

Commitment Justification Paper – Decarbonisation	
Output/Commitment Title	
Evolve the business to support energy decarbonisation, which includes delivering low carbon hydrogen as a substitute for natural gas.	
Detail	This involves activity to deliver against the targets in our Sustainability Strategy to do everything we can to deliver sustainable energy. The plan includes ensuring that our network is ready for decarbonised gasses by upskilling colleagues, developing new policies, procedures, and processes, and investing in activities that offer customers choices for decarbonising their heating and cooking systems.
Targets (more stretching than GD2?)	Making the network hydrogen-ready by 2035 in key areas and fully ready by 2040. Target dates have been changed to reflect Ofgem funding decisions and positions to date.
	Choose low and ultra-low emission options for our fleet. Builds on GD2 progress.
	Invest in innovation and early stage decarbonization projects. Higher ambition than GD2 – further detail in innovation strategy.
	Reduce operational and supply chain emissions. Builds on GD2 progress; further detail in Environmental Action Plan.
	Prepare to receive 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.
	Invest in at least three industrial clusters. New ambition building on GD2 progress
	Proactively support local area energy planning. Higher ambition building on GD2 progress and reflecting development of National Energy System Operators’ Regional Energy System Planning function.
Strategy Document/ Business Plan Section	BP: Supporting Net Zero – BP: Workforce & Supply Chain Resilience Strategy – BP: Protecting our customers and communities
Cost & Bill Impact	
Proposed Funding	See innovation strategy. Ofgem SSMD restricts investment in net zero activity in base allowances due to perceived uncertainty.
Benefits & risks	
Benefits	<p>Summary: Maintaining consumer choice in heating options, especially near industrial areas where hydrogen heating is possible by the mid-2030s, ensuring a safe transition to hydrogen, and supporting the decarbonisation of the gas network, in line with broader environmental sustainability goals and stakeholder expectations.</p> <p>Direct financial benefits: More cost-effective pathway to Net Zero for consumers over the long term.</p> <p>Societal benefits: Retention of industrial and supply chain jobs, especially in existing industrial areas. Development of new opportunities. Reduced carbon and other emissions and improvement to local environments.</p> <p>As detailed above, many of our targets build on progress in GD2 so are inherently more ambitious. However, Ofgem’s position on investment in hydrogen restricts the content of our GD3 plan, especially in relation to major pipeline projects.</p>
Summary of risks	It will take longer for the UK to reach net zero targets, also limiting the maintenance of consumer options to use gas or electricity for heating, if proposals are not supported. There will be no clear decision from government until 2026 at the earliest. Use of reopener mechanisms for activity beyond the immediate scope of this business plan depends on further decisions from government and the regulator.
Stakeholder voice - Golden thread	
Engagement method (what and who)	<p>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. Review of published evidence from national, devolved, regional and local stakeholders.</p> <p>Stakeholders: We have engaged with stakeholders to gather feedback covering various aspects of the transition to net zero and decarbonisation, including the development of hydrogen</p>

infrastructure, Innovation, local area energy planning (LAEP), and strategies to support vulnerable consumers and reduce carbon emissions. These stakeholders include:

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: Stakeholders have identified key sectors and regions for hydrogen deployment and net zero initiatives, with varying priorities and timelines for achieving these goals. Heavy industry, ports and shipping, heavy goods vehicles, and public transport are seen as primary targets for hydrogen use by the government. There is some scepticism about the feasibility of hydrogen for domestic heating, but some stakeholders support continued trials. Using hydrogen to store excess renewable energy is seen as a critical component of balancing the grid. Business representatives emphasise the need to prioritise sustainable sources of biomethane and the importance of educating consumers about hydrogen's impact. The most cited dates stakeholders expect to achieve net zero is between 2035 and 2050 (largely based on Local Area Energy Plans), and this requires the gas network to be ready in advance of this. Wales & West Utilities' customers have expressed various preferences and considerations regarding their future heating and cooking options, with a strong emphasis on reliability, cost, and the need for clear, accessible information to guide their choices.

Stakeholders, including energy networks, industry representatives and charities have expressed cautious opinions on both decommissioning and repurposing the gas network. For decommissioning, there is a consensus on the need for a holistic assessment of costs, social implications, and intergenerational fairness, with many highlighting insufficient evidence to define a clear course of action. They advocate for detailed assessments and potential funding mechanisms, while also noting the necessity for changes to legal and regulatory frameworks. In terms of repurposing, stakeholders emphasise the importance of gathering further evidence, maintaining flexible regulatory environments, and integrating new infrastructure to support the transition to hydrogen. Collaboration with various stakeholders is deemed essential, alongside financial considerations to ensure a clear business case for repurposing activities. Overall, there is a strong call for careful planning and consideration of the implications for all parties involved in both processes.

Associated facts: Main Replacement Programme to be completed by 2032 as dictated by HSE. The UK's Net Zero by 2050 target requires a significant reduction in carbon emissions across various sectors, including heating. To enable choice around heating and cooking solutions we need to work ahead of current legislation relating to natural gas boilers. The government will not make a policy decision on hydrogen for heat until 2026 but expects to make Britain a clean energy superpower and to decarbonise the power sector by 2030.

Conflicts: Differences of opinion highlight the complexity of stakeholder perspectives on the transition to a net-zero gas network, reflecting a mix of optimism, caution, and concern over the implications of such a significant change. Key areas of contention relating to net zero include:

- Support for Immediate Action: Energy industry representatives and local authorities advocate for immediate and aggressive action towards hydrogen adoption, arguing that delaying decisions could hinder progress and increase costs.

- **Cautious Approach:** Domestic and business consumers and other stakeholders suggest a more measured approach, emphasising the need for thorough evidence-gathering and public education before fully committing to hydrogen as a primary energy source.

Regional differences: There are notable regional differences in the development and focus areas of Local Area Energy Plans (LAEPs). The primary factors contributing to these differences include local energy needs, existing infrastructure, stakeholder priorities, and socio-economic contexts. Here are some key regional distinctions:

- **South and south west Wales:** Hydrogen is seen as a crucial component in this region for achieving net zero in industrial applications. It places significant emphasis on decarbonising heavy industries. Cardiff Capital Region - LAEPs here focus on creating a coordinated, place-based plan that avoids duplication of efforts, aims to save money, and realises additional social benefits. It was identified that initial work needs to include setting up governance frameworks and refining stakeholder mapping to ensure comprehensive engagement and effective decision-making.
- **South west England:** Stakeholders stress the importance of increasing public awareness and transparency around low-carbon technologies like hydrogen and electrification. There is a recognition that both hydrogen and electrification will be part of the future energy mix.
- **North Wales:** There is significant interest in exploring hydrogen and biomethane as key components of the energy mix, particularly for decarbonising transport and heating. WWU is involved in the development of a Local Industrial Decarbonisation Plan which will identify further options.

Despite these distinctions, there is relatively high alignment on the need for WWU to continue to make progress on decarbonisation across our operating areas, and strong expectation that we will be involved in Regional and Local Area Energy Planning activity in GD3 and beyond.

Options considered: We considered the following options:

1. Only spend on activities that support decarbonisation, and support consumers to change their heating and cooking systems OR spend on activities that give customers a choice in how they decarbonise their heating and cooking systems, but with a greater spend to repurpose the network to carry hydrogen more quickly.
2. Where we are upgrading old metal gas pipes close to clusters of industrial customers and we identify other customers nearby could potentially convert, we will invest more to also make those parts of the network hydrogen ready OR take a broader approach and prepare as much of the network as possible for hydrogen.

How we responded: To better align with our stakeholders' aspirations and the urgency of climate goals, we are committed to achieving net zero readiness. In industrial areas, prioritised by stakeholders, we aim to be ready for net zero by 2035. For other regions, our target is set for 2040, considering the realities of skill availability, the current government policies, and decisions related to GD3 guidance. In addition, we are proposing to expand our innovation programme and early-stage net zero delivery activity to further support the development of the technologies and techniques which will be needed to deliver decarbonisation.

Our Willingness to Pay research supported this level of ambition. We engaged 1,252 domestic customers and 153 business consumers about our proposed GD3 commitments. The results showed that 74% to 68% of domestic participants were willing to pay an additional £8 to £10 on their gas bills to support a higher level of ambition. We also conducted a separate study with 1,401 participants, including domestic and business consumers and future bill payers, to test the acceptability of this commitment. The findings revealed that 90% of domestic consumers and 97% of business consumers accepted this commitment.

Performance	
GD2 Performance, Benchmarking/ Industry comparison	<p>See notes against individual targets above.</p> <p>Given SSMD and Business Plan Guidance, we expect overall proposals on use of Net Zero innovation and delivery mechanisms to be similar to other networks. However, there are clear regional differences due to the maturity of projects, especially those related to industrial decarbonisation.</p>
Deliverability	
Deliverability & viability implications	<p>We have identified projects and areas for investment through:</p> <ul style="list-style-type: none"> - Existing work with industrial clusters across our network, including development work towards major projects - Development of our innovation strategy and environmental action plan with input from around the business - GD2 collaborative activity with other networks on energy system transition topics - Regional Energy Planning activity, which has identified actions from LAEPs - Outputs from the Business Evolution work <p>Together this gives us confidence in our focus areas and delivery. Although there is no dedicated Net Zero annex to the business plan, we intend to summarise our plans in a separate Net Zero Delivery Plan.</p>

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.

Document Name	Score					Final Score
	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 – 6 th 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.