2	10
ENA Innovation Funding Research – Final Report	2	2	2	2	2	10
ENA Response to Ofgem RIIO-3 Sector Specific Methodology	2	2	2	2	2	10
Entry Gas Connection Charging Consultation 24.06.22 published	2	2	2	2	2	10
Final version WWU - Critical Friends Panel - Feb 2023 - Feedback Report	2	2	2	2	2	10
Gas Strategy Group 280923 Minutes and Actions	2	2	2	2	2	10
HyRES Open event summary report v2 23-01-26	2	2	2	2	2	10
LAEP Technical Report Merthyr Tydfil DRAFT 160524	2	2	2	2	2	10
LAEP_BG_Technical-report_v1.1DRAFT-REVIEW_20240604	2	2	2	2	2	10
LAEP_Flintshire_Technical-report_v1(DRAFT-REVIEW)_20240611	2	2	2	2	2	10
LCT Tracker results for WWU FV	2	2	2	2	2	10
ms1590 WWU PSR Customer Experience Research Presentation vFINAL	1	2	2	2	2	9
National Gas Transmissions NGT Response to Ofgems RIIO-3 Sector Specific Methodology Consultation	2	2	2	2	2	10
Neath Port Talbot LAEP Technical Annex - Client V1	2	2	2	2	2	10
PE21199 Understanding consumers' attitudes to safety measures when using 100_ hydrogen in the home v1.0	2	2	2	2	2	10
Powys LAEP Draft A	2	2	2	2	2	10
RCT LAEP Technical Report DRAFT 280524	2	2	2	2	2	10

Report - CCC - Delivering a reliable decarbonised	2	2	2	2	2	10
RP-FGS-Monmouthshire Technical Report-070624-DRAFT-ISSUED	2	2	2	2	2	10
RP-FGS-Torfaen Technical Report-240520-DRAFT-ISSUED-v2	2	2	2	2	2	10
Safeguarding the switch to domestic hydrogen WWU report 1.0	2	2	2	2	2	10
Stakeholder workshop - Actions Responsibilities P2 - PRESENTATION PACK - CCR_bilingual	2	2	2	2	2	10
Stakeholder Workshop - Baseline and setting p_Lewis Garvey	2	2	2	2	2	10
Swansea LAEP Technical Annex - V2 - Client Copy1 - WWU Feedback	2	2	2	2	2	10
Technical Report Cardiff DRAFT 2024_05_24	2	2	2	2	2	10
Technical_Report - Gwynedd draft issue 07.06.24	2	2	2	2	2	10
Technical_Report_Anglesey_draft issue 14.6.24	2	2	2	2	2	10
Technical_Report_Caerphilly_v.1(d)	2	2	2	2	2	10
Technical_Report_Vale of Glamorgan_2024_05_24	2	2	2	2	2	10
UK-Hydrogen-Strategy_web	2	2	2	2	2	10
UKRI-141123-EnablingNetZeroPlanUKIndustrialClusterDecarbonisation	2	2	2	2	2	10
VCMA Year 1 Showcase Stakeholder Workshop - Feedback Report	1	2	2	2	2	9
WGP Hydrogen Strategy v2.0 (Summary and Technical Reports) FINAL	2	2	2	2	2	10
Workshop 2 Summary - Futureproofing the networks	2	0	2	2	2	8
Workshop 7 Summary - Working with the regulator and Government	2	0	2	2	2	8
WWU - Critical Friends Panel - Feb 2024 - Feedback Report v5	2	2	2	2	2	10
WWU Biodiversity Stakeholder Workshop Feedback Report	0	2	2	2	2	8
WWU Business Panel_full report with appendix	1	2	2	2	2	9
WWU Citizen Panel Full Report_V1	2	2	2	2	2	10
WWU Citizens Panel report Decarbonisation of home heat March 2022 FINAL	2	2	2	2	2	10

WWU Customer Satisfaction_full report	1	2	2	2	2	9
WWU GD3 Business Planning Workshop Feedback Report	2	2	2	2	2	10
WWU LAEP Stakeholder Workshop Feedback Report	2	2	2	2	2	10
WWU qual priorities report FINAL	2	2	2	2	2	10
WWU Report Cardiff November 2022 LW Comments	2	2	2	2	2	10
WWU Safety Stakeholder Workshop Feedback Report	0	2	2	2	2	8
WWU SSMC response – 6th March	2	2	2	2	2	10
WWU Sustainability Strategy Workshop - Feedback Report	2	2	2	2	2	10
WWU Vulnerability Panel Report_V3_060923	2	2	2	2	2	10
WWU_EVP_Insights_Report_Aug22_v1	1	2	2	2	2	9
Average Score of Sources						9.73
Mode						10

Score	Grade	Description
0-3	Poor	Feedback should not be used for triangulation as it does not meet the minimum quality standards.
4-6	Average	Feedback could be used for triangulation but possible lacks robustness.
7-8	Good	Feedback meets the standards necessary for credible triangulation.
9-10	Excellent	Feedback meets the best standards of rigour and quality.