



Our Business Plan for 2026-31

Delivering for our customers

A company you can trust, with a proven track record

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Symbols to look out for:

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Mapping our work to Ofgem outcomes



Infrastructure fit for a low-cost transition to net zero



Secure and resilient supplies



High quality of service from regulated firms



System efficiency and long-term value for money

Navigating our plan

Our RIIO-GD3 Business Plan was created with an ambition to be as transparent and clear as possible in sharing our vision, an approach that extends to the words we use. This industry is a technical one, and we're working to make our information clearer both inside and outside of the industry too. On this page, we've included some additional information to help navigate our plan.

Meeting the needs of consumers, customers and stakeholders

We use several terms to refer to the 7.5 million people we serve through our extensive network of gas pipes and the wider group of people who have an influence or impact on our business. These terms appear frequently throughout the plan as the central focus of our work, so here's a short explanation of the differences between them, and how we use them.

Consumers/Customers

In general, a customer or consumer is a person whose household or business is connected to our gas network, or who uses any of the services that we provide.

Stakeholders

These are any interested parties – for example UK government or environmental groups – that need:

- to be informed by our business and/or
- have an influence on the delivery of our operations or
- have an impact on decisions affecting our business.

Referencing

In the plan, we've added references with endnotes and links in some of the chapters where we see that additional external information or sources would help clarify the content. Endnotes can be identified by a number positioned next to the text, which corresponds with the endnotes page at the back of this document. We've also added signposts to other chapters within the business plan and to our supporting Strategies.

Endnotes page

Net zero

We use this term in lower case except as an adjective – such as Net Zero programme.

Consumer Voice

Read Chapter 2.1, Consumer Voice, for more detail on our engagement with consumers, customers and stakeholders.

2.1 Consumer Voice

Most used acronyms in our plan

The specialist language used within the gas industry includes a lot of acronyms. They are a way of condensing multiples of technical words that must be included to meet regulatory requirements and/or express specific terminologies that have no alternative. So that these are easier to digest within our plans and strategies, we use acronym keys, where you can find the shortened version and look up the full meaning. We also spell out the first appearance of each acronym within each chapter. After this point, if you need to look up an acronym, you can find a list at the back of the plan. Here, upfront, is a list of the 10 most used in the plan to get a head start. As these terms need to be used so frequently, we don't spell their acronyms out in each chapter, but you can refer to this page or the end page if you need clarification.

WWU	Wales & West Utilities
RIIO-GD3	Revenue = Incentives + Innovation + Outputs - Gas Distribution 3
HSE	Health and Safety Executive
NARMS	Network Asset Risk Metrics
PE	Polyethylene
MOBs	Multi-Occupancy Buildings
PSR	Priority Services Register
LTS	Local Transmission System
CBA	Cost Benefit Analysis
VCMA	Vulnerability and Carbon Monoxide Allowance

Acronyms page



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Except where stated to the contrary, all financial values within this paper are stated in 2023/24 prices. All cost forecasts within the Business Plan Data Template exclude real price effects and ongoing efficiency assumptions as instructed by Ofgem in its Business Plan Guidance.

Business Plan redaction statement

In the interests of transparency and to facilitate meaningful stakeholder engagement, no content from this business plan document has been redacted. Some appendices have been redacted, in part or in whole, on the grounds of commercial confidentiality or market sensitivity.

Click for our [Redaction Explanatory Statement](#) published alongside our business plan.

1. Introducing our plan

Our 2026-2031 Business Plan commences with an introduction from our Chief Executive Officer Graham Edwards. Setting the scene for the upcoming price control, read how we'll continue to build on our proven stability while refining for the challenges ahead. The section goes on to discuss the ways we're preparing now for an ambitious future and details our track record that shows we can be relied upon to deliver.

What's in this section:

1.1 A message from our CEO

1.2 Why we need to act in RIIO-GD3

1.3 Our plan at a glance

1.4 A company you can trust



1.1 A message from our CEO

I'm very pleased to present our 5-year Business Plan for RIIO-GD3. A demonstration of our commitment, the plan contains a detailed vision for the work we will continue, using our expertise to keep on delivering a safe and reliable network to our customers. While we navigate the future of energy distribution, our strategy will be strengthened by innovative initiatives and dedication to fulfilling our role to the highest possible standard, not just to meet the requirements set by our regulator – but because it's the right thing to do and is embedded in our ethos.

Our industry has seen many changes, and there are major shifts ahead in the transition to a greener energy system. We have decades of experience in adapting and responding, managing changes alongside the day to day. We've done it before, and we'll do it again; refining our operations to meet the new and evolving challenges, from adopting measures to meet net zero, to training our people in the new skills we need and recruiting new colleagues with specific expertise.

As ever, our plan centres around our stakeholders – all those people and organisations with a vested interest in what we do, so we have engaged widely – listening to a broad range of views which includes customers, industry, government, local authorities, colleagues and charities. We commissioned a tailor-made artificial intelligence tool to help us analyse the in-depth feedback that we gathered, identifying themes and conflicts to confirm that we understand what our stakeholders want and need. What stakeholders said has shaped all areas of our plan.

The industry is at an important point – reflecting rapidly advancing technology, evolving laws and policies, the future of energy and our part in this, and a growing emphasis on sustainability. In response to these changes, we have developed our Business Plan to meet the expectations of our stakeholders, customers, and communities.

"We have developed our Business Plan to meet the expectations of our communities, stakeholders and consumers."

Graham Edwards
Chief Executive



Our network has connected enough green gas capacity to meet the average demand of 160,000 homes across our large operating region. We recognise that the move to greener energy – through decarbonisation – is certain in industry and power. But, uncertainty remains in terms of how homes will be heated in the future. While we anticipate limited change to how we operate and who we serve in RIIO-GD3, we have put considerable effort into understanding how all areas of our business would need to evolve in line with potential future energy scenarios over the longer term. Our plan will progress the decarbonisation of industry and power using hydrogen, and we are ready to move at significant pace when decisions are made on hydrogen for heat.

Since 2005, we have achieved all our regulatory standards, an achievement not consistent among the GDNs. I am incredibly proud of our excellent track record, across safety, workload, the reliability of our network, and supporting vulnerable customers. All this while continuing to innovate to support the move to net zero and improve our sustainability.

Our vision for the future is both ambitious and attainable. By embracing innovation and staying true to our core values, we are well-positioned to lead the way; not only in the gas distribution sector, but across all sectors of the economy with our approach to delivering a high-quality service. I am confident this Business Plan will serve as an ambitious roadmap towards a successful and sustainable future.

Finally, my sincere thanks to our colleagues, customers, and stakeholders for their commitment and contribution to our activities to date. Many of us live in the communities we serve, and many families have worked here across decades. While there are new challenges ahead, our strength and stability has been built over generations. We look forward to continuing our work together into the future.

Graham Edwards
Chief Executive

During RIIO-GD3, we will focus on several key areas which align with and expand on the company priorities we updated in RIIO-GD2:



Regulatory compliance

Continuing to demand safety always, we invest over £200m a year and insist on raising the bar to meet regulatory requirements, to maintain public trust, and uphold the reliability of our operations.



Customer-first approach

Further enhancing our focus on outstanding service and engagement, through digital transformation and innovative tools that help us tailor our support to consumers and ensure their voices are better heard.



Workforce development

Ongoing investment in our people to design our future. With continuous training and development programmes we meet changing industry needs, reinforcing our culture of expertise and resilience.



Sustainable practices

Committing to doing all we can to further our environmentally responsible operations, reduce the waste we produce and explore alternative energy sources to achieve Net Zero targets.



Infrastructure strengthening

Investing in value for money technologies and digitalisation to modernise and strengthen our distribution network, upholding reliability and efficiency and supporting decisions and innovations in the journey to a Net Zero energy system. An example is creating a digital twin of our network to help us test decisions ahead of time and support the work of the National Energy System Operator.

1.2 Why we need to act in RIIO-GD3

Shifting to a net zero world is one of the greatest challenges and opportunities faced by humanity. As a member of the growing group of businesses, institutions, cities and countries that have made a pact to reach Net Zero emissions by 2050, we at WWU are committed to taking timely, credible action.

The International Energy Agency (IEA) reported in 2021¹ that the energy sector accounts for three-quarters of total global greenhouse gas (GHG) emissions. The United Nations² state that replacing polluting power with energy from green sources, would dramatically reduce carbon emissions. The Energy Networks Association state in their [Innovation Strategy](#) that it's a pivotal year for the UK's transition to net zero. World leaders through to UK energy networks know that we cannot continue operating in the way we have to date.

And yet, further government policy decisions and technological developments are required for UK energy as we move away from fossil fuels. The path through the changes to come is not fully clear, and our plans seek to navigate this uncertainty while supporting customers and policymakers with future options.

Setting the scene at WWU

At WWU, it is our responsibility to distribute gas to homes and businesses in Wales and the South West of England, through our network of pipes. We don't sell gas. We look after our pipes and assets to keep the gas flowing safely and reliably.

Some of our key facts are as follows:



We own and maintain over 35,000km of gas pipes



Supplying 2.5 million households and 100,000 businesses



Serving 7.5 million people



Operating from North Wales to South Cornwall, covering one sixth of the UK.

Responding to gas emergencies and looking out for any vulnerable customers are also part of our core business, to keep the communities we serve safe. As a gas distributor, evolving our practice to ensure we're helping to protect and enhance the environment has always been a crucial part of both our day-to-day operations and future strategies. Today, as we plan for RIIO-GD3, evolving our business to keep pace with the change has become more necessary than ever – for continuity for customers, to meet our legal responsibilities as a regulated GDN, and to do what's right as a socially conscious company.

The need for drastic change in energy generation and use

As we stated in our [2023 Sustainability Strategy](#), for the UK to reach Net Zero carbon emissions, our society and industry needs to change virtually everything about the way we generate and use energy. Today, most energy used in the UK is from fossil sources. Gas is by the far the most common method of heating in England and Wales, with official statistics showing that 85% of homes in England and Wales are on the gas grid, while 9.1% used two or more types of central heating. Many of the same pipes that serve homes also transport gas to industrial and commercial users – over 65,000 of which are connected to our network – and power generation, with 57 gas fired power generation plants on our system.

For these customers, delivering net zero means a combination of one or more of the following:

- Energy will need to come from alternative cleaner sources such as wind, solar, biomethane and low-carbon hydrogen
- Carbon emissions will need to be mitigated
- Customers will need to change the way they use power and heating.

Ultimately, the transition is likely to include all three of these elements. With the huge role that gas distribution networks (GDNs) play in society, we expect to have a crucial collective role through the energy change and for the long term. Mains gas will continue to be necessary to meet seasonal demands and minimise disruption and cost – but we recognise that the timelines for policy decisions and the choices consumers make remain unclear.

As the capacity for intermittent wind and solar generation increases to meet the government's [Clean Power 2030](#) commitment, the need for flexible power generation and storage becomes ever more indispensable. In the near term that means retaining capacity for natural gas, including the storage offered by the gas system, and taking further steps to support green gasses. In the medium and longer term these greener gasses, including biomethane, hydrogen-blended natural gas and ultimately 100% hydrogen will provide important options and are all likely to use at least some existing gas network infrastructure. As we move towards net zero, the resilience the gas network provides the wider energy system becomes more important. This means that the GDNs will be required for many years to come to provide a safe and reliable means of supplying energy to homes and businesses.

Preparatory work for a no regrets future

We recognise that our regulator, Ofgem, has identified the uncertainty surrounding the future of gas networks and will not be funding dedicated net zero related upgrades during this period through base funding. As a result, we are not asking to invest in making assets hydrogen ready in RIIO-GD3, although the safety-driven Iron Mains Risk Reduction Programme (IMRRP) will help deliver a hydrogen ready pipe network. However, we anticipate Ofgem facilitating preparatory activity, through a combination of innovation stimuli, uncertainty mechanisms and potentially re-openers which can respond to government decisions on hydrogen and heating. Agile, flexible funding is essential to ensure that UK Net Zero targets are met and the end-to-end energy system is supported.

A potential example of preliminary work in terms of network asset management is installing strategically placed valves that enable us to separate areas of the network to either switch to hydrogen or away from gas, if regional and local energy system plans enforce such changes. We intend to prepare efficiently for such potential changes. For example, through appropriate people management activity such as bespoke education and training for our team members. We plan to build their expertise and readiness for what's next, ensuring we have the skills to be able to deliver repurposed or decommissioned networks in future. On a customer service level, no regrets work could translate to preparation for decarbonised gasses and for electrification. This could include providing information and advice to customers who don't yet understand the energy transition that lies ahead and how that could impact on them; plus advising on changes to the insulation levels and appliances in their homes for electrification.

Without funding for this low-cost work in RIIO-GD3, we wouldn't be able to prepare for future scenarios until 2031. That timeframe would leave us just 19 years to prepare for and execute major changes required to meet the UK government's legally binding deadline of 2050 – which would likely be insufficient given the scale of physical work and customer engagement required. Continuing to wait for a government decision before taking any sort of action, could mean a diminished time to act and that we quickly run out of time to meet UK Net Zero targets. We therefore propose to use innovation stimuli and Net Zero uncertainty mechanisms to make the progress and prepare for a range of future scenarios.

Practical action and business evolution in RIIO-GD3

At the same time, we are working on reducing our operational emissions and gaining a greater understanding of the emissions in our supply chain to achieve Net Zero greenhouse gas emissions by 2040. We will do this primarily by tackling our largest emission sources, reducing methane leakage from our network through our pipe replacement programme both in terms of emissions reduction and safety, choosing low emission vehicles for our operations where appropriate options and market conditions exist and minimising the use of virgin aggregate and recycling wherever we can. For further details please see [Chapters 3.1 Net Zero](#) and [3.5 Innovation](#).

1.3 Our plan at a glance

On this page we outline some of the threads that run through our plan which we've mapped with graphics. These all help to emphasise how, through our work, we're fulfilling our promises to consumers and stakeholders.

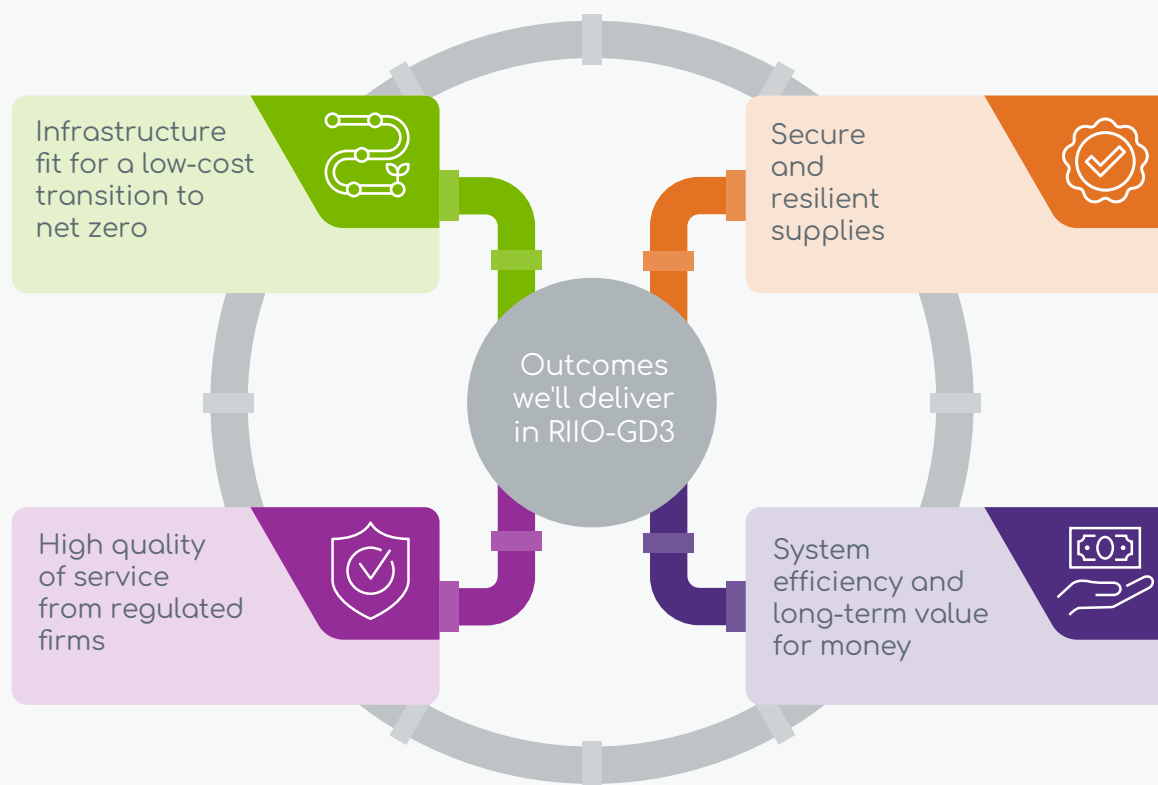
Mapping to the United Nations Sustainable Development Goals (SDGs)

The SDGs were developed in 2015 by world leaders in a historic promise that resulted in [The 2030 Agenda for Sustainable Development](#) and its 17 goals. The SDGs reflect an understanding that sustainable development everywhere must integrate economic growth, social well-being, and environmental protection. We are committed to sustainable practices that contribute to the agenda for sustainable development in the work that we do. Led by an expert sustainability/SDG professional, we conducted several internal workshops to consider the goals and to identify those we could most influence and contribute to. From this, we identified six goals and developed overarching commitments for each. In the introductory pages to each section of our plan we have mapped the relevant SDGs to the RIIO-GD3 work we'll carry out.



Turning commitments into outcomes

The following are outcomes that Ofgem assign to GDNs, with the expectation that each Business Plan commitment is associated with at least one. On the next page, you'll find the connections between those outcomes, and the commitments we've made to ensure we deliver them.



How we're committing to outcomes in RIIO-GD3

Infrastructure for a low-cost transition to net zero



We will:

Invest £38m on innovation to solve the challenges in achieving Net Zero

Reduce our methane emissions by 16%

Support hydrogen blending and be ready to roll out plans for hydrogen heating if that policy decision is made

Share data and analytics and build digital twins of our network to support the decision-making to net zero

Equipping the workforce with the necessary skills for future challenges.

Secure and resilient supplies



We will:

Ensure resilience and security of our critical infrastructure

Invest an average of £438m per year Total Expenditure, c.96% of which we consider mandatory

Replace 435km per annum of metallic mains to deliver environmental and safety benefits

Our investments include £32.8m per annum on high pressure pipelines and above ground assets to ensure reliability of greater than 99%.

High quality of service from regulated firms



We will:

Attend all gas escapes within 1 hour or 2 hours at least 97% of the time

Invest £5m p.a. to support vulnerable customers. This also includes the continuation of our Carbon Monoxide awareness programmes.

Achieve an average customer score of >9/10

Support consumers to ensure that no one is left behind in the UK energy transition.

System efficiency and long-term value for money



We will:

Continue to achieve all standards and outputs expected by our customers

Embed efficiencies from previous controls and set a stretching further efficiency challenge of 0.5% p.a.

Test all our investment decisions to ensure the environmental safety, reliability, and other customer benefits are value for money.



1.4 A company you can trust

We're a company you can trust, with a track record to prove it. Despite a decade of considerable disruptions including Brexit, the COVID-19 pandemic and economic uncertainty – we are one of the few GDNs that has continued to meet, and in a number of instances, exceed our commitments and measurable outputs. This is assurance to our customers, stakeholders and regulators that we will deliver on the plan we present.

Our forecast for the remainder of RIIO-GD2 shows we will further this stability and success, once again meeting all our outputs, both annually and across the control as appropriate, as shown in the table (right).

The single output we have not delivered on is making the target number of connections within the Fuel Poor Scheme because the UK government position on new gas connections changed. As a consequence, Ofgem agreed to the allowances from this output being repurposed to help vulnerable customers.

Our performance

As our name highlights, we're a company with a strong geographical focus and we make it our business to go above and beyond for the regions we serve; achieving excellence in meeting consumer needs, safety, sustainability and value for money. To tell more of our performance in these areas during RIIO-GD2, we've collated some key facts and actions that speak for us. Please see these overleaf.

Results from our RIIO-GD2 Year 3 (2023) RRP Strategic Performance Overview

Overall output	In detail	Result
Meeting the needs of consumers and network users	Consumer vulnerability minimum standards	●
	Fuel poor connections	●
	Complaints metric	●
	Guaranteed standards of performance	●
	Emergency response – 97% controlled gas escapes	●
	Emergency response – 97% uncontrolled gas escapes	●
	Loss of supply – number of unplanned interruptions	●
	Loss of supply – duration of unplanned interruptions	●
	Loss of supply – number of planned interruptions	●
	Loss of supply – duration of planned interruptions	●
	Planned interruptions survey (score /10)	●
	Emergency response and repair survey (score /10)	●
Maintaining a safe and resilient network	Connections survey (score /10)	●
	Repex – tier 1 mains replacement	●
	Repex – tier 1 services	●
	Capital projects	●
Delivering an environmentally sustainable network	NARMS	●
	Shrinkage and environmental emissions	●
	Biomethane connections information	●
	Environmental action plan and annual environmental report	●
	Business Carbon Footprint (BCF) reporting	●
	Carbon monoxide awareness	●
	Introduce distributed gas entry standards (SCMH connections)	●

Key: ● On track ● At risk ● Not on track



Consumer needs

Customer service

- We consistently score over 9/10 overall in customer satisfaction surveys with our emergency service achieving the highest score among the GDNs.
- If things do go wrong we resolve 83% of complaints within one working day.
- Implemented new Guaranteed Standards of Performance on April 1, 2021 and have paid customers automatically for failures.

Vulnerability support

- We've helped 140,000 consumers sign up to the Priority Services Register (PSR) so far in RIIO-GD2, which combines gas suppliers' priority registers and is a free service that helps us to look after customers who need extra support with communication, access or safety, by tailoring services to better suit them.
- By giving advice on increased welfare support, grants and energy efficiency we have helped over 140,000 households in our region to save a combined £17.5m+.

Inclusive service

We are the first GDN to meet the requirements of new ISO22458 standard and kitemark for inclusive Service.

Carbon monoxide protection and awareness

- More than 100,000 people received our education on the dangers of CO through partnerships, online campaigns and working in schools.
- 16,900 priority customers received one of our free CO alarms.

Reliability

80% of households rely on gas to heat their home, and we have maintained over 99.97% network reliability in RIIO-GD2.

Safety

Keeping our communities safe

- Our work to replace all our 425km of ageing gas mains per annum that are made of iron and steel is essential to avoid the devastating consequences of gas explosions. We carefully decide which section of our pipeline to replace and when on a risk basis.
- By 2026 our network will be 85% plastic and we will have delivered all our outputs in this area.
- We are proud to be leading the way among the GDNs in our gas mains replacement performance - on time, on cost and on replacement progress.

Responding to emergencies

Our average time to attend a reported gas escape is just 45 minutes. We take our regulatory responsibilities very seriously and are one of only three networks to achieve the regulatory targets for emergency response since 2005.

We keep our workforce safe

Recognising our commitment to the safety of our people, we've been awarded our 11th Consecutive Royal Society for the Prevention of Accidents (RoSPA) Gold Award.

Sustainability

Protecting the environment

Outperforming our shrinkage target of reducing 10% in RIIO-GD2, achieving a 10% reduction two years ahead of schedule.

Supporting Local Authorities (LAs)

By providing data and use of our Pathfinder Model, we have enabled all LAs in Wales to produce Local Area Energy Plans, with South West well on their way.

We deliver green gas

We connected 21 biomethane plants that have the capacity to deliver low carbon gas to meet the average demand of 160,000 homes.

We are enabling renewable electricity

Supporting the intermittent nature of solar and wind power, we transport gas to 57 sites for electricity generation when the sun's not shining and the wind's not blowing.

Innovating to support the transition

Our innovation plans will help us navigate future changes, while supporting our customers and other stakeholders.

Value for Money

Focus on value for money

When consumers tell us what they want from our service, we make sure we deliver it with value for money front and centre.

A Totex approach

By refurbishing assets to improve their health, we can avoid costly full replacements and extend the life of our assets until there is more certainty for the future of a gas network and what that will look like.

In-house delivery model

A combination of approaching the market, understanding consumer needs, and recognising our own high-quality of service and operation, we concluded we could do better for consumers. We brought 250+ colleagues on board so that we now insource rather than outsource. This means:

- Job security and a committed workforce for RIIO-GD3
- Protection for consumer bills from the volatility of price increases in the contracting world
- Tested investment against the safety, reliability and environmental benefits they give, ensuring our upfront costs give value to present day and future consumers.



2. Meeting the needs of consumers and network users

Without consumers there would be no gas network, and we recognise this in all we do at WWU by always putting consumers first.

This section begins by outlining consumer and stakeholder involvement in every step of building our RIIO-GD3 plan, using a comprehensive engagement process that spanned discussions through to decision making. Our Outputs and Incentives chapter 2.2 reflects the results of those detailed talks with stakeholders – sharing our commitments for 2026-31, how we'll make them happen, and, crucially, what's in it for consumers.

We explain that our work takes us into around 100,000 homes and businesses a year. This gives us the opportunity to speak to a wide range of gas customers face to face, enabling us to offer a range of support where we encounter vulnerability. We also discuss the significant changes ahead in connecting and disconnecting households and businesses to the gas supply.

What's in this section:

2.1 Consumer Voice

2.2 Outputs and Incentives

2.3 Protecting our customers and communities

2.4 Connecting homes and businesses

Mapping to the UN Sustainable Development Goals

In Chapter 1.3, we introduce how we align with the SDGs and are committed to sustainable practices. Across this business area in RIIO-GD3, we will contribute to the following goals:



2.1 Consumer Voice

Keeping consumers and stakeholders at the heart of our decision-making

Stakeholder and consumer engagement is our primary method of making sure our decisions are relevant to the people we serve. By putting our communities at the heart of what we do and engaging in tailored ways, we identify our stakeholders' wants and needs while maximising the value we add.

Our Independent Stakeholder Group (ISG) has scrutinised our Business Plan for the RIIO-GD3 regulatory period 2026-2031 and the processes we used to put this together. The group is independent and tasked with using their expertise and experience to offer robust challenge to company proposals. The seven-strong group has specialisms in communications and engagement; utilities including the energy sector; business; safeguarding vulnerable customers, and research. Their professional credentials can be found on our website [here](#).

What is now known as the ISG was formerly the Customer Engagement Group (CEG) before a rebrand by Ofgem in Spring 2024. For clarity, we'll refer to the group as the ISG throughout this plan.

The positive contributions from ISG Members during our RIIO-GD2 business planning process were recognised by both our Executive and Board, therefore we maintained our ISG beyond submission and into the delivery period of 2021-2026. We held a Q&A with CKI's International Business Director at the beginning of 2024, who also shared praise for our ISG. The Regional Head Office of Cheung Kong Infrastructure – known as CKI – is in London, and in 2012 CKI led a consortium of companies to become the owners of Wales & West Utilities.

As the only company with responsibility for transporting gas around Wales and the South West of England, we are a natural monopoly; while Ofgem is the Office of Gas and Electricity Markets, and they act to ensure we behave efficiently and fairly. We continued our ISG into RIIO-GD2 because of the value we see from their challenge and scrutiny of our delivery programmes, so when Ofgem announced its requirement for networks to set up ISGs, ours was already in place. Our existing Group will help Ofgem understand to what level our RIIO-GD3 plans meet the needs of consumers, both today and in the future.

A crucial day-to-day decision-making tool

Enhanced engagement is a part of our culture and embedded in our business. We were in the early stages of engagement maturity³ at the start of RIIO-GD2 business planning and we now use an ever-increasing range of engagement methods and channels to suit different types of consumers based on factors such as geography and need. We specifically use deliberative engagement with consumers via our Citizens Panel, and we have increased membership for future bill payers. We carry out consumer group segmentation and stakeholder mapping exercises to make sure we reach and gain insight from a wide representation across the regions and localities in which we operate, including for demographics, lifestyle characteristics and firmographics⁴. This helps us identify what matters to people and the unique needs across consumer groups and communities. We also adapt our engagement methods to suit varied stakeholder groups, which are those people who have a vested interest in our activities, such as partners like Citizens Advice, government departments and environmental organisations.

This list shows some of our wide variety of regular and ongoing engagement methods and people that we engage with:

- **Daily consumer contacts** – during operational works; emergency call outs; gas pipe replacement drop-in information events, and conversations with our customer contact centre.
- **Planned consumer engagements** – the annual trending research we carry out during Business Plan delivery, and part of our consumer engagement that is separate to business planning.
- **Workshops with local regional representative stakeholders** (including consumer groups and charities) – in person, virtual (during Covid restrictions) and now hybrid.
- **Panels** – engaging with people who are educated in certain topics including our Critical Friends Panel, Citizens Panel (using the deliberative consumer engagement method)⁵, Small Business Consumer Panel, and pilot Youth Panel. These are delivered via online or hybrid sessions and using virtual platforms, to account for stakeholder engagement preference and the best method for engagement with that audience type.
- **Engaging with major industrial gas users** through WWU account managers, innovation projects, and collaborative gas network engagement programmes.
- **Political engagement programmes** – engaging in national political events; joining all-party specific interest groups; meeting politicians and advisors at Party Conferences; discussing gas pipe replacement with local Members of Parliament (MPs) and, in Wales, Members of the Senedd (MSs); plus raising awareness about carbon monoxide risks and consumer vulnerability projects as part of our ongoing political engagement programme.



- **Local Area Energy Plan consultations** – working closely with local authorities and their consultants, to support them in developing plans for decarbonising their constituencies.
- **Working together with the gas networks** and engaging with common key national stakeholders.
- **Programmes to engage colleagues** – engaging with colleagues through our intranet; weekly bulletin; quarterly '2W' magazine with 'Thrive' wellbeing insert; in-person roadshows; online Q&A sessions with members of our Executive team and senior leaders; quarterly 'Advance' business briefing packs; and surveys and focus groups to gain insight from colleagues on topics like their expectations of an employer of choice.

RIIO-GD3 business planning

ISG preparedness

To make sure representation in our ISG was fit to take us through RIIO-GD3 business planning, we reviewed the group membership with our ISG chair and adjusted accordingly. We ensured the group was diverse and supported our business aspiration of reflecting our communities across our whole network. We recruited new members to include experience of larger size businesses with the addition of the Managing Director of Business West which supports businesses in the South West of England to realise their ambitions. We recruited consumer vulnerability expertise with the addition of the Head of National Energy Action Cymru and disability expertise with the founding Director of Partnerships for Good which helps corporate directors achieve their social obligations.

To support their understanding of the energy sector and gas networks, alongside an in-depth understanding of WWU and our values, we arranged appropriate induction sessions for new members. We introduced an additional high-level secretariat to make sure the Chair, Deputy Chair and Members had the administrative support they needed.

With the aim of re-focusing ISG activity on RIIO-GD3 planning, we held a briefing and Q&A session with our Executive team, and ramped-up the ISG meeting schedule to accommodate as best as possible the reduced business planning timeline once, 'no rollover of RIIO-GD2' was announced by Ofgem.

Also maximising available working time, we discussed and jointly agreed the ISG work programme to meet their needs. In addition, we introduced sub-group working so they were able to fulfil their challenge and scrutiny requirements, including creating a separate business planning challenge log, to track all points for discussion.

Stakeholder engagement strategy: objective, principles, values and approach

Our **Stakeholder Engagement Strategy** sits with our dedicated Communications and Engagement Team, that itself sits in the broader People and Engagement Department and is endorsed by our Executive. The Engagement Team also manage our engagement programme, but delivery of this engagement sits firmly within the relevant teams in the business and is a part of our business-as-usual culture. Insight reporting comes back through the business to inform future engagement planning and influence the engagement programme.

Our **objective** sets out the role stakeholder engagement plays in informing our key business decisions:

"We continuously strive to be a sustainable business, putting people and communities at the heart of what we do. We identify our stakeholders' wants, needs, perspectives and behaviours through appropriate engagement activities, analysing and reviewing feedback alongside our own external insight to inform business decision-making and shape the delivery of the services that matter to all our stakeholders."

Our **principles** support both the objective and approach of our ISG, while also reflecting our **values**:

Inclusivity

Engaging a wide and inclusive range of customers and stakeholders.

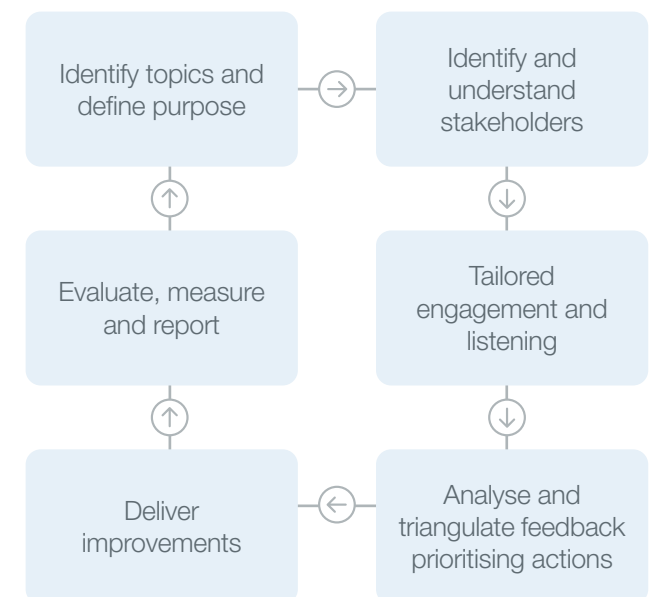
Continuous improvement

Aiming to identify stakeholder issues before they arise and effectively resolve them when they do.

Transparency

Demonstrating that openness, honesty and accountability guide our business decision making.

Our **approach** to engagement is a centrally managed, locally delivered model that supports our culture of engagement right across the business:



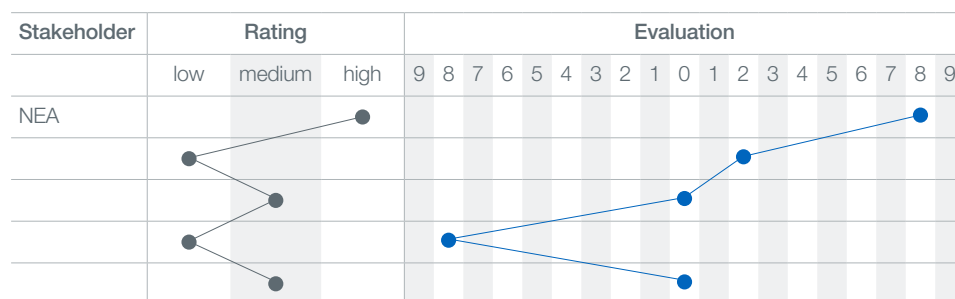
Key stakeholder strategic positioning

Working with our ISG, we agreed a stakeholder relationship mapping process for our top 20 stakeholders across four areas. We mapped our engagement and relationships, firstly to agree how they overlap or differ:

1. Internal relationships between WWU and the ISG.
2. External relationships held by the ISG.
3. External relationships held by WWU over which the ISG have oversight.
4. External relationships held by WWU over which the ISG have no oversight.

Jointly with our ISG we follow our engagement progress with our top 20 stakeholder groups across pre-agreed frequencies, updating the list if necessary. A stakeholder analysis matrix helps us analyse our engagement and relationship building over time. As engagement information is built up, the data can be used to trend a qualitative assessment of our key stakeholder engagement.

Example: Key stakeholder qualitative engagement assessment data



While this assessment is from our perspective, we will also consider the results of an independent relationship scan that reports in 2025 and support benchmarking of these relationships and target setting into RIIO-GD3 delivery. This marks a significant step forward from RIIO-GD2.

Best practice engagement and programme development

While our objective, principles, and approach to engagement remain constant – as outlined in our [Stakeholder Engagement Strategy](#) – we always consider improvements in technology and engagement best practice. With this in mind, we instigated a review, choosing five case studies in the electricity and water sectors that could reference excellent engagement programmes to compare and contrast. We also looked at innovative engagement techniques including Citizens Jury⁶, Open Space Technology⁷, A Community of Enquiry⁸, World Cafe⁹, and the use of Artificial Intelligence (AI), to find elements that could transfer to our RIIO-GD3 business planning engagement programme. We notably have a Citizens Panel – which is an adaptation of the Jury; and our stakeholder workshops include elements of a World Cafe approach.

Following this review, we agreed on our central and supporting objectives for RIIO-GD3 business planning engagement with our ISG, Executive team, and business planning colleagues.

Objectives of our engagement programme

Build a RIIO-GD3 Business Plan that meets the needs of stakeholders

Empower our decision makers by leveraging stakeholder feedback

Establish 'golden thread' between plans and stakeholder feedback

Understand stakeholders' priorities and include them in planning

To make sure consumers and stakeholders were integral to the development of our RIIO-GD3 Business Plan and that we could demonstrate the thread of consumer and stakeholder voice throughout, we agreed on a **five-phase engagement programme** that is detailed on the next page.



Phases of our WWU RIIO-GD3 engagement programme

Phase 1 – Planning

We looked at what was important to us, considered Ofgem guidance, and at the same time looked at what matters (in terms of our work) to stakeholders and consumers from engagement insight already gained.

Next, we took the following actions:

- Sought to identify any gaps in both stakeholder groups and insight on specific topics so we could fill them. This included identifying the purpose of future engagement or key questions that we were seeking feedback on.
- Shared the outputs of the mapping exercise with our ISG, took their feedback and collaboratively developed an evaluation scoring system to assess the quality of our key stakeholder relationships over time.

Phase 2 – Stakeholder priorities, wants and needs

- We undertook further topic-specific engagement seeking insight on identified questions with relevant stakeholders/consumers.
- We reviewed stakeholder and consumer priorities, wants, and needs. To do this we used a technique called Max Diff¹⁰ as it offers an insightful approach to prioritisation which can determine not only the rank order of items, but also the relative 'distance' between items. In this way it offers the benefits of both ranking and rating scales.
- Using this information, we started the process of refining our commitments and developed specific proposals with differing levels of ambition.

Phase 3 – Co-creating proposals

Further engaging with stakeholders on these proposals, we looked at a range of options that could potentially satisfy their needs to become our **Business Plan commitments**.

- We considered a broad range of alternatives and options to make sure each commitment was the best fit.
- The next step was to review all the insight gathered (evidence from over two hundred engagement activities in addition to one-to-one and small group meetings) with the help of our AI engagement analysis tool, to refine our commitments based on what matters to stakeholders, while examining and resolving conflicts.

Phase 4 – Refine and draft Business Plan

We worked with an organisation experienced in behavioural psychology research to develop a research programme to again understand consumer priorities and willingness to pay with a focus on supporting consumer vulnerability and the transition to net zero. The programme involved 1,405, 20-minute interviews with a broad demographic of domestic and Small and Medium sized Enterprise (SME) consumers, which followed an initial qualitative engagement programme to check understanding and interpretation of our proposed commitments.

We used the Max Diff approach, for prioritisation and Contingency Valuation Methods (CVM) for willingness to pay. From this exercise, both domestic and small business consumers said their top three priorities for us to deliver during RIIO-GD3 and for which they are willing to accept associated bill increases are:

1. To help people on low incomes who struggle to pay their energy bills, and to partner with charities to provide energy efficiency advice and access to grants.
2. When upgrading old metal gas pipes in industrial areas that want hydrogen for heating, to also upgrade gas pipes in nearby areas to support heat decarbonisation.
3. To make consumers aware of the dangers of carbon monoxide and provide alarms for people most at risk, including accessible alarms for people with sensory impairments.

To inform final refinements, we worked with the same research partner and tested acceptability of our Business Plan commitments with an additional 1,401 participants, comprising both domestic and SME consumers; and ran a hybrid stakeholder workshop with multiple break-out sessions to assess stakeholder acceptability (73 participants from 64 organisations).

- For domestic consumers all commitments received a very high level of acceptance (90%+), with commitments themed under '**Maintaining a safe and resilient network**' receiving the highest scores (96%).
- Commitments themed under '**Delivering an environmentally sustainable network – net zero**' were ranked as lower priority for domestic consumers but as mentioned above, still received a high level of acceptance (91%).
- For domestic consumers who strongly accept our overall Business Plan, '**Innovate to speed up our transition to net zero and improve other areas of the business**' is one of the strongest differentiations, leading to higher overall levels of acceptability.
- In contrast to domestic consumers, SME consumers accept some '**Environment – net zero**' commitments very strongly (96%), while most of the 'Value for money' commitments are relatively less strong (94%), with all commitment themes scoring over 90%.
- A broad range of stakeholders, including from our identified top 20 key stakeholders scored commitments themed under safety as their top priority at 3.88 out of 5, with transition to net zero less strongly at 3.32 out of 5.
- Working with another research partner, we ran qualitative consumer engagement with 200 domestic consumers to further understand their perspectives on bill proposals for RIIO-GD3 and an evaluation of their opinions on the services supported by bill revenues across broad commitment areas. The engagement comprised a series of face-to-face workshop sessions and telephone interviews.



- Acceptability levels across our themed commitments were confirmed as 89%+ which was in line with our quantitative acceptability research programme.
- 76% of respondents said they were satisfied that our average annual RIIO-GD3 bill proposal represents value for money.

Phase 5 – Final touches

- We carried out deep dive engagement on areas of insight we wanted to examine further.
- This stage included further engagement where we knew qualitative data would help us understand how to better communicate with consumers and stakeholders.
- Gathering qualitative data to inform future engagement programmes in RIIO-GD2 and into RIIO-GD3 delivery is another reason for our further engagement at this phase.

Throughout each phase of delivery, our ISG has provided oversight, scrutiny, and challenge. This makes sure that the correct stakeholder groups and consumers are represented, and that their feedback is accurately interpreted and incorporated into the development of this Business Plan to represent consumer interests.

Insight analysis, triangulation and evidencing

We worked with Sirio Strategies to make sure our engagement insight was analysed, triangulated and aligned to the methodology as outlined in the Treasury's Magenta Book. Triangulation in engagement and research means using datasets, methods, theories and/or investigators to address a research question. In the first instance analysis was carried out manually, and this evolved into us becoming one of the first adopters of the AI engagement analysis tool created by Sirio Strategies.

The AI tool enables swift and accurate analysis, synthesis and triangulation of insight, which has sped up the process of accessing precise and true analysis of stakeholder insights. It gives us the ability to quickly follow up the answer to a question with further questions, to develop a thorough understanding of consumer and stakeholder insight. The tool works by analysing our engagement insight data, associated robust industry and other reports and credible third-party engagement insight.

This approach has helped us develop Stakeholder Justification Papers (SJPs) for Business Plan commitments. The SJPs outline the thread of consumer and stakeholder insight, summarised in our [Stakeholder Engagement and Decision Log](#). They detail how we considered a wide range of alternatives – a process called optioneering; and they also outline the conflict resolution process. Each SJP follows this process to show how individual Business Plan commitments were decided upon.

As an example, the tool analysed engagement insight to support our development of a RIIO-GD3 commitment on data and digitalisation, as illustrated below.

Our SJPs were shared with our ISG for scrutiny and challenge, and during SJP working sessions, ISG Members could ask the AI Tool any follow-up questions they wanted. This tested the rigour and scope of our engagement programme, as well as how we considered the insights that led to our commitments.

Example

Input

Evidence from 200+ engagement activities uploaded to AI tool. (Not including 1-2-1 and small group meetings).

- Evidence is brought together and synthesised to produce answers encompassing the stakeholder voice.
- This is then triangulated using a scoring methodology considering relevance to topic, level of stakeholder knowledge, quality of engagement, rigour of feedback collection, credibility of analysis and interpretation.



Output

Insight gained, covering opinions, views, conflicts and regional differences.

- Data and digitalisation drive environmental sustainability and energy transition.
- Accurate data collection supports vulnerable customers on the PSR.
- Transparency, accessibility and timely data provision are crucial.
- Protecting personal data is essential, along with robust cybersecurity measures.



Decision

Transformational ambition required for RIIO-GD3.

- Stakeholder conflicts emphasise the need to balance transparency, cybersecurity, cost management, and their data privacy concerns.
- We will commit to share data in line with customer expectations and develop risk assessments, a triage process, and employ good governance.



Development of common approaches and benchmarking

We are actively participating in a collaborative stakeholder engagement group that involves all the gas networks. The group engaged national stakeholders on their topics of interest in relation to gas networks. We worked with a research partner to engage (virtual face to face interviews) with 28 national stakeholders representing views of sectors of key interest to the gas networks – consumer vulnerability, industry, environment, safety, local government, gas generation and future of network and workforce.

Our research partner produced a report, in which stakeholders were positive about the regularity of engagement with the gas networks, stating we were open and collaborative. The report directly states, *“WU was quoted as being one of the best gas networks for stakeholder engagement, sometimes directly comparing them to the other operators and infrastructure companies favourably.”* There was also praise for the range of formats in which stakeholders had engaged with us, including: regular emails, engagement sessions in person, and social media.

Key actions for GDNs, as recommended from this insight are:

1. Communicate with openness and transparency

Clearer communication is needed, regarding the goals and strategic thinking of the gas networks.

Our response:

Hydrogen and its role in the future network –

We are committing to provide more frequent website updates on the progress of hydrogen projects we are involved in; also providing updates for other publications and our monthly stakeholder newsletters, plus we will produce specific hydrogen update newsletters for dissemination to key stakeholders.

2. Engage on the future of the network

Driven by concerns about the future of gas networks, stakeholders want engagement on industry plans for adapting to the transition and distributing low carbon alternatives like biomethane and hydrogen, plus the implications for consumers.

Our response:

Appropriately support consumers through the energy transition – Considering further stakeholder and consumer insight, we are committing to upskill our customer facing colleagues and existing partners to provide key information on the energy transition to net zero. We will also develop tailored communications and delivery channels to support consumers most likely to be involved in the energy transition, proactively taking these communications into communities. More information on this commitment can be found in page 19 of our [Vulnerability Strategy](#).

3. Take leadership on the transition

Gas networks should work with the electricity networks to take greater leadership in the transition where they feel Government leadership is lacking.

Our response:

Give greater support for vulnerable consumers – With the use of specific initiatives and because of the unique opportunity gas engineers have when entering homes to identify consumer vulnerability. Stakeholders said they want gas networks to push for regulatory support in this area.

We appraised these recommendations together with other stakeholder and consumer insight and considered two options for providing support to the actions of the group:

— Option 1

Support up to 260,000 consumers on low incomes to access services including energy efficiency advice, access to the PSR, CO awareness and free CO monitors and gas appliance repairs and replacements.

— Option 2

Increase our ambition to target, reach and support twice as many consumers.

Willingness to pay consumer research helped us understand the value consumers place on delivery of our VCMA projects and other support services. This supported our decision to put forward Option 2. Consumer acceptability testing of our Business Plan commitments found that 93% of the 1,401 participants found this acceptable, and understood both our plans, and the benefits.

We also shared the results of our best practice engagement review with this group and demonstrated the AI insight analysis and triangulation tool we have adopted, to give others the opportunity to consider if it was appropriate for them.

Following on from our collaborative stakeholder engagement exercise, we joined efforts with all the other GDNs and Gas Transmission Networks. Our joint project looks at how we can best line up and define our engagement efforts to bring a more unified approach to future engagement programmes. The project has given us a guidebook that we can follow to introduce more consistency. Using common definitions (e.g. stakeholder groups/topics), engagement materials (e.g. explaining gas bill make up) and evaluation scales, introduces a new level of refinement to gas network engagement practice.

2.1



Consumer Voice

Continuing focus on engaging stakeholders and consumers

For the remainder of RIIO-GD2 into RIIO-GD3 and beyond, we are committed to continuing effective and regular engagement with a broad range of stakeholders and consumers. We will continue regular stakeholder mapping exercises across the business to make sure our programmes include new and emerging stakeholder groups. In addition, we will refine consumer segments and discrete communities, to make sure we engage on topics that best reflect changes in the external world and hold the most significance to stakeholders and consumers.

We will continue engaging through our current engagement channels while continually reviewing their effectiveness with different stakeholder groups and consumer segments. This is with the aim of making sure we are using the most relevant channels and new technology.

While further regulatory guidance is expected following our Business Plan submission, we are committed to continuing to work with our ISG. Recognising the benefits of their independent scrutiny and challenge, we expect to work with them on delivery and performance across the business throughout RIIO-GD3.





2.2 Outputs and incentives

Our commitment to delivering our promises across our full range of services is steadfast; and we continue to use outputs to measure and report on our performance, as required by our regulator Ofgem. We use the term outputs among the GDNs to describe the activities we accomplish to achieve our outcomes. In RIIO-GD3 we will further increase transparency of our performance by using digitalisation to present results in a more automated and timely way.

This chapter explains our proposed outputs for 2026–31, all of which are common across the sector. Each output has associated targets, and this chapter summarises the targets, in addition to the corresponding stakeholder support. Our RIIO-GD3 outputs build on a successful foundation of being one of the few GDNs that forecasts and achieves delivery of all our RIIO-GD2 outputs both annually and cumulatively.

Penalty and reward incentive arrangements ensure that customers get best value and are protected from risk should we fail to deliver our commitments. These form a cornerstone of the RIIO framework. Financial incentives have delivered impressive results in RIIO-GD1 and RIIO-GD2 and we believe these incentives should be strengthened in RIIO-GD3 to encourage outperformance for the benefit of consumers.

For example, the shrinkage incentive in RIIO-GD1 resulted in reductions in methane emissions far above the funded targets.

Definitions

There are three regulatory mechanisms that govern outputs:

Licence obligations (LO) – set minimum standards; with potential enforcement for failure.

Price control deliverables (PCDs) – capture outputs with baseline funding.

Output delivery incentives (ODIs) – Service quality improvements beyond the minimum standard (may be financial or reputational).

Each chapter in this Business Plan contains a more detailed assessment of their relevant outputs and we have mapped these in the table on the next page, with further detail available in our appendices. This chapter is supported by our Stakeholder Justification Papers (SJPs) that are summarised by our Stakeholder Engagement and Decision Log [here](#). The SJPs show the different stakeholder groups and consumers we have engaged with, along with the mechanisms used. They bring together our engagement feedback and demonstrate how it has helped shape each of the proposed RIIO-GD3 commitments plus the associated outputs that will help us fulfil them.

Our Ambitious RIIO-GD3 Plan

During RIIO-GD2, we successfully implemented initiatives to enhance our support for vulnerable consumers, reliability, and environmental responsibility. Based on this, while preparing our RIIO-GD3 Business Plan, we have tested our ambition with consumers and our plan reflects their priorities. By building on the foundations laid in RIIO-GD2, we aim to continue delivering these valued outcomes in RIIO-GD3. The only exception is Fuel Poor Connections, where we are proposing a much broader support strategy for vulnerable customers.

In addition to these commitment output measures, we have ambitious plans across the business for:

- **Vulnerable customers** – a continuation of the funding repurposed in RIIO-GD2
- **Environment** – reducing Business Carbon Footprint (BCF) and having a positive impact on biodiversity
- **Regional planning** – supporting National Energy System Operator (NESO) and Regional Energy Strategic Plan (RESP) development/ambition
- **Data and digitalisation** – supporting the UK wide energy network twin, and to improve quality of analytics
- **Business evolution** – systems and colleague engagement to support readiness of the network in any transition scenario

Ofgem outcomes



Infrastructure fit for a low-cost transition to net zero



Secure and resilient supplies



High quality of service from regulated firms



System efficiency and long-term value for money

This chapter sets out our ambitious output targets for RIIO-GD3.

These are presented according to three Ofgem outcomes categories. For reference, where a comparable measure already exists in RIIO-GD2, we also show our corresponding targets. Highlighting our reliability and trustworthiness as a company that delivers on our plan, we are achieving all our RIIO-GD2 outputs and propose to continue with these outputs as they are equally valid in RIIO-GD3.

Further details in relation to the targets for RIIO-GD3; the cost assumptions we have made; and the associated incentive payments / penalties where a financial ODI is proposed, are included within the relevant chapters of this plan or appendices supporting our submissions. These documents are signposted in the tables on the next page.



Secure and resilient supplies

Our stakeholders and consumers recognise the importance of effective management of gas escapes and their prevention; backed up by our annual priorities research (based on RIIO-GD2 commitments) which shows that safety is consistently the top consumer priority. This is compounded by general support from all stakeholders and consumers for initiatives to reduce the UK's carbon emissions.

For this reason, we are committing to:

1. Keep people and their properties safe by making sure our engineers get to all reported gas leaks rapidly.
2. Maintain a safe and reliable gas network, while upgrading our gas pipes, actively reducing methane emissions to support the UK's environmental targets

The below outputs will contribute to achieving our commitments which we will report on annually to show progress.

Output	Type	RIIO-GD2 Explanation	RIIO-GD2 Performance	RIIO-GD3 Target	Further Information
Emergency response time	LO	Licence Obligation (LO) to attend 97% of gas emergency calls within 1 hour for uncontrolled and 2 hours for controlled escapes.	Exceed LO of 97%	Exceed LO of 97%	Chapter 2.3 Protecting our customers and communities
Shrinkage	ODI F&R	A financial and reputational Output Driven Incentive (ODI) to measure the volume of gas lost (GW/h) through leakage, theft of gas and own use gas.	322GWh average per year	260GWh average per year	Environmental Action Plan – Table 1 action C1 page 17
Repex – tier 1 mains replacement	PCD	Price Control Deliverable (PCD) A programme of work that is mandated by the HSE to replace metallic mains within 30m of an occupied building by 2032.	314km per year	335km per year	Chapter 4.2 The Distribution Network Workload
Repex – replacement of metallic services	PCD	The replacement of metallic services to comply with HSE guidance which does not allow a steel service to be reconnected following a mains replacement, or to just repair a service following a leak.	86,740 over the 5 years	77,856 over the 5 years	Chapter 4.2 The Distribution Network Workload, Repex EJPs and BPDT
Network Asset Risk Metric (NARMs)	PCD ODI	A common model across GDNs for calculating the monetary value of the risk of assets. This is used to assess the impact on risk from our intervention programme	£247m	£233m	Chapter 4.1 Asset Strategy
Shrinkage	N/a	An incentive to minimise the volume of gas lost through leakage.	10%	16%	Environmental Action Plan – Section 2.1 P.16 and Table 1. Action C1 P.17



Infrastructure fit for a low-cost transition to net zero

To help fulfil the government's Clean Power 2030 commitment and ambitious 2035 and 2050 Net Zero carbon targets, we must act in RIIO-GD3. This involves preparing as much of our network as possible to transport low carbon alternatives like biomethane and hydrogen. Investing in our workforce and attracting new talent to support our transition. Leaving the areas we work in better shape environmentally, by exploring ways to improve biodiversity, natural capital and contribute to overall carbon reduction. By improving our data and digitalisation capabilities to facilitate collaborative working with other industries and our consumers. This is why we are committing to:

3. Expand and improve our low carbon gas connections, including biomethane from organic feedstock that would otherwise go to waste.
4. Lower carbon emissions by replacing up to 20% of the gas we transport with low carbon hydrogen.
5. Evolve the business to support energy decarbonisation; this involves making the network hydrogen-ready by 2035 in key areas and fully ready by 2040.
6. Reduce our business carbon footprint ahead of government targets.
7. Help our business and partners to meet national biodiversity objectives; this could involve offering use of our land to community groups.
8. Support the ecosystem by planting more native trees in their natural habitat.
9. Invest in improving our colleagues' knowledge and skills so we can deliver a Net Zero ready network.
10. Attract diverse and talented people to better reflect the communities we serve and have or are able to develop the skills needed to deliver a Net Zero network.
11. Safeguard our data against cyber threats and only make it accessible, when safe to do so.

The below outputs will contribute to achieving our commitments which we will report on annually to show progress:

Output	Type	RIIO-GD2 Explanation	RIIO-GD2 Performance	RIIO-GD3 Target	Further Information
Annual Environmental Report	LO	An LO requiring GDNs to report their environmental performance through Business Carbon Footprint (BCF) reporting.	Multiple targets	Multiple targets	EAP pages 5-7 and section 2
Environmental Action Plan initiatives	PCD	A PCD to support GDNs to minimise their environmental impact and reduce BCF.	Multiple targets	Multiple targets	EAP pages 5-7 and section 2
Land remediation	PCD	A suite of outputs to continue our programme of managing and maintaining old, contaminated gas works sites.	85 land management /remediation outputs in RIIO-GD2 (70 sites)	Routine monitoring and maintenance outputs = 64 Remediation outputs= 9 (73 Sites)	EAP page 20 and table 2.1 action ref. NC3



High quality of service from regulated firms



We have a track record of providing an excellent experience for our customers, which is important because our stakeholder engagement evidences they value reliability, quality, helpfulness, openness, transparency, and ease of interaction. However, RIIO-GD3 will present challenges as we transition to new low carbon technologies while the cost of living remains high and more households are expected to fall into fuel poverty. Additionally, more extreme weather events, while having limited impact on the gas network, have the potential to leave the most vulnerable customers at risk, through increased electricity outages and flooding. This is why over 90% of the consumers on which we tested the following commitments found them to be acceptable (Sample: 1,401 comprising 84% domestic, 11% business consumers, and 5% future bill payers).

12. Provide an exceptional level of service to our customers, meeting their expectations.
13. Identify consumers who need more help to stay safe and warm and support them.
14. Minimise both the number of and length of time gas goes off for consumers.
15. Support our consumers through the energy transition.

The below outputs will contribute to achieving our commitments which we will report on annually to show progress.

Output (GD2)	Type	RIIO-GD2 Explanation	RIIO-GD2 Target	RIIO-GD3 Proposed Targets
Consumer vulnerability minimum standards	LO	An LO to identify vulnerable consumers and provide support including partnership working.	Meet revised LO	Meet LO
Customer satisfaction survey	ODI F	A financial ODI with penalties and rewards based on customer satisfaction survey scores across the three key work areas.	Reward bands set as: Emergency 9.43-9.58 Planned 8.69-9.13 Connections 8.65-9.33	Reward / penalty mechanism retained WWU Proposal 9/10
Complaints Metric	ODI F	A financial ODI with a penalty only to incentivise the timely and high-quality resolution of complaints. Focused on resolution times, repeat complaints, and Ombudsman complaints.	<5 complaints score	We propose retaining existing score of <5 complaints
Guaranteed Standard of Performance (GSoPs)	LO	A set of legal minimum standards with associated compensation relating to our core services for interruptions, connections and customer service.	Statutory Instrument updated Meet LO	Meet LO
Consumer vulnerability and CO safety 'use it or lose it' allowance	UIOLI	A 'use it or lose it' allowance to focus on initiatives to support vulnerable customers and raise CO risk awareness.	£750k per year fund Licence change in July 2023 increased to £4m per annum	£4m per annum for VCMA plus £0.8m per annum for CO safety and PSR awareness
Average restoration time for total unplanned interruptions	ODI F	The average time taken to get supply back on after an unplanned interruption. Major incidents involving over 250 properties will be exempt and reported separately.	Less than 13 hours (average)	MOBs - 500 hours or >90% restored within 31 hours Non-MOBs less than 10 hours (average)

Further Information: Chapter: 2.3 Protecting our customers and communities



System efficiency and long-term value for money



Ofgem has stated that they expect this category to be met through overall efficiencies rather than specific commitments.

Our Acceptability research showed that 93% of domestic consumers and 96% of business consumers (Sample size: 1,401) found our efficiency commitment to be acceptable. Recognising this, we conducted qualitative research with 200 consumers on our proposed RIIO-GD3 commitments, providing detailed information on our part of the proposed domestic consumer bill. This research demonstrated that 73% of consumers found our proposed RIIO-GD3 bill to be acceptable.

More detail on these engagement activities can be found in our [Stakeholder Engagement and Decision Log](#), along with the commitment we are making under this RIIO-GD3 outcome category.

Reporting and consequences for non-delivery

As a responsible business, and to engender trust among our customers, we will continue to be accountable and transparent in reporting our performance against this Business Plan and will compensate customers should we fall short.

We will continue to measure and report progress against our outputs and incentives through the annual regulatory reporting process; the details of this will be established through the Ofgem working groups prior to the start of RIIO-GD3, building on the comprehensive reporting already undertaken in RIIO-GD2.

The consequences of non-delivery of the common outputs, including those with bespoke targets, will be in line with the Ofgem guidance and instructions.





2.3 Protecting our customers and communities

Protecting our customers and communities

At WWU, our work takes us into around 100,000 homes and businesses a year, giving us the opportunity to speak to a wide range of customers face to face. We encounter the complexity of vulnerability in multiple aspects of our work and we understand how our work impacts businesses and homes, and how we can mitigate those impacts. Our track record of providing high levels of customer service is reflected in our Customer Satisfaction scores of over 9/10. We have a wide range of services tailored to meet the needs of vulnerable consumers and our Guaranteed Standards of Performance (GSoP) payments are automated in cases where we fail. In rare cases of receiving a complaint, we resolve 83% within a day.

Our direct contact with customers provides opportunities for conveying education on the benefits of the PSR; carbon monoxide awareness, and about the UK energy transition. This is delivered by our engineers; our other on the ground team members; our educational outreach projects, and a portfolio of partnership organisations each with their own network of trusted colleagues and agencies.

As a responsible GDN, in our [2023 Sustainability Strategy](#) we committed to:

- Maintain high levels of customer service that evolve with customer needs
- Invest to support our most vulnerable consumers so they can access energy services, with the purpose of helping tackle fuel poverty and protecting customers from carbon monoxide dangers
- Support customers through the UK energy transition ensuring no one is left behind

We have published our own Customer Strategy on our website along with our [Vulnerability Strategy](#) and a [Joint GDN Vulnerability Strategy](#) that should be read in conjunction with this chapter.

Our RIIO-GD3 headlines

Insights gained from our stakeholder feedback evidenced that customers want us to continue delivering a high level of service.

To achieve this, we will:

- ✓ Comply with all licence obligations.
- ✓ Align our services with the Ofgem Consumer Confidence and Consumer Vulnerability Strategy.
- ✓ Tailor services to domestic consumers, priority service register consumers and businesses.
- ✓ Offer choice as to how customers can interact with us, ensuring our services are fully inclusive.
- ✓ Aim for 9/10 as an overall customer satisfaction (CSAT) score in RIIO-GD3.
- ✓ We will report the volume of complaints we get, compared to the number of consumers we serve each year as well as our speed of resolution.
- ✓ Retain our ICS ServiceMark and ISO22458 Inclusive Service Provision accreditations.
- ✓ Meet licence obligations to attend a minimum of 97% of uncontrolled gas escapes within 1 hour, and 97% of controlled gas escapes in 2 hours.
- ✓ Minimise number of planned and unplanned interruptions and when we do interrupt, minimise the time off gas.

- ✓ Establish partnerships to reach customers beyond our capabilities; support customers through a just transition to cleaner energy and identify customers most at risk from being left behind.
- ✓ Continue to engage with stakeholders to test our services – we define who they are in Chapter 2.1. Consumer Voice.

Stakeholder feedback

On an ongoing basis, we gather insight on our customer performance and plans from customer satisfaction surveys, complaints, commendations, GSoP and through stakeholder engagement. In focus groups and Citizens panels we have heard the feedback to improve and evolve our services but to balance this work with impact on consumer bills.

In our stakeholder feedback we heard that customers expect a high level of service from us and to continue with our RIIO-GD2 performance.

To test our services for vulnerable consumers alongside additional services provided via our Vulnerability and Carbon Monoxide Allowance, we engaged with our ISG, Citizens Panel and regional stakeholders. Existing partners and other organisations provided us with feedback at local events and through the annual Vulnerability Showcase event. Stakeholders helped us understand the needs of different groups, encouraging us to maintain existing levels of investment in vulnerable consumers, which is c.£25m during the Price Control Period, including the Fuel Poor Network Extension Scheme Funding (FPNES).



'Willingness to pay' research with 1,405 consumers has evidenced that domestic consumers and small businesses support the continued investment in helping consumers in need, and are willing to accept an associated bill increase.

Our Business Panel also shared their views. The group that consists of micro and small businesses within hospitality, construction and retail industries, said they would like to see improved communication ahead of mains replacement projects, along with WWU engagement to allow them to plan for disruption caused by our works, and to receive regular updates on scheme progress.

Our customer service commitments for RIIO-GD3

1. Continuing to build on our RIIO-GD2 performance levels, we will strive to be an industry leader for customer service in RIIO-GD3.
2. We will continue to benchmark ourselves against other sectors through the ICS ServiceMark accreditation, the most rounded and comprehensive measurement of customer service.
3. Customers will be at the heart of all that we do, and this continues to be one of our main company values. 'We put customers first' is among our core ambitions, while our customer service strategy is also informed by the ICS world class service model.
4. We will continue to assess the impact of our programmes of work and investments on customers, always seeking to lessen the negative outcomes.

Providing excellent customer service is embedded deeply in the approach of our people. This begins with inductions upon joining and continues with ongoing development and annual customer service training. With a diverse customer base that requires different levels of care, we will continue to measure customer satisfaction for all customers and the subset of PSR customers. At WWU, our method of measuring all complaint handling performance, will soon be split to include a detailed look at handling of PSR customer complaints specifically. We welcome the feedback this will bring in RIIO-GD3.

Our research shows the majority of customers expect a high level of service. For customers who want to speak to an advisor, we will continue to have a dedicated customer call centre supported by our emergency despatch team, providing 24/7 customer service. If additional care is required, our customer facing staff are trained to identify this, and we then provide expert support through our Priority Customer team.

We will develop our self-service tools for customers by evolving our connections platform to deal with disconnections plus new services and alterations. Introduction of Artificial Intelligence (AI) to allow customers to self-serve to get the information from us and allow agents to record and capture customer interactions.

We have always performed well and achieved against our licence obligations; however, our ambition is to improve in RIIO-GD3 by minimising consumer failures and compensation by at least 25% compared to the first 3 years of RIIO-GD2.

Continuing to engage with priority customers and businesses in advance of planned works, will be another priority; to update all customers throughout the works until completion for maximum satisfaction among those impacted. During an incident we can deploy colleagues to our call centre and to support operational teams on site.

Where we seek new initiatives, innovations or changes that will impact a customer, we will conduct qualitative research to ensure we test this with real people and have feedback to analyse before implementing into a live environment. At WWU, we have many families who have worked here across generations, and it is important to recognise that many of us live in the communities that we serve. Therefore, our own people are key stakeholders impacted by our works, and we must engage with them and their valuable perspective to improve the services we provide. In RIIO-GD3 we will provide colleagues a platform to share their feedback and ideas.

Attending gas escapes

Annual Consumer Priorities research of our RIIO-GD2 commitments shows that safety remains a high priority for consumers. To uphold their expectations, we will continue to meet licence obligations to attend a minimum of 97% of uncontrolled gas escapes within 1 hour, and 97% of controlled gas escapes in 2 hours. Our RIIO-GD2 performance has exceeded 97% and our ambition is to continue with a similarly high level of performance in RIIO-GD3. Continued investment in our network to replace metallic pipes with PE and other durable materials will continue to reduce gas escapes from our own network.

Minimising interruptions

Our Asset plans deliver a safe and reliable network to our consumers meaning a consumer is likely to experience an interruption just once every 250 years, and therefore unlikely in their lifetime. We already have the lowest planned and unplanned interruption average durations amongst the GDNs and our ambition is to maintain our performance. We propose that the common GDN target for unplanned interruption is set at 10 hours for non Multi Occupancy Buildings (MOB).



For MOBs (Multi-Occupancy Buildings), where there can be significant additional challenges, we have only had 225 interruptions in the first year of RIIO-GD2 with an average of 31 hours. On the rare occasion we have an unplanned interruption to a MOB, we will engage with all stakeholders to minimise the duration of the interruption, however, this may still be a number of weeks so we commit to supporting the impacted households during that period with heating, cooking, hot food/water, and where required – alternative accommodation. Recent experience of listed buildings in Bath and Cheltenham has seen a handful of consumers off gas for up to four months which would push our annual average unplanned interruption time to 500 hours. We propose this is set as our output target. Alternatively, we commit to an average of 31 hours to be achieved for 90% of consumers.

We also commit to keeping planned interruptions below an average of 4.5 hours, which are mainly associated with iron mains and MOB replacement.

Implementing our Vulnerability Strategy

In collaboration with our stakeholders, we have updated our Consumer Vulnerability Strategy to set out how we will support priority customers. This is aligned to Ofgem's Consumer Vulnerability Strategy 2025. Within our strategy, we define what vulnerability means to us and how we identify those most at risk.

Our role in operating the gas network means that we engage face-to-face with customers and communities on a much more regular basis than that of a gas supplier. This results in us seeing and reaching a higher volume of priority customers that require additional care and support, whether to help with broken gas appliances, or to provide energy efficiency advice to help keep their home warm at an affordable rate.

We have referred over 140,000 customers to the PSR so far in RIIO-GD2 and will continue to promote and refer priority customers in RIIO-GD3. Data sharing agreements allow us to pass this data to the relevant electricity Distribution Network Operator (DNO) who is permitted to share it with water companies and energy suppliers. This is a significant step towards a common utilities PSR, which we support. The DNOs and Water Companies have stretching targets in their current price controls relating to their PSR, and we have signed up significant numbers in the years to date, which means we are likely to see a reduced number of households remaining to be identified and referred. Approximately 27% of our consumers are on the gas suppliers PSR, each with their own needs code. Having quality, current data in the PSR allows us to best serve those consumers. In the event of any unplanned incident, we can use the data to prioritise those most in need of additional care.

All teams including engineers and First Call Operatives (FCOs) are trained to identify and support customers that require additional care from us, and to refer vulnerable customers to the dedicated customer care team, who then contact the customer and provide or signpost to relevant support making full use of our portfolio of VCMA partnerships. More detail can be found in our [Vulnerability Strategy](#).

We are proud to be among the first nine companies in the world to attain the ISO22458 Inclusive Service Provision Kitemark and will continue to seek reaccreditation to provide assurance outside of the company that we are treating all customers fairly, while also identifying best practice to continually evolve.

Carbon monoxide (CO) safety

We have agreed with Ofgem that CO safety activities will be funded through base allowances. Our carbon monoxide safety activities will be similar to RIIO-GD2 and include:

- Annual GDN carbon monoxide awareness campaigns
- Provision of free CO monitors to eligible homes including monitors for consumers with hearing loss. Homes will be primarily privately owned, as landlords have obligations to install and maintain for rentals
- Education in schools on CO with different content for primary schools, secondary schools, older students and adults with learning difficulties.
- Continued support to All Party Parliamentary Carbon Monoxide Group and partnerships with stakeholders including Gas Safe Register

In addition, we will embed CO check with Carbon Monoxide/Dioxide Atmosphere and Appliance Testing (CMDDA1) into our core processes ready for RIIO-GD3. With 20 engineers trained and equipped to carry out additional checks for the presence of CO following a CO alarm or suspected CO poisoning.

Activity	RIIO-GD3 Investment (total 2.54m)	Reach
CO awareness campaigns	£0.63m	310,000 people
CO alarms	£0.62m	38,000 alarms
CO education	£0.29m	60,000 people
CO checks (CMDMA1)	£1.0m	2,500 homes



Vulnerability and Carbon Monoxide Allowance (VCMA)

Supported by guidance from stakeholders, our VCMA funded work in RIIO-GD3 will be shaped by the following insights:

- There are increasing numbers of people with a disability or health condition and 24% of the UK have some form of disability
- Fuel poverty levels are typically 12-15% in England and much higher in Wales
- 25% of customers have some form of disability
- Fluctuating energy prices, government policies, energy debt problem.

RIIO-GD3 VCMA proposal

Our engineers have a key role in identifying vulnerability in the 100,000 homes we visit, as such they are trained in being able to offer support through our business as usual or VCMA services. We can deliver some services direct such as PSR sign ups and CO alarms, but third parties are usually better placed to fund and deliver other services. These include benefits checks; dealing with debt and energy tariffs; and funding for energy efficiency measures – which all need funding and support.

Stakeholders and Willingness to Pay research supports us to continue to fund the VCMA at RIIO-GD2 levels (less those activities moved into base allowances which include CO safety and PSR awareness).



Secure and resilient supplies



High quality of service from regulated firms

Expected customer outcomes from our RIIO-GD3 £20m investment:

- Crisis support through Fuel bank Foundation vouchers.
- Ensure customers can access support services which understand their specific needs and can provide direct services and signposting.
- Support customers to achieve warm, well insulated homes by using partnerships such as Warm Wales and Care & Repair Cymru to help them access Energy Company Obligations (ECO), Wales Warm Homes Programme and other national and local scheme funding.
- Tackling fuel poverty through maximising household income and ensuring each home is on the best tariffs, direct debit payments and debt plans.
- Supporting customers to understand how to use their heating system controls and how to minimise their use of energy and water, in turn reducing their annual utility bills.
- Services beyond the meter and gas appliance repairs/servicing.

UK Energy Transition – a just transition for our customers

We see ourselves along with other stakeholders having a key role to play in the UK energy transition to achieve net zero by 2050. We recognise this is an evolving subject, with our customer messaging to all domestic and business consumers being reviewed continually throughout RIIO-GD3.

Our customers have said that GDNs are seen as trusted organisations, however, government, local authorities and gas suppliers are perceived as best placed to share energy transition information. Customers have said they want visibility of potential installation and ongoing costs for heating homes to compare options.

In our [Vulnerability Strategy](#) we detail the service we can offer as a GDN to support customers in a just UK energy transition and also define those most likely to be left behind.

Table to show VCMA investment and reach in RIIO-GD3

Social Return on Investment (SROI) will be measured for each individual project as required by Ofgem guidance and expanded on in our [Vulnerability Strategy](#). Administration costs of running the projects are included in the table below.

Priority	Investment	Reach
Fuel poverty	£12m	200,000 homes
Vulnerable consumers	£6m	205,000 homes
Services beyond the meter	£1m	11,000 homes
Support through UK energy transition	£0.5m	200,000 homes
CO support via partnerships	£0.5m	100,000 homes
Total	£20m	716,000 homes



2.4 Connecting homes and businesses

Significant changes to connections and disconnections across the industry

We are obliged by the Gas Act 1986 and our operating licence to provide quotations for gas connections and to carry out connections of homes and businesses to our gas network. RIIO-GD3 will see significant changes to the connections carried out across the industry, with a notable rise in fees for domestic gas connections, a stop on gas connections to new-build homes for heating, and more customer choice for non-gas, low carbon heating options.

Removal of the Domestic Load Connection Allowance (DLCA) and Fuel Poor Network Extension Scheme (FPNES) will impact consumers and GDNs in RIIO-GD3. The DLCA provides up to the first 10 metres of a gas connection in the public highway free of charge to customers, and alongside this mandate, GDNs were given funding to cover the cost. The uncertainty on future volumes of connections and disconnections can be managed using volume drivers which is a mechanism that adjusts funding for the volumes completed. However, GDNs need to be funded to be able to continue to deliver their statutory obligations and provide quotes to customers. This is detailed further in [Chapter 5.2: Managing Uncertainty](#).

As consumers navigate the options for heating their homes and the changes that lay ahead, we are committed to continuing our high-level of service and upholding our position as a trusted GDN they can rely on amid the changes.

RIIO-GD3 headlines

Expected connections and disconnections work during RIIO-GD3



- Continue to provide quotations for services
- Connect 7,000 homes and businesses to the gas network / Disconnect 20,000 properties
- Lay 30km reinforcement gas mains to ensure network is maintained
- Divert 40km gas mains for customers
- Provide proactive plant protection services to minimise risk of damage to our assets and customers building over or near our assets
- Investigate gas theft occurrences and recover money where efficient to do so.

Stakeholder feedback

To inform our forecast we have looked at local development plans, housebuilding rates, major infrastructure projects and we will consider outcomes of Local Area Energy Plans. We also keep ourselves informed about legislation changes such as the Future Homes Standard and schemes such as Energy Company Obligation (ECO), Boiler Upgrade Scheme, and Warm Homes Programme in Wales to help accurately forecast our workload.

Engagement with customers evidenced they want a high level of service from us, with the ability to self-serve, speak to advisors and have face-to-face communication with engineers. We have undertaken a customer journey mapping review to ensure we have a smooth and efficient process for domestic and priority consumers in addition to businesses.

RIIO-GD3 improvements and commitments

We pride ourselves on providing the best connections experience for all our new customers and plan to build on achievements gained in RIIO-GD2. To realise this, we will:

- Invest in a new online customer portal to provide an enhanced user-friendly experience for our customers who want to self-serve.
- Aim to complete works within twenty days of receiving payments from customers.
- Continue to give customers the ability to track engineers using an app for anticipated arrival times on the day of their works. Positively scored in RIIO-GD2, we will expand this to include disconnections.
- Provide tailored communications for customers based on their preferred method of choice.
- Meet GSoP requirements – see 2.4 Connections – and compensate customers where we fail them.



Workload forecasts

New services

We will continue to connect homes and businesses to our network in RIIO-GD3 under our statutory obligations. However, we expect a declining connections workload from RIIO-GD2 levels due to the transition to net zero.

Providing quotations to customers is one of our statutory obligations, and we anticipate the acceptance rates will drop as consumers are incentivised to move to other technologies. The removal of the DLCA will significantly increase charges to customers as they will pay the full cost of the new connection. We anticipate continued funding will be available to homes during RIIO-GD3 to subsidise the installation of low carbon heating solutions. This – like the DLCA removal – will result in a similar cost of gas to a low carbon heating solution. What's more, costs of a new gas central heating system will likely increase due to the UK government proposal to introduce 'boiler tax' also known as the Clean Heat Market Mechanism (CHMM) to take effect from 1st April 2025. The CHMM will add costs to the manufacturer price for gas boilers, which will be passed on to customers.

The Future Homes Standard consultation confirms there will be a stop on new gas supplies being installed into new homes from 2025 to serve first time gas heating. There will be a transition period allowing gas connections to continue into late 2026 and beyond if the foundations of the building have been constructed prior to the end of the transition period. This means new housing work will continue in RIIO-GD3, but on a smaller scale than RIIO-GD2 and with a likely decline each year. The changes will also impact Independent Gas Transporters (IGT) and Utility Infrastructure Providers (UIP), who may decide to focus more on non-domestic connections in our area.

There are currently fewer incentives and options for low carbon heating in non-domestic settings. We therefore expect to continue connecting non-domestic properties to the gas network in RIIO-GD3 and expect workloads to be in line with RIIO-GD2 levels. It is important to recognise that non-domestic workload is uncertain, and location of the work is difficult to anticipate, but we continue to receive customer enquiries and requests, especially for large gas demands. The Department for Energy Security and Net Zero (DESNZ) has recognised there will be an increased demand for gas fire power stations across the UK, an expectation we share. These are large loads that often drive reinforcement to our network, therefore it is important that the large load re-opener remains in RIIO-GD3.

A risk in this scenario is that customers still request quotations from us, but the acceptance level drops significantly. To date, under all price controls, the costs of unaccepted quotations are paid for by those who accept a quotation and go ahead with work.

We propose that customers who go ahead with work should only pay their reasonable cost for their connection with unaccepted quotation costs being funded through base allowances. Otherwise, there is a significant risk that with the removal of the DLCA and an increased percentage of quotes not being accepted, the cost to those who do accept a quote increases significantly - to the point that realistic options for consumers are reduced.

Specific reinforcement

Specific reinforcement is driven by a new load connecting to our network. Where we need to up-size pipes and pressure control equipment to facilitate the new load, we would use the Economic Test as described in our [4B Connections Charging methodology](#) to determine our costs and those charged to the customer. A high proportion of schemes are driven by new housing developments and while direct connections to homes will reduce / stop, we may still need to reinforce if, for example, gas is providing a backup to a district heat scheme.

We expect larger commercial loads to continue to connect to our network including gas fired power generation which can drive significant reinforcement. We will use the large connections re-opener to deal with this uncertainty.

Alterations

Historic workloads show that we undertake around 3,000 alterations per year, and we forecast this work will continue at a similar level through RIIO-GD3. Under our licence we typically fund 150 free alterations each year due to a physical inability to access the ECV (Emergency Control Valve). This is likely to increase due to an ageing population in RIIO-GD3.





Disconnections

Key facts



The Boiler Upgrade Scheme and ECO4 have funded around 7,000 low carbon installs in our area. 50% of those were a move away from gas.



In 2024, we undertook approx. 1,000 annual disconnections.

By 2031, we expect to have completed over 4,000 disconnections per year.



The UK government has set a target to install 600,000 heat pumps each year by 2030.

Domestic and business customers who are disconnecting will either pay for the gas supply to be disconnected or remove their meter via the gas supplier and go through the Gas Safety (Installation and Use) Regulation process. Despite funding through schemes such as the Boiler Upgrade Scheme, ECO and Warm Homes Programme on offer, projections show heat pump installations to be below projected targets. Research, aimed at understanding perceptions of low-carbon technologies, with over 1,000 UK citizens has shown that the majority continue to see gas boilers as the best form of heating their homes and are unsure whether heat pumps are a good option. The research found participants are put off by the upfront cost of the installation, and along with this only 36% were aware of funding schemes available.

We have therefore projected disconnections work using our own assumptions rather than the Future of Energy (FES) Scenarios 2024. We propose a volume driver in RIIO-GD3 to protect both consumers and companies from the uncertainty of disconnection workload.

Diversions

We will continue to receive requests and enquiries to carry out diversions of our assets, such as moving gas pipes, and we project a workload similar to RIIO-GD1 and RIIO-GD2 of 8km each year. This workload is customer driven and it is difficult to predict where the projects will be across our network. Water companies investing in their infrastructure, highway modifications, and building developments will all need to divert any of our assets that affect their planned works.

Gas theft

Across the UK, a cost of up to £125m per annum for theft of gas adds around £5 to every single bill. In addition, theft can create a safety issue if it is caused by tampering with the gas pipe or metering equipment. We will continue to investigate alleged theft of gas in RIIO-GD3 through Crimestoppers, via Revenue Protection Officers, and also using continued proactive action through analysis of xoserve Shipperless site reports.

Research has told us that stakeholders understand that all customers are accountable for legitimate cases of gas theft and stated that we should carry out an investigation to recover the money. We will therefore aim to recover all efficient costs while stopping the theft by helping the customer to register with a gas supplier of their choice or failing that, by disconnecting the service. Through data analysis and work with other stakeholders, we will monitor for patterns of theft and take action to address issues arising within our communities or through organised crime.

Plant protection services

We currently provide asset information and advice to over 500,000 annual searches via Linesearch (LSBUD – Linesearch Before U Dig) to third parties. This combined with our route walking, aerial surveys and site visits with developers allows us to identify and mitigate the risk of third-party damage to our network.

We are also supporting the development of the National Underground Asset Register (NUAR) and DataMapWales, ensuring there is no excuse for third parties to dig holes without knowing about the location of our assets. It is unclear how NUAR will operate, but we have been advised that asset owners will pay an annual fee to the system operator. We expect this to be allowed as a passthrough cost in RIIO-GD3. Increased proactive engagement with stakeholders is also part of our plan. We are already seeing increased engagement with developers of housing, solar farms, wind energy and DNOs extending and reinforcing their networks for the UK energy transition.

Green gas connections

We provide information on our website about processes to connect biomethane to our network. For information on the steps we are taking to improve biomethane capacity, connections, processes, and to develop similar processes for hydrogen blending, please see [Chapter 3.1 Net Zero](#) and our [Innovation Strategy](#).



3. Delivering a sustainable network

Doing all we can to provide sustainable energy and achieve Net Zero targets, is one of our core priorities at WWU.

This section of our Business Plan examines how in RIIO-GD3 our pipelines and infrastructure must continue to provide the safe, consistent energy supply that our consumers expect today – while we prepare for and respond to decisions about our role through the transition and into the future.

Our chapters step through the actions we have committed to, including how we aim to tackle our emission reducing targets and support our partners to achieve national goals to enhance nature.

We explore measures we're taking to further the resilience of our workforce to ensure we have the skills we need for a changing energy system. To maintain resilience in our supply chain, we will continue to gain maximum value for money from everything we buy. Innovation and digitalisation feature strongly, showcasing how we're using technology, new approaches and analytics to help deliver a Net Zero energy system and support vulnerable customers through changing times.

What's in this section:

3.1 Supporting Net Zero

3.2 Environmental Strategy

3.3 Digitalisation Strategy and Action Plan

3.4 Workforce and Supply Chain Strategy

3.5 Innovation Strategy

Mapping to the UN Sustainable Development Goals

In Chapter 1.3, we introduce how we align with the SDGs and are committed to sustainable practices. Across this business area in RIIO-GD3, we will contribute to the following goals:





3.1 Supporting Net Zero

Preparing for our role in the transition and beyond

Our gas network has a long-term role in the move to a decarbonised energy system, as is widely recognised by our stakeholders. In RIIO-GD3 our pipelines and infrastructure must continue to provide the safe, secure energy supply that our consumers expect in the present day – while we prepare for and react to decisions about the role we will play through the transition and beyond.

We recognise the uncertainties in policy direction and consumer choice which will impact our network in future and influence our activity in RIIO-GD3. As detailed in [Chapter 1.2](#) Why we need to act, our strategy to support net zero during RIIO-GD3 includes investing to reduce emissions in the short term and supporting interim targets such as carbon budgets and the 2030 Clean Power target.

This means that we will efficiently prepare for a range of long-term scenarios so that we're contributing to the UK's – and the world's – 2050 Net Zero targets before it's too late. Uncertainty cannot be a reason for inaction. By facilitating greener gasses, reducing our own emissions, delivering innovation and supporting whole energy system benefits such as flexible power generation we can contribute to reducing carbon now while keeping options open for the future.

Our Vision for RIIO-GD3 and beyond

In our [Sustainability Strategy](#), published in 2023 and supported by engagement with our stakeholders, we set out our vision for a Net Zero energy system. We describe that for the UK to reach Net Zero carbon emissions, society needs to make considerable changes to the way energy is generated and used. Today, that originates mostly from fossil sources – and our network infrastructure can play a critical role in enabling this transition. The European Environment Agency also states that, 'Reducing and avoiding our emissions requires us to reshape everything we do – from how we power our economy and grow our food, to how we travel and live, and the products we consume. It is a problem felt locally and globally.'

There are three broad actions which can be taken across the wider energy system, and the transition will likely involve all three of these elements:

Use cleaner energy sources – Energy will need to come from alternative cleaner sources such as wind, solar, biomethane and low-carbon hydrogen.

Mitigate remaining emissions – Where greenhouse gas emissions cannot be completely removed, at least using current technologies and infrastructure, their impact can be reduced by capturing emissions at source or elsewhere.

Adopt new technologies – Energy users of all types will adopt new technologies which can reduce demand and reduce or eliminate emissions.

Within RIIO-GD3 as custodians of a critical GDN we will support this transition by investing carefully to maintain secure and reliable supplies and prepare for the transition of our assets; developing understanding of a range of future energy sources and technologies; and supporting customers for a transition in which no one is left behind.

Our role as a responsible GDN

Assist in the adoption of lower carbon gasses and emission mitigation measures

Support the development and adoption of new technologies

Prepare our network and customers for a range of future outcomes

Maintain secure, reliable and cost-effective services to consumers.

Our extensive network spanning Wales and the South West of England is a vital asset for our 2.5m consumers and will be needed to support energy system supply for decades to come. We can accelerate the transition by maintaining a reliable and efficient network for the communities we serve; continuing to invest in emission-reducing technologies and activities; and connecting low carbon biomethane while taking appropriate action to prepare our assets for low-carbon gases such as hydrogen.

In RIIO-GD3 and beyond, gas system assets including the GDNs will continue to be vital to meet seasonal demands and to minimise disruption and cost. High energy demands for heating in the winter, the increasingly intermittent generation mix on the power system, and limited alternative options for long term energy storage all contribute to the requirement for our system.

As an example, we now have 57 power stations using gas from our network, predominantly as 'flexible' generators. This role is recognised in National Energy System Operator's (NESO) 'Clean Power 2030' advice, which suggests that the clean power target will need capacity for unabated gas generation, 'broadly consistent with the size of the existing fleet,' even as the volume of gas used annually reduces to respond in periods of high demand and/or low wind and solar generation. Beyond 2030, 'low carbon dispatchable power could be built up,' to fulfil this role through gas with carbon capture and storage (CCS) and hydrogen, which could require ongoing or repurposed gas network infrastructure.



Within our **Sustainability Strategy**, we set specific targets subject to policy and regulatory support. Our priorities and targets within the Strategy are mapped to the UN Sustainable Development Goals and the Wellbeing of Future Generations (Wales) Act. Of those related to our priority around, 'Doing everything we can to support sustainable energy,' the key targets which relate to our RIIO-GD3 Plan are:

Sustainability Strategy Target	RIIO-GD3 Ambition, subject to funding
Making the network hydrogen-ready by 2035 in key areas and fully ready by 2040	Ongoing investment in the Iron Mains Risk Reduction Programme (IMRRP) programme, driven by safety and reliability, as discussed in our Asset Strategy, will support emissions reduction and preparation for the future. Identify key areas through Local Area Energy Planning and industrial cluster partnerships and contribute to activity using innovation and Net Zero development funding where appropriate.
Choose low and ultra-low emission options for our fleet	Deliver Environmental Action Plan commitments on fleet emissions reduction and investigate future options.
Invest in innovation and early stage decarbonisation projects	Use innovation mechanisms (NIA, SIF and non-regulatory sources) and Net Zero development funding as set out in this section and our Innovation Strategy. Continue to connect biomethane entry in response to entry customer demand and investigate investments to support capacity for new and existing customers.
Reduce operational and supply chain emissions	Deliver our Environmental Action Plan commitments and shrinkage reduction plans.
Prepare to receive 20% blended hydrogen	Deliver our Environmental Action Plan; respond to policy and regulatory developments.
Invest in at least three industrial clusters	Continue to support industrial clusters and actively seek new opportunities to support industrial decarbonisation, using innovation and Net Zero development funding where appropriate.
Proactively support local area energy planning	Increase resources on Local Area Energy Planning in RIIO-GD3 to meet devolved, regional and local stakeholder expectations, and support NESO.

Our Net Zero Strategy for RIIO-GD3

We recognise that policy, consumer preferences and technology will continue to evolve between now, the end of RIIO-GD3, and beyond – but that we must deliver now while preparing for a range of future outcomes. Our strategy for supporting net zero is to take the action we can now, while considering how a range of different scenarios will impact the business and our customers in the future, including preparation for full hydrogen conversion and decommissioning.

In RIIO-GD2 we set up an internal 'Business Evolution' workstream to plan our response to future decisions and drivers, whatever they are. This programme has considered how we can prepare our business processes, systems, data and skilled workforces to manage the transition safely and efficiently. It identifies trigger points for investments or changes which means we spend money only where there is sufficient certainty, managing the responsibility of using consumer money wisely and offering value for money. Through this process it has identified priorities for RIIO-GD3 which are reflected in this section of our plan.

Our Net Zero strategy considers our long-term vision, the expectations of our stakeholders, and the priorities we have identified through RIIO-GD2. For RIIO-GD3 we have built this strategy on five core priorities set out on the following two pages.

Our plans are intentionally flexible to reflect changing policies and stakeholder priorities, and to be able to respond to new opportunities to support decarbonisation as they emerge. We have set out more detail on our planned activity, and the basis for it, in our RIIO-GD3 Delivery Plan later in this section.



RIIO-GD3 Priority

1 Innovate for the Energy System Transition

Investing £37.9m in energy system innovation to support the upcoming changes, as set out in the Delivery Plan and in more detail in [Chapter 3.5 Innovation](#), by working with a wide range of partners.

We expect this to include collaboration and support for industry wide evidence development.

We have identified three challenges that we are seeking to address through this funding:

1. Planning and Delivering Net Zero Operations
2. Facilitating Green Gasses
3. Supporting Vulnerable Customers

Desired Outcomes by end of RIIO-GD3

- To have significantly advanced understanding of future options for our network. Innovation continuing and progressing to solve the challenges of supporting net zero with our network assets, and to reduce emissions from our system and activities.
- To have improved understanding of new technologies and approaches which can support the energy system transition beyond RIIO-GD3, for us, our customers and the wider industry.
- To have provided innovators, clusters and other third parties support to develop technologies and techniques which can support the transition – in line with our innovation strategy.

RIIO-GD3 Priority

2 Deliver Net Zero Development Projects

Investing £37.89m in small Net Zero facilitation projects and development projects which could develop into larger re-opener funded activity. See Delivery Plan below for further details.

Desired Outcomes by end of RIIO-GD3

- To have delivered projects which facilitate decarbonisation, including:
 - Facilitating increased volumes of green gasses (biomethane and blended hydrogen).
 - Deploying previously proven innovation (e.g. Smart Pressure Control as outlined in the Innovation Strategy annex).
 - Reduction of shrinkage and operational emissions through ongoing investment and new initiatives (e.g. Digital Plan for Leakage Analytics (DPLA).)
- To have delivered projects which prepare for significant changes to come, including:
 - Supporting clusters and collaborating with other regional and local partners on Net Zero and energy system planning activity.
 - Preparatory work for projects which could be deployed in future (e.g. facilitating Front End Engineering Design (FEED), Pre-FEED / feasibility, detailed technical design and engineering development, securing planning consent or associated customer and stakeholder engagement) which may lead to applications for re-opener or non-regulatory funding.

RIIO-GD3 Priority

3 Reduce today's carbon emissions

Continuing to reduce the emissions associated with our activity and improve our environmental impact, as set out in our [Environmental Action Plan](#) (EAP). Connecting low carbon gas producers of biomethane and hydrogen (for blending with natural gas/biomethane, depending on further policy decisions).

Desired Outcomes by end of RIIO-GD3

- To have prepared our business and teams for further changes to come in a range of scenarios beyond RIIO-GD3.
- To have improved the environmental impact of our own activity, by reducing emissions (see EAP), which will also reduce the environmental impact of future activity to deliver the transition.



Infrastructure fit for a low-cost transition to net zero

RIIO-GD3 Priority

4 Prepare the business and our customers

Undertaking high level work to prepare for a range of future of energy scenarios and to understand their impact on our business. We intend to build on our RIIO-GD2 activity by playing a more active role helping customers to understand how the gas network may change in the future. We will gain their views and insights and deliver our [Vulnerability Strategy](#) (discussed in [Chapter 2.3](#)) to help support customers in the transition to net zero. Internally, our Business Evolution workstream captures and prioritises activity to ensure that we are preparing for a range of future scenarios, including repurposing parts of the network for hydrogen. See 'Preparing our business' below for further details.

Desired Outcomes by end of RIIO-GD3

- To have delivered activity identified by our 'Business Evolution' work to prepare the network for future scenarios and decisions, and continue to develop understanding of changes which may be required.
- To have increased gas network customer understanding of the implications of the transition, and the options that may be available for them.
- To have met the needs of our stakeholders by digitising our products and services and making them accessible to those who need them, supporting decisions and innovations for a just transition to a carbon neutral energy system, in line with our Digitalisation Strategy.

RIIO-GD3 Priority

5 Collaborate with key partners

Supporting Local Authorities with their Local Area Energy Planning, and the new National Energy System Operator with delivery of its remit, including the regional energy system planning function. Alongside this we will continue to expand strategic regional partnerships, such as with industrial clusters (see 'Collaboration for delivery' below), as the 'hubs' which are most likely to lead developments in their wider regions. See the 'Collaboration' section below for further details.

Desired Outcomes by end of RIIO-GD3

- To have played a positive and proactive role in supporting NESO, devolved government, regional bodies and local authorities in energy system planning activity.
- To have supported developments in regional clusters and understand where we need to prepare the network for repurposing for hydrogen.



System efficiency and long-term value for money

A Strategy built on collaboration

Collaboration for delivery

The coordination required to deliver the transition to net zero, and common challenges across different geographies, mean that collaboration will be critical. In RIIO-GD3 we will build on our strong RIIO-GD2 record and prior by continuing to develop partnerships with national and regional developers, innovators and other networks. This will support the delivery of our [Innovation Strategy](#) and [Vulnerability Strategy](#), as set out in the relevant parts of this plan.

We will continue to develop partnerships with industrial clusters in the areas we serve, to understand how demands may change in the future and develop suitable plans. Recognising our role in the energy system for Wales and the South West of England, we intend to expand our support for Regional and Local Area Energy Planning activity, meeting the expectations of devolved government, regional bodies, local authorities and the National Energy System Operator.

Collaboration for Industrial Decarbonisation

Preparing our network assets for the Net Zero transition means understanding how the generation, distribution, storage and use of energy will change in the regions we serve. We are ongoing active partners in regional groups including:

- South Wales Industrial Cluster
- North East Wales Industrial Decarbonisation Plan

We are also engaging with a range of related projects and programmes in the South West of England, including the West of England Industrial Cluster, and through groups such Hydrogen South West. All of these groups help us understand and prepare for future changes to our network.



In RIIO-GD2 we used funding from innovation and uncertainty mechanisms, alongside funding from outside sources, to support the development of plans and explore the use and potential repurposing of gas network infrastructure to support industrial decarbonisation. There are examples of this in our [Innovation Strategy](#), and we expect ongoing requirements to build on this activity and develop new partnerships in RIIO-GD3, which are reflected in our Innovation and Delivery Plan.

Collaboration for Local Area Energy Planning

We are heavily involved in Local Area Energy Planning, to meet the expectations of devolved government, local authorities and other stakeholders. Just in the past two years this has included working directly on Local Area Energy Plans (LAEPs) in over half of our 39 local authorities, supported by over seventy runs of our Pathfinder model to test different scenarios – which is described in more detail below. We expect this activity to continue to increase in RIIO-GD3 as most stakeholders in our dedicated local authority workshop reported that they are at ‘early planning’ stages of their LAEPS, and local authorities have told us they are in favour of an enhanced and expanded role for us at WWU in energy planning processes, alongside efforts to ensure consistent data and approaches between network¹¹. We therefore expect additional workload in this space as local authorities engage with us to seek data and other information and to support implementation of their plans. and National Energy System Operator (NESO) seek similar engagement.

Pathfinder: analysing energy supply and demand

Our bespoke whole energy system model, Pathfinder, analyses energy supply and demand. It can analyse areas that are defined by the user and has been designed to consider whole energy system impacts. To date we have used it in a total of 33 different projects including the LAEPs mentioned above, other planning projects and in response to requests for information. We have run the model a total of over two hundred times. It has been offered to or shared with over 60 different organisations and local authorities. We intend to continue to develop and deploy the tool through RIIO-GD3 to support our stakeholders' plans and assist in understanding the impacts on our network and the wider energy system.

RIIO-GD3 Net Zero Innovation and Delivery Plan

The priorities of our Net Zero strategy set out previously summarise the basis for our plans and the outcomes we intend to achieve. While we need to retain flexibility to adapt to changes during the RIIO-GD3 period, our Net Zero Innovation and Delivery Plan sets out the key areas of activity we intend to deliver, and anticipated resources and funding routes required.

Further detail to support the activity areas we have identified, and the basis for estimates of costs are provided under ‘Evidence for our Role’. In summary, this has been built from the bottom up with key inputs including our experience in innovation projects, Net Zero delivery projects and Local Area Energy Planning in RIIO-GD2; our Business Evolution activity; and our national and regional engagement. Further detail on the basis for Network Innovation Allowance (NIA) funded activity and the links between funding sources is provided in our [Innovation Strategy](#); as set out there we will also seek to use the Strategic Innovation Fund and non-regulatory innovation funding.

Funding request summary

Funding Allowance	Total Cost (£m)
Network Innovation Allowance (NIA)	37.90
Net Zero Re-opener Development UIOLI Allowance (NZARD UIOLI)	37.89

Where appropriate this funding will be supported by activity funded through our wider Business Plan, the Strategic Innovation Fund, re-openers, Hydrogen Transport and Storage Business Model (HTSBM), alternative non-regulatory mechanisms, and other funding routes.

Funding breakdown table – RIIO GD3 Net Zero and Innovation Mechanisms

Challenges to be addressed	Funding Route	Total Cost (£m)
Planning and Delivering Net Zero Operations	NIA	22.75
	NZARD UIOLI	23.39
Facilitating Green Gasses	NIA	13.70
	NZARD UIOLI	14.50
Supporting Vulnerable Customers	NIA	1.45
	Implementation Funding	1.03



Challenge 1: Planning and delivering Net Zero Operations

We intend to:	This will be achieved by:	Funding	Cost (£m)
Improve energy system planning By playing our role in developing the data and tools which will help deliver effective national, regional and local area energy planning. Continuing to innovate and add new capabilities to the Pathfinder tool we developed in RIIO-GD1 and used and refined in RIIO-GD2 will aim to offer new analysis and insights. As this develops in RIIO-GD3 we aim to provide further evidence and understanding on consumer and local choices and new technologies in relation to energy planning, network demand and the role of retrofit in future demand reduction.	Whole energy system modelling and decision support tools for different technology choices that will align with Future Energy Scenario (FES) modelling, the National Energy System Operator (NESO) Strategic plans, and the Regional Energy System Plan (RESP) development and ambitions. Meeting expectations from Local Authority engagement which has highlighted a role for networks in exploring future options and supporting change. Using NIA funding to develop new and innovative approaches, with further detail provided in our Innovation Strategy annex. Using NZARD UIOLI funding to support energy system planning activity, including resources for planning and data analysis to support NESO and Local Authority activity, engagement with external stakeholders, and where appropriate the delivery of projects identified as priorities in regional or local area energy plans.	NIA NZARD UIOLI	5.35 8.50
Prepare the business for a Net Zero future By evolving the business, processes and systems for a Net Zero future, while reducing emissions and associated environmental impacts.	Future tools and systems for network readiness to transition, preparing for repurposing or effective decommissioning in areas that do not transition. Reducing emissions from the network and developing technologies and techniques for future scenarios. Using NIA funding to develop new and innovative approaches, with further detail provided in our Innovation Strategy annex. Using NZARD UIOLI funding to further develop and deliver actions for example those identified under our Business Evolution as low regrets actions which could facilitate future scenarios.	NIA NZARD UIOLI	5.55 8.09
Improve use of data and digitisation By supporting the central Ofgem and industrial innovation strategy themes, this area is under increasing stakeholder and regulatory scrutiny to provide opportunities to increase efficiency over the long-term energy transition; this supports the Data and Digitisation Strategy.	Pressure management, digital twins of gas assets and protection of our assets which includes delivery of zero emission stations and data, implementing tools that can be productionised and reduce costs, and improved quality of analytics and data to support optimal future investment decisions, asset safety and the environment. Using NIA funding to develop new and innovative approaches, with further detail provided in our Innovation Strategy annex.	NIA	4.50
Move towards a ultra-low emission fleet By supporting the Environmental Action Plan by plugging gaps in existing technology, particularly around rurality and range, on-board power requirements pay load, and tow weight to outline viable routes to meet Net Zero targets and the Net Zero emission vehicle mandate set by the government.	Using NIA funding to develop new and innovative approaches, with further detail provided in our Innovation Strategy annex. Using NZARD UIOLI funding to implement successful innovation, and continue to progress projects such as our successful trial of hydrogen fuel cell vans, and our participation in projects such as the Department for Transport's HyHaul which is seeking to find decarbonised solutions for heavy goods vehicles.	NIA NZARD UIOLI	3.90 6.80
Reduce environmental impacts To respond to health, safety and environment challenges with greater efficiency.	Developing new technologies and techniques to improve operational transition, reduce venting, emissions, and embedded carbon. Further detail in our Innovation Strategy annex.	NIA	3.45



Challenge 2: Facilitating green gasses

We intend to:	This will be achieved by:	Funding	Cost (£m)
Facilitate green gasses To enable us to reduce environmental impacts to support our Environmental Action Plan and improve the processes and systems which will allow us to connect increasing volumes of biomethane and hydrogen into our network and respond to policy and technology developments. Assessing repurposing of our network for a range of scenarios including hydrogen at 100% and addressing requirements to implement blended hydrogen.	Supporting the development and connection of projects which can reduce emissions from the overall gas system while preparing hard to decarbonise areas such as industrial and commercial decarbonisation, developing options for long-term, low carbon storage, and green hydrogen production supporting government ambitions such as Clean Power 2030 and industrial decarbonisation. Creating a range of decarbonisation scenarios, and supporting research on the integration of low carbon energy generation and changing demands to the energy system as new technologies emerge and new policy decisions are made to better understand and facilitate the development of green gasses Using NIA funding to develop new and innovative approaches, with further detail provided in the innovation section of our plan, and in our Innovation Strategy annex. Using NZARD UIOLI funding we will progress activity such as actions required under the ongoing Hydrogen Blending Implementation Plan project, developments to support capacity for green gas entry building on our Smart Pressure Control and Reverse Compression projects in RIIO-GD2, allowing us to respond quickly to delivery challenges and market changes. This excludes more significant investment in asset mitigation measures should these be required for hydrogen blending or preparation for repurposing, as explained under Business Evolution below.	NIA NZARD UIOLI	13.70 14.50

Challenge 3: Supporting vulnerable customers

We intend to:	This will be achieved by:	Funding	Cost (£m)
Support consumers through the transition By supporting the Consumer Vulnerability Strategy using information from sources such as regional and local area energy planning and stakeholder feedback, to ensure those considered vulnerable are not left behind in any future energy system scenario, while also continuing to support their day-to-day safety and concerns.	Create non-digital means to communicate with consumers with barriers to technological fluency. Understand impact of consumers living in multiple occupancy buildings and other housing options for heating and transition. Options for keeping consumers warm during gas supply interruptions, advice and digital tools for consumers and the third sector, improved registration of Priority Services Registration.	NIA	1.45
Increase safety at street works, provide vulnerability support, improve gas safety and support vulnerable customers through the UK energy transition	Implementing a range of innovation projects that will support vulnerable consumers to deploy better ramps, lighting and signage for street works, support customers or representatives to understand environmental decisions and energy options for their home or area, (including costs, grant and installers), an Artificial Intelligence (AI) driven chatbot and roll out of smart alarm hubs. Further detail is provided in the innovation section of our plan, and in our Innovation Strategy.	Implementation Funding	1.03



Evidence for our role and activity

National published evidence

The UK government's Strategy and Policy Statement for Energy¹² recognises that:

"The natural gas system plays a vital role in our energy mix, including contributing towards security of supply. The continued resilience of necessary infrastructure remains a key priority in order to maintain our safe, efficient and reliable gas networks."

"Funding allowed by Ofgem under the regulatory arrangements for networks has and will continue to be an important enabler of the necessary research and development (in the gas system), including the pioneering programme of trials of hydrogen heating."

The ongoing role of the gas network and the importance of maintaining resilience and security of supply is widely recognised beyond government, even taking longer term uncertainty into account. For example, all Future of Energy (FES) 2024 pathways involve at least 20% of homes still on natural gas in 2045, even as many transition to electrification or hydrogen¹³ and NESO's Clean Power 2030 advice on the required gas generation capacity referenced above. As the gas system needs to meet peak demands, to avoid power interruptions, substantial infrastructure for safe, reliable supplies will be required even in scenarios where annual throughput may have significantly dropped.

Our RIIO-GD3 plans aim to balance these priorities, by ensuring ongoing resilience for our network while delivering research and development and early Net Zero delivery projects which can support future options for customers and policymakers. We are proposing ongoing use of innovation allowances, as explained in our [Innovation Strategy](#), to continue research and development activity alongside Net Zero and Reopener Development funding. This is set out below summarising our planned areas of focus.

We recognise the need to respond to institutional developments in the energy sector, in particular the recent creation of the NESO and its role in developing Regional Energy System Plans (RESPs). It is likely that this will evolve during the RIIO-GD3 period, so our plans are flexible, but recognise that this is a new area of activity where GDNs will need to have formal interaction with RESP development, providing data and other inputs, as set out in RESP policy framework consultation¹⁴.

Innovation funding mechanisms and Net Zero and Reopener Development funding will be critical to support the development of RESPs and other NESO initiatives, supported by our Digitalisation Strategy. We will continue to use and develop our Pathfinder model to analyse future developments, as we do now for LAEPs, primarily funded through the RIIO-GD3 Net Zero and Reopener Development allowance. If during RIIO-GD3 there are significant additional costs because of RESP recommendations, we would expect to apply for Net Zero Re-opener funding to address these.

Stakeholder views

We have directly engaged with a wide range of national and regional stakeholders in the development of our Business Plan, as well as with customer representatives. In addition to one-to-one and small group meetings, we have collected feedback from over 200 distinct engagement activities, of which many covered the future of energy in some form. Our dedicated team engages with stakeholders such as Local Authorities and we are expanding this team to reflect the need to support NESO and RESP.

Regional energy system planning

In relation to net zero, stakeholders have a range of views on priorities and technologies. In general, they support us at WWU playing a role in areas including:

- Energy system transition research and development
- Increasing engagement with customers on the future role of the network
- Undertaking Net Zero delivery projects
- Increasing volumes of green gases through biomethane and blended hydrogen connections
- Preparing the network for further changes to come
- Supporting Local Area Energy Planning

They also support initiatives to reduce our operational carbon footprint, as set out in the [Environmental Action Plan](#).

Our stakeholders, including domestic customers, have a range of views around preparation for repurposing the gas network for hydrogen. In general, heavy industry, and heavier transport (including HGVs, ports / shipping and aviation) are seen as the most likely sectors for hydrogen use, alongside storage and use of intermittently generated renewable energy to balance the grid, including through blending. Many recognise that using existing gas infrastructure can reduce the investment required in alternatives, and support energy system resilience.



The potential use of hydrogen for domestic heat divides opinion, though there is generally support for research and educating consumers about future options. Our 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. In general, they are keen to minimise disruption as well as cost in the transition to low carbon heating. As we support industrial decarbonisation plans across our network, we will consider how these could support other customers and efficient system outcomes in the future.

These views support the ongoing need for research and innovation around the role of our network in the energy system transition, alongside reducing our own environmental impact, educating and supporting customers, and the delivery of Net Zero facilitation projects including biomethane and hydrogen blending. This engagement has informed our RIIO-GD3 plans, in particular centring our approach to considering repurposing for hydrogen in key hubs such as industrial clusters.

Other regional evidence

Our strategy has been built around stakeholder plans for Net Zero infrastructure as detailed below. This makes sure that our work aligns with the focused activity happening across our region, putting us in a strong position of both harmonising with local progress, and contributing to the wider development toward achieving the 2050 targets.

Our network serves a range of consumers and demands across our geography. Our plans take account of this diversity, and are informed by devolved and regional evidence including:

- South Wales [Industrial Cluster Plan](#) noting the role of hydrogen and carbon capture infrastructure, including our flagship Hyline Cymru project.
- North East Wales [Industrial Decarbonisation Plan](#), and the role of hydrogen and low carbon energy articulated by [Ambition North Wales](#).
- [Western Gateway's hydrogen vision](#) for South West England and South Wales, and its [Plan for Sustainable Growth](#) which emphasises opportunities around innovation and green energy.

Our [Regional Decarbonisation Pathways](#) (RDP) project provides evidence on the long-term role of our GDN in Wales and South West England against a range of future scenarios. As set out in our [Innovation Strategy](#) and in our [Annual Innovation Report](#), this successful innovation project led to a series of successor projects which have helped us, our partners and stakeholders understand the decarbonisation options.

Welsh Government's [Future Energy Grids for Wales](#) report (October 2023) recognises uncertainty around the volume of hydrogen to replace natural gas but notes that:

“Deployment of hydrogen to meet demand, largely for industry and shipping, is likely to be required in the medium-to longer-term, so network operators should understand the range of future quantities and production types of hydrogen and adapt as the future of hydrogen becomes more certain. Network operators should also work with Welsh and UK Government to reduce future uncertainty around hydrogen.”

And states that:

“Natural gas networks owners should continue to investigate the need for, design and feasibility of a hydrogen transmission network in Wales.”

Furthermore, it notes that, “understanding the full implications of complex network activity for the Welsh energy system requires specialist knowledge,” and therefore that network operators should commit resources to supporting Regional Energy System Planning in a way that takes account of the whole energy system.

The [Welsh Government Heat Strategy](#) – while emphasising national policy and the role of electrification – sets out ongoing ambitions to support and implement Local Area Energy Planning. It also supports the development of localised hydrogen hubs, committing to, “engage our energy network operators on the plan for hydrogen in industrial areas, the infrastructure needed, and the opportunities for renewable electricity generation”.

Across South Wales and South West England, there are clear ambitions to develop decarbonised gasses and consider the role of existing gas network infrastructure.

[Western Gateway](#) states:

“South Wales is home to the South Wales Industrial Cluster (SWIC), a consortium of energy intensive industries and power generation assets looking to hydrogen as a key part of their decarbonised future. A world leading aviation industry investigating hydrogen as the aviation fuel of the future is situated just across the water in the South West of England and this is all connected through extensive shared energy and gas distribution infrastructure. This is combined with multiple ports, the M4 corridor and a nationally important rail line.”



North Wales' Regional Growth Deal includes a Low Carbon Energy Programme which features two hydrogen hubs alongside other initiatives. The area's Regional Energy Strategy sets research challenges which need to be resolved to continue to make progress beyond 2035, including:

Domestic decarbonisation	What is the future role of the gas network and transition technologies such as hybrid heat pumps post-2035?
Non-domestic decarbonisation	How can North Wales support the role for hydrogen in industrial clusters? Where would low carbon hydrogen be sourced from and what is the role of the HyNet North West project? What is the role for carbon capture and storage technologies in supporting the decarbonisation of heavy industry?

How our plans respond

Recognising current uncertainty, we intend to use Energy System Transition innovation and Net Zero and Reopener Development Funding (NZARD) to play our part in meeting the needs and expectations of these regional stakeholders, and our customers more generally. Our focus areas are summarised in our Innovation Strategy. In addition to this we will seek alternative funding, such as through alternative innovation schemes or the government's Hydrogen Transport and Storage Business Models, where that is more appropriate.

As set out in the 'Collaboration' section, we intend to continue to support Local Area Energy Planning in RIIO-GD3, working with regional and local authorities. LAEPs developed in RIIO-GD2 have also identified areas of research and activity for us to undertake, which has informed our Innovation Strategy and Net Zero delivery plans as some of these actions may extend into RIIO-GD3. We recognise that these actions and activities will develop throughout RIIO-GD3 as existing LAEPs are refined and new LAEPs are developed. This is why we propose using innovation and NZARD UIOLI funding, which can be flexible to these workload demands as they evolve.

How LAEPs are driving action and energy system transition activity

As well as setting out options for energy system development, LAEPs typically identify actions for the Local Authorities, energy networks and other partners. LAEPs developed in 18 of our Welsh local authorities in 2023-24 have developed over 230 actions to support delivery of the plans. WWU has either direct responsibility or strong involvement in 78 of these, around a third of the total. Where appropriate we will support or deliver these actions using resources including UIOLI NZARD funds and NIA / SIF innovation projects.

Examples of WWU actions from existing Local Area Energy Plans

Blaenau Gwent County Borough Council (BGCBC)

- Hold regular engagement meetings between BGCBC and grid operators National Grid and Wales & West Utilities
- Consolidate project pipelines across electricity and gas networks
- Highlight gas infrastructure opportunities

Swansea Council

- Establish Regional LAEP Steering Group
- Address Future Needs of Hydrogen Fuelled Vehicles, including a sub action to develop hydrogen recommendations (for transport refuelling) in collaboration with WWU.

Low carbon gas connections: biomethane and blended hydrogen

We will respond to demand for distributed entry connections through RIIO-GD3, using established processes and responding to policy and technical developments. Our connection processes receive consistently positive feedback from entry customers. We also intend to build on progress in RIIO-GD2 by supporting distributed gas producers to resolve network capacity challenges through technologies such as Smart Pressure Control (see case study in our Innovation Strategy) and Reverse Compression. This could allow more biomethane to be connected to our network than would otherwise be possible, providing higher volumes of decarbonised gas to customers. Where appropriate we will fund activity related to this through innovation or Net Zero and Reopener Development funding.



We also anticipate further activity in RIIO-GD3 to plan and invest in projects which can improve understanding of options to manage connections as distributed gas sources evolve. As policy and regulation around blended hydrogen connection changes, we will use the principles we have developed around biomethane to support these customers. This will also build on the recommendations of the report on biomethane and hydrogen interactions we commissioned in RIIO-GD3¹⁵, and is likely to be funded through innovation mechanisms. We assume that hydrogen produced for our network will meet the UK Low Carbon Hydrogen Standard to demonstrate emissions savings.

Preparing for our future: Business Evolution

We recognise the scale of change that will be needed to enable us to deliver Net Zero in all viable future of energy scenarios, including the FES24 scenarios, and we will do everything we can to make sure we are ready. It is likely that different parts of our network may transition in different ways or at different times, so we must be ready to respond with solutions for all areas of our regions. Our Business Evolution workstream considers the implications of a range of scenarios and informs us to be able to make the necessary preparations.

Our work has been steered by direction from Ofgem in the Sector Specific Methodology Decision (SSMD) that describes investment to support hydrogen, including preparing assets for repurposing for 100% hydrogen, incorporating blended hydrogen, taking account of the needs of industrial clusters, and preparing for potential decommissioning. The projects we plan to undertake fit the definitions required by Ofgem to be funded under the RIIO-GD3 price control.

We anticipate that work identified through Business Evolution will in many cases be triggered by external changes, for instance in response to strategic changes in government policy, including decisions on the role of hydrogen in heating and on blending hydrogen in the existing gas network. In addition, we expect ongoing activity for Business Evolution to be funded through appropriate mechanisms including Network Innovation Allowance (NIA); Strategic Innovation Fund (SIF); Net Zero and Reopener Development Use It Or Lose It (NZARD UIOLI) Fund, Re-openers; and where appropriate outside RIIO-GD3, via the Hydrogen Transport Business Model (HTBM).

We have considered the impacts of a range of transition scenarios across differing geographies, to understand the actions we need to take during RIIO-GD3. While a level of work is required in all scenarios, we expect it to be possible to accommodate low levels of change within our normal business improvement and update programmes.

Further work – including through innovation mechanisms and NZARD UIOLI funding – will help us gain clarity on requirements to support blending hydrogen in our network. In December 2023, the UK government took a strategic policy decision to explore blending of up to 20% hydrogen by volume into the network – **The HyDeploy Project** was set up to gather feasibility evidence and support final policy and regulatory decisions. As work to develop the implementation plan for hydrogen blending is ongoing, and the technical implications of HyDeploy project outcomes are not yet fully understood, we are excluding estimates around the costs for mitigative measures on network assets, component replacements, and repurposing. We anticipate these would be funded through a Net Zero re-opener if required, and that such reopeners will be broadly scoped to allow for potential requirements under all hydrogen scenarios, including blending and 100%.

While we have developed our understanding through RIIO-GD2 of activity that may be needed in a range of different future scenarios, we are only planning to take forward activity where there is a relatively high level of certainty, or where failing to act in RIIO-GD3 will limit options or risk progress in the future.

To find out more about our commitments, see [Chapter 3.2, Environment](#) and [3.5 for Innovation](#).



3.2 Environmental Strategy

Here at WWU, our commitment to being an environmentally responsible company is longstanding, while our record is outstanding. Minimising harm is not the limit of our ambition; we are here to do good. Through our long-term targets to move away from transporting unabated methane, we intend to be part of the resolution to the climate emergency and nature crisis, while continuing to deliver a high quality of service by keeping customers and communities safe, warm and powered.

In RIIO-GD3 we are setting our sights on continued progress while maintaining cost effectiveness for our customers. This is based on upholding high industry standards, such as ISO14001, the international benchmark for responsible environmental management which we have held since 2005.

Stakeholder perspectives and the basis for action

Our Environmental Action Plan (EAP) is informed by professional expertise, industry best practice, our decades of in-house operational experience, and direct feedback from our stakeholders. To ensure we at WWU stay at the cutting edge of the sustainability agenda, our Environment Management Team benefit from membership of the Institute for Environmental Management and Assessment which provides learning, personal professional development, and benchmarking against other companies and sectors. We are members of the UK Business Biodiversity Forum with the purpose of staying up to date with the latest legal and best practice developments in nature; the Section Six (Environment Wales Act) Forum which focuses on biodiversity and resilience of ecosystems; in addition to the United Nations Global Compact on sustainability.

We also regularly engage with other environment teams across the GDNs and National Gas Transmission for mutual support and to further develop an industry wide approach to environmental responsibility.

National and global targets

The UK government's Net Zero target has been set alongside a growing coalition of countries, cities, businesses and other institutions, to make sure that by 2050 the global total greenhouse gas emissions are equal to those removed from the atmosphere. The Science Based Targets Initiative (SBTi) is a collaborative effort by scientists, countries and companies to set emission reduction targets that are coherent with this global goal.

As a responsible GDN, we adopted an approach aligned to the Science Based Target methodology in 2019 to reduce our emissions by a minimum of 37.5% by 2035; aiming for 63% reduction if funding and technology enable, and to be operationally net zero by 2050. This remains our target as we move into RIIO-GD3, noting ongoing delivery challenges such as the availability of appropriate low emission vehicles for our fleet.

Stakeholder views

Our stakeholders, engaged through a variety of formats including qualitative and quantitative research, Citizens' Panel and regional engagement events, overseen by our Independent Stakeholder Group (ISG), want us to do everything we can to reduce greenhouse gas emissions, particularly leakage of methane.

ISG members recognise the speed at which we can reduce greenhouse gas emissions depends on the availability of funding and suitable, cost-effective technology. Our environmental action must work alongside our commitment to deliver value for money. The ISG encourage us to be ready to respond to potential government policy changes within RIIO-GD3 that will enable accelerated action to achieve net zero. In the meantime, their guidance is to act where technology and funding is not a barrier: which is mainly in the enhancement of natural capital. This term describes the world's stocks of natural assets which directly or indirectly bring value to people, including geology, soil, air, and oceans, through to plants and animals.

Our commitment to nature is supported by a broader audience. We took advice for example from [Wales Environment Link](#) (WEL), an umbrella body of Welsh and UK nature conservation organisations. They support our plans on nature and have encouraged our intentions to use partnership and collaboration to deliver our goals.

73 stakeholders from 64 different organisations including local authorities, charities and environmental groups joined our regional stakeholder engagement workshop. Stakeholders praised the focus on community collaboration and biodiversity. Many felt that the collaboration opportunities with regional conservation and not-for-profit community organisations to help ensure national biodiversity objectives are met was a positive step and noted that this mirrored the successful approach adopted by Local Nature

Partnerships to improve natural environments in Wales. Similarly, the commitment around planting more native trees in their natural habitat to support local ecosystems was endorsed, with a number of stakeholders stressing that WWU should have a positive impact on biodiversity in its licence area. We tested this commitment further in over 1,405, 20-minute interviews with a mix of domestic and business consumers, from which 95% of participants stated they found it to be acceptable.

Environmental Management

Since our launch in 2005, our Environmental Management System (EMS) has been certified to the ISO14001 international standard, and we emerged from our most recent audit (at the time of writing) in 2024 with no non-conformities. The EMS is a rigorous combination of risk analysis, control processes, observations and reviews that ensure we remain compliant with environmental legislation and take opportunities to improve our performance. For example, we were praised in our recent audit for the high level of knowledge of environmental legislation and ecological functionality demonstrated by operational First Line Managers when dealing with a river crossing in Powys and scrub clearance along a pipeline in Swansea.

The EMS commits us to a principle of 'continuous improvement' and undergoes an annual review in which managers from different parts of the business meet and discuss challenges and opportunities. A fundamental part of the EMS is the **Aspects and Impacts register**. This is a register of environmental risks and how we control them. As such, it is one of the foundations of our EAP, and in line with the principle of continuous improvement, the Action Plan can drive changes in the EMS by setting aspirational targets and goals.

Important components of our environmental aspects and impacts are as follows:

An environmental aspect is defined in ISO 14001:2015 as an element of an organisation's activities, products or services that may impact, or does impact, the environment. Therefore, an environmental impact is a result of the aspect. We categorise greenhouse gas emissions using the [Greenhouse Gas Protocol Accounting and Reporting Standard](#), as either scope 1, 2 or 3.





Our **Scope 1** emissions are from:

- **Gas consumption** associated with heating.
- **Fuel consumption** associated with running our commercial vehicle fleet and company cars. To maintain the network, we require a large fleet of vans, lorries and industrial vehicles. Currently, the technology does not exist to make all these vehicles electric and maintain a safe, efficient gas network. The energy demands of many of our vehicles' duty cycles cannot be met by battery electric vehicles. Hydrogen Fuel Cells and direct combustion of hydrogen offers a viable alternative but until the market supply and the refuelling infrastructure sufficiently develops, our scope 1 fleet emissions will be challenging to reduce significantly. We are therefore an active and enthusiastic partner in trials of alternative fuel, low emission vehicles and we remain ready to take the opportunity for deploying these vehicles if the market and refuelling infrastructure evolve within RIIO-GD3.
- **Shrinkage**, which has three components: gas we use in our own operations, gas that leaks out of some pipes, and gas that is stolen from the network. This is by far the largest single source of emissions for all eight GDNs, and shrinkage is forecast and reported using a model common to us all. This is updated annually with actual asset and operational data to give an accurate reflection of methane emissions each year. The GDNs including us are currently running an innovation project named 'Digital Platform for Leakage Analytics (DPLA)'. This is exploring new technologies in methane detection and sophisticated analytic techniques with a view to further improving emission estimates and giving us more insight to plan investments to maximise emission reductions.

Our **Scope 2** emissions are related to our electricity consumption. We have been on a 100% certified green electricity tariff since April 2021 which means that the electricity we consume is matched by the production of electricity from renewable sources. We also have our own solar panels on buildings and will further increase our solar generation capacity in RIIO-GD3.

Our **Scope 3** carbon emissions are the result of activities not owned or controlled by us but are a consequence of the work we do. This broad category includes emissions resulting from the purchase of goods and services. It also includes the emissions produced by contractors. In July 2021, contractors (scope 3) were onboarded for mains replacement work as WWU staff (scope 1) and workload then increased for the larger workforce. This resulted in an a reset of our Scope 1 emissions. Subsequently, our scope 1 emissions have begun to decrease from the post on-boarding rise.

Embodied Carbon is the entire amount of carbon dioxide (CO₂) emitted throughout the production, transportation and use of a product. The concept covers the whole life cycle and can also be used to calculate the amount emitted through the lifecycle of a project. We currently calculate the embodied carbon of large construction projects and the materials and services we use daily through our scope 3 reporting.

The '**waste hierarchy**' ranks waste management options according to what is best for the environment. It gives top priority to preventing waste in the first place, then reuse, recycling, recovery, and last of all disposal (e.g. landfill). It is a widely adopted principle endorsed by UK government, and guides not only how we manage waste in our activities but how we can avoid waste arising through procurement and project design. Our stakeholders and consumers recognise that legislation in England and Wales mandates this as a compliance minimum but encourage us to maintain rigorous oversight on the fate of our waste even after it has passed from our control, therefore positively influencing environmentally responsible waste management in our region.





Biological diversity, known as biodiversity, is the variety of life on Earth. It includes genes, species, ecosystems and habitats. Our activities have direct and indirect impacts on biodiversity. This includes the way we manage our land and buildings; the construction of new gas infrastructure; the manufacture and disposal of products we buy and use; the way we travel, and through our management of chemicals and water.

Natural Capital is described earlier in the chapter, and when we build new infrastructure, we have the potential to damage or enhance this. It is particularly the case (but not limited to) when working in rural locations where natural capital is more abundant.

Our **land remediation** work, where we are cleaning up the industrial legacy of the gas industry, is an example of how we enhance natural capital. We own a portfolio of 169 former gas production sites (gasworks) and former gasholder sites. The environmental impacts of these sites are managed through remediation and/or site investigations and remain subject to review as safety standards and circumstances evolve. For example, if homes are planned next to a site that was remediated prior to the establishment of WWU, we reassess the risk. We take a proactive approach to manage and minimise statutory environmental risk associated with these historical sites.

In RIIO-GD3 we will continue to make investments to manage statutory risk at 73 of our sites, based on our process of assessing potential risks and fulfilling legal duties in accordance with current site use. The remaining 96 sites are being maintained at an acceptable level. As supported by our stakeholders and consumers, we will consider options for using these low-risk sites to support biodiversity either through our direct management or by working with others.

Our RIIO-GD3 Aims

The combination of stakeholder feedback, technical advice, experience, and our environmental aspects and impacts managed through the EMS all inform our environmental vision for RIIO-GD3 comprised of eight high level aims. These aims are supported by detailed actions and opportunity analysis which are provided in our EAP annex.



1. Reduce shrinkage emissions now and prepare for the future

Achieve the shrinkage model target of reducing shrinkage by at least a further 16% from a 2026 baseline by 2031 and in doing so accelerate progress to a Net Zero gas network being ready for 100% hydrogen in areas more likely to convert by 2035. Use Digital Platform Leakage Allowance (DPLA) technology and innovations in pressure control mechanisms to support efforts to exceed the shrinkage model target.

? Why:

Methane is a powerful greenhouse gas and shrinkage is the largest contributor to our scope 1 and 2 emissions at over 95%. Stakeholders have given us a very clear demand to do everything we can to reduce shrinkage.



Infrastructure fit for a low-cost transition to net zero

2. Work towards achieving long-term scope 1 & 2 emission reduction targets

Using the GHG Protocol Corporate Accounting and Reporting Standard, aim to reduce business carbon footprint for scope 1 & 2 (excluding shrinkage) on a pathway compatible with the Science Based Targets Initiative (SBTi). Achieve operational Net Zero status by 2050, benchmarking progress against an interim target of 37.5% reduction in scope 1 and 2 emissions by 2034 from a 2019 baseline (excluding shrinkage). We note that our baseline was set prior to a change in business model which has impacted our scope 1 emissions in RIIO-GD2, and that this impact is likely to continue in RIIO-GD3. SBTi methodology does not have a sectoral decarbonisation approach for gas distribution, and in collaboration with other gas networks and Ofgem we will consider reviewing the SBTi aligned target before the end of RIIO-GD3, which could also account for the impact of our change in business model.

? Why:

Stakeholders want us to commit to clear targets and support our alignment with the UK net zero target by 2050, some urging us to exceed this ambition. Our ISG understand the technological and funding limitations we face but urge us to be ready to take advantage of changes in funding technology and legislation as soon as they arrive.



Our RIIO-GD3 Aims cont.

3. Increase understanding of embodied carbon

Continue to monitor embodied carbon in new projects and from the scope 3 category. We currently include embodied carbon in the Cost Benefit Analysis (CBA) of some major capital projects. Working with our contractors and partners we will quantify improvements in embodied carbon as part of progress towards net zero.

② Why:

Reducing embodied carbon of projects delivers better overall value for customers, decoupling the zero carbon solutions for the future from emissions of today. Recognising this, the regulator Ofgem requires action by the GDNs on embodied carbon.

6. Enhance action on biodiversity

Protect natural capital and ecosystem services in our operations and through land management achieving 10% biodiversity net gain in qualifying projects as a compliance minimum. Support our partners and communities to achieve regional, national and international nature goals. Support two major projects in our region that aim to achieve outcomes compatible with the Global Biodiversity Framework 2050 Vision and 2030 targets.

② Why:

Public sector, specialist organisations and community stakeholders strongly support working in partnership to improve ecosystem services.

4. Act on our supply chain emissions

Reduce scope 3 emissions by encouraging our suppliers to reduce the embodied carbon of the products and services we buy, ensuring that at least 95% of suppliers by value meet the environmental requirements of our supplier code by end of RIIO-GD3, with 100% by 2040.

② Why:

Scope 3 emissions are challenging for all organisations and can best be addressed by collaboration across the supply chain and so as a responsible GDN and in line with Ofgem guidance, we will collaborate with our suppliers.

7. Safeguard the legacy of our gasworks sites land remediation programme

Apply routine monitoring and maintenance at 64 sites and physical remediation at nine sites enhancing natural capital and community value.

② Why:

We have a duty of care under Part IIA of the Environmental Protection Act (1990) to ensure our assets do not pose a risk of significant harm to human health, controlled waters (surface and groundwater bodies) and the environment. Stakeholders support our goal to manage our former gas holder sites to improve local well-being and where safe, co-manage sites for community benefit.

5. Better manage waste and resources

Continue to apply the Waste Hierarchy to maximise resource efficiency and reduce costs, going further to influence our suppliers to embed Circular Economy principles in the supply chain. Monitor options for waste collection and processing capacity in our region so that we send zero waste to landfill by 2050.

② Why:

Legislation in Wales and England is increasing the requirements for organisations to reduce waste overall and increase the amount of materials repurposed, reused and recycled. Stakeholders support our efforts to stay ahead of legislation.

8. Maintain high environmental management standards.

Continuously improve our Environmental Management System maintaining our record of zero environmental incidents, and full compliance with environmental legislation. Anticipate and respond to changes as they occur and proactively respond to new opportunities.

② Why:

An accredited EMS regularly audited by a third party ensures we are accountable and seen to be fully disclosing our environmental performance and conformity with legislation. We require this of our suppliers and contractors and we in turn are frequently asked to provide these credentials.



3.3 Digitalisation Strategy

Our digitalisation ambition for RIIO-GD3 is to meet the evolving needs of our customers and communities by building on the adaptive, data-driven, digitally-enabled shift in our business. With decades of experience in tackling industry changes, we're committed to transforming processes in new ways with digitised, centralised information, and workflows that improve our operations and enhance our high-quality of service, from supporting vulnerable consumers to managing our assets.

By the start of RIIO-GD3 we will have built a data lakehouse to store our data mass at a low cost. We will prioritise population of this by the needs of our stakeholders and data users. This will support the digital enhancement of regulatory reporting and enable us to access our information easily to drive innovative improvements to our network. Other digitalisation initiatives for RIIO-GD3 include creating the above-ground assets of the future – as discussed in our Digitalisation Strategy – and a digital twin of our network.

Our in-progress and planned activities are aligned to our Digitalisation Strategy Framework – featured in the diagram below – which helps to visualise the 'building blocks' of our strategy and ambition statements.

The people and process elements form the foundation of our strategy, followed by the technology platforms and capabilities needed to deliver our target business outcomes.

WWU ambition	Trusted to expertly serve customers and communities with safe, reliable and affordable energy services today, whilst investing wisely to create a sustainable, greener future.				
Digital Strategy Action Plan ambition	To meet the evolving needs of our customers and communities by becoming an adaptive, data-driven, and digitally-enabled business. We will provide digital products and that support equitable access access to safe, reliable and affordable energy services today, with the ultimate goal of driving decisions and innovations in the journey to a Net Zero energy system.				
Business outcomes	Advancing our data and analytical capabilities	Building the 'Digital Utility'	Upholding regulatory standards	Delivering safe and value-for-money products and services for our stakeholders	
Building Blocks Technology	Consumer database solution	Data lakehouse	Data and analytics reporting platform	Open data platform	Digital applications
Building Blocks People and processes	In-house expertise	Enhanced digital and data literacy	Measurable success and continuous improvement	Robust digital and data governance	Secure by design

The strategic focus of our investment during the RIIO-GD2 control period has been shaped in large part by the plans we set out in our September 2023 application to Ofgem for Data and Digitalisation Re-opener funding, received in May 2024. This reflected both our evolved thinking and requirements in digitalisation that were not known at the time of the RIIO-GD2 Business Plan, but which became necessary to deliver against the Ofgem subsequent guidance and licence conditions, the UK government's Energy Data Taskforce (EDT) findings and, crucially, our stakeholder needs.

Key RIIO-GD3 Initiatives:

Our Business Plan for RIIO-GD3 seeks to build upon our achievements and ongoing work in the current price control period with funding to undertake several key initiatives which have been identified based on known industry ambitions as well as evolving customer expectations. For example, we will:

- **Build a digital twin of our network** in collaboration with National Energy System Operator (NESO), which will be connected to our real-world counterpart by a two-way flow of right-time data, copying it in all aspects. This will enable us at WWU and the teams at NESO to test decisions before we make them and understand how different actions might affect the real world.
- **Create an interface between our data infrastructure and the UK Data Sharing Infrastructure (DSI)** to enhance our data management and digital capabilities to better meet the needs of internal and external data users.
- **Develop our digital Disconnections Platform** to more effectively manage the process of disconnecting homes and businesses from the gas supply.
- **Create digitally enhanced processes for fulfilling the Regulatory Reporting Pack (RRP)** to streamline our process of reporting to Ofgem.



- **Develop the above-ground assets of the future** by employing sensors, data recorders and communication systems to better understand condition and performance, optimising investment and maintenance costs.
- **Explore opportunities to use AI**, large language models and machine learning to drive efficiency and support our consumers and the most vulnerable.
- **Use satellite imagery and movement sensors** to improve protection of our assets from third party damage.
- **Invest in methane detection technology and analytics** to revolutionise the way we deliver reductions in our business carbon footprint.
- **Continue investing in new and emerging skill requirements** around data and digitalisation.

Many of these initiatives will be made possible by the plans set out in our latest Digitalisation Strategy for the remainder of RIIO-GD2. For example, the mass population of the data lakehouse we will begin building in 2025 will be critical to supporting the UK DSI programme, the programme from the NESO programme of digital twins of the UK energy network and the digital enhancement of regulatory reporting.

Overall, the delivery of these initiatives will help to ensure we are well-positioned to lead the way in building an infrastructure fit for a low-cost transition to net zero capable of providing secure and resilient supplies, whilst continuing to provide efficient, high-quality service and long-term value for money.

Stakeholder Engagement

We remain committed to a customer-first approach and have progressed our focus on customer service and engagement, through digital transformation and innovative tools that help us tailor our support to consumers and ensure their voices are better heard.

We've used a variety of methods to engage widely including; stakeholder workshops, feedback panels, online voting and feedback platforms, facilitated group discussions, surveys, research and consultations.

To help us better understand the needs of the various stakeholder groups and consumers we continue to engage with, we commissioned Sirio Strategies to develop an engagement and insight tool using AI. The tool streamlined the process of triangulating and synthesising stakeholder feedback. This improvement enhanced the overall quality of the analysis by removing the potential for human error and interpretation. Additionally, it enabled us to create and improve a catalogue of digital products and services that generate value, matching the needs of end users and their evolving expectations.

Our engagement with stakeholders emphasised the need to respond to the following key themes:

- Accurate data collection is crucial for identifying and supporting vulnerable customers on the PSR, using data analytics to understand customer needs, and presenting information in accessible formats.
- Transparency, accessibility, and timeliness in data provision are vital, with support for open data and clear reporting using visual infographics; and
- Protecting personal data and ensuring controlled access to sensitive information are key concerns, alongside the need for robust cybersecurity measures.

In RIIO-GD3 we will continue to make our Energy System Data available and accessible for the benefit of our stakeholders and society, in line with Ofgem Data Best Practice Guidance and the recommendations of a recent independent data maturity assessment. As a Critical National Infrastructure (CNI) provider, however, it remains vital that we ensure sensitive information is only shared subject to a robust triage and risk assessment process, balancing risk and benefit.

Governance

The delivery of these key initiatives will be governed by our Digital Technology Governance (DTG) committee, chaired by our Chief Information Officer. This group will play an important role in shaping how we respond to new and evolving requirements identified as part of our ongoing Engagement Approach over the course of 2026-31. We will also continue to monitor policy developments to consider whether applications for re-opener funding may be required to respond to unforeseen changes. Accordingly, the evolution of our response in future Digitalisation Strategy and Action Plans (DSAP) will thereby help us to ensure our organisation's digitalisation journey remains on track, while taking full advantage of opportunities to deliver benefits early and to iterate improvements to our digital Products and Services.

Our approach to the governance and delivery of our Digitalisation Strategy will be critical to our success given the present lack of detailed requirements for several major key initiatives planned for RIIO-GD3. In the absence of such requirements, we are proactively making what preparations we can; for example, we're planning to expand our plan to expand our Future Energy Engagement Team from three to six people in RIIO-GD3 to ensure successful collaboration with the NESO and the Regional Energy System Planners (RESP). This is critical to the development of digital twins and ensuring data to support the energy transition is available and can be digested in the most efficient way.

Technology alongside People and Processes

The ongoing digitalisation of our business relies on so much more than investment in technology alone. As outlined in our Digitalisation Strategy, our IT and Telecoms Strategy, and in our Innovation Strategy, during RIIO-GD3 we will continue to invest wisely in technology and, crucially, in our people and processes.



3.4 Workforce Resilience and Supply Chain Strategy

Workforce Resilience

Our Vision for RIIO-GD3

People are at the centre of everything we do at WWU. Without our customers, there would be no need for the gas we transport to heat homes and businesses; to fuel important everyday tasks, and to drive industrial processes that create jobs. Without our workforce, there would be no highly skilled people to make sure that every element of maintaining our network of gas pipes is taken care of, so that we keep delivering a reliable, safe and value for money service. Our Workforce Resilience Strategy has always been crucial. It is now more important than ever so that we can uphold our high-quality of operations as we move to a Net Zero energy system.

The picture of employment in GDNs

- EU Skills estimate the utilities sector as a whole will employ > 300,000 new colleagues by 2030¹⁶
- 15,800 new roles are expected for the GDNs between 2024-2030
- 67% growth is predicted in GDN role numbers by 2030
- At WWU in 2024 we directly employ circa 2,000 skilled and talented people
- We create wider benefit with secondary jobs in areas in which we operate, such as roles making pipes to move gas.

Our commitments for RIIO-GD3 rely on having appropriately skilled, talented and dedicated people. We have engaged with colleagues and stakeholders to develop a strategy that is fit for the future.

Our ongoing areas of focus include:

- Creating an inclusive environment where all colleagues feel valued and respected
- Building trust through clear communication during times of change
- Promoting the energy sector as a desirable and environmentally conscious career choice
- Enhancing colleagues satisfaction and maintaining low turnover rates
- Equipping the workforce with the necessary skills for future challenges
- Prioritising the health, safety, and wellbeing of all colleagues.

We will regularly engage with our colleagues, trade unions and external stakeholders to shape our approach, ensuring it evolves based on our experiences and learnings.



Infrastructure fit for a low-cost transition to net zero

Strategic Direction driving our ambition

The strategic direction of our 2026-2031 Business Plan is driving significant change in our workforce resilience strategy compared to previous price control periods.

Our focus areas are as follows:

Change in work type

Until now it's been network discretion to replace tier 2 pipes – those categorised as less urgent – based on cost benefits vs risk. However, the Health and Safety Executive (HSE) is reviewing these regulations which, if updated, will increase our workload and the need for relevant people and skills.

Transition to net zero

Acting now, while considering a range of different future scenarios including the annual view from the National Energy System Operator (NESO) and preparing for full hydrogen conversion and decommissioning.

Cyber, data and digitalisation

Continuing to provide digital products and services that support equitable access to safe, reliable, and affordable energy services today and in a Net Zero energy system.

Innovation

Building on the valuable research and technology innovation outputs developed in RIIO-GD2 to facilitate the energy system transition and ensure vulnerable consumers are supported.



Equity, Diversity and Inclusion (ED&I)

Following the energy industry's annual ED&I conference, the sector is acting to attract a more diverse range of people. Our [ED&I strategy](#) and action plan sets out our ambitions now and for the coming years. We will also work collaboratively with the help of TIDE – Tackling Inclusion & Diversity in Energy cross-industry group, our sector skills council, and other specialist organisations.

Health and Wellbeing

Our wellbeing approach will continue to support colleagues with all aspects of wellbeing from financial to mental health. Our [Better Wellbeing Strategy](#) sets our plan for the coming years, providing both proactive and reactive support.

Changing career trends

Our research shows that work priorities are becoming more diverse due to 'generation z' entering the workforce. Driven by events like the pandemic and generational values, this group tend to want role and employment changes more frequently than previous generations – including remote working, and the trend is entering all demographics as work becomes more flexible and balancing priorities more important.

Changing skills requirements

Strong leadership and management will continue to be important during RIIO-GD3 to manage an increase in recruitment, changing skills requirements and achieving our business commitments alongside creating a more diverse and inclusive workforce. We will continue to support our leaders through our range of development programmes.

RIIO-GD2 to date

As part of our commitments to being an employer of choice and attracting diverse and talented people which we discuss in more detail later in the chapter – during RIIO-GD2 our initiatives included:

- **Revising our Ambition, Priorities and Values (APVs)** with the help of our colleagues and Critical Friends Panel, a wide range of stakeholders, and critical friends, in multiple workshops and testing. Our updated APVs are detailed in our Strategy, and underpin everything we do as a company, from going above and beyond to give a high quality of service to consumers, to reducing our environmental impact.
- **Becoming a Disability Confident Committed employer**, a scheme that supports employers to remove barriers and provide opportunities for disabled people to fulfil their potential. As part of our membership, we agreed to commitments; identified actions to make a difference, and we will undergo a review to evolve our current processes.
- **Offering alternative ways of applying for roles** including online, over the phone, and by post.
- Informing applicants during the application and interview process about **potential flexible working practices** and giving the option to ask for special requirements.
- In 2021 we jointly designed a new **operational competency framework, based on career ladders**. This approach allows colleagues full transparency over how they can progress within their specialism, with clarity on what qualifications and experience is required at different levels within the organisation.
- Creating **colleague networks** during RIIO-GD2 is enabling groups of like-minded colleagues to own safe spaces within the workplace. The results have been significant as summarised in the following case study.

Case Study



Safe Spaces at Work: Women's Inclusion Network

The Women's Inclusion Network was launched in 2022; a group coordinated by and for colleagues and supported by WWU resources. This community acts to improve the inclusion of women, providing a platform for colleagues to share experiences, support, and advocate for necessary changes.

Key Initiatives and achievements are as follows:

1. Sourcing Personal Protective Equipment (PPE) specifically designed for women
2. Introducing personal safety alarms for lone workers
3. Raising awareness of menopause for support and understanding in the workplace
4. The success of the Women's Inclusion Network has set a precedent and created momentum for establishing other inclusion groups within WWU such as our Accessibility Network
5. The Women's Inclusion Network aligns with our broader goals of equity, diversity and inclusion, contributing positively to the overall success and well-being of the workforce
6. The group were winners of the 'Driving a Sustainable Future Award' at our 2024 Celebrating Excellence Awards.



Key challenges and risks

As we operate across two regions of the UK – Wales and the South West of England – there are many nuances that we must consider to effectively attract, retain and engage our valued workforce. Our Employer of Choice research included focus groups which revealed a range of regional differences, which we discuss in detail in our Strategy. By tailoring our approach to the specific needs and preferences of colleagues in our operational region, we can enhance our attractiveness as an employer across both geographies while encouraging those from outside to also consider us as a potential employer. This is a critical consideration with the move to increased remote working and associated fluidity of the workforce.

There are also external factors which pose challenges and risks. The differing approaches to education, training and management of skills by Wales and UK governments causes us challenges when accessing appropriate training programmes and ensuring the consistency of skills across our region. The Labour Market Statistics report¹⁷, also shows differences across our geography in relation to employment levels and standards of living.

Our industry has undeniably felt the effects of the changing labour market, resulting in significant workforce turnover. In response, we ramped up recruitment across the network for both direct labour and contractor teams. During RIIO-GD2, we shifted from a contractor-dependent model to an insourced strategy for our mains replacement programme. Although we see the benefits of this approach, we continue to evaluate cost efficiency through retendering operational activities.

Our results indicate that our internal mains replacement model offers the best value for consumers, providing resilience and flexibility as detailed in our [Cost Assessment and Benchmarking Approach](#).

In RIIO-GD3 specifically, there are challenges ahead to make sure we have the right number of appropriately skilled staff necessary to continue delivering our high-quality of service, while addressing new and evolving challenges. More jobs being made available across the industry could create a risk of our existing expert workforce leaving for new opportunities, and as industry change happens rapidly there's a risk of not meeting new skills needs, such as cyber and the Net Zero carbon conversion requirements on our network.

In conjunction with the other GDNs, through EU Skills, we are continuing to carry out thorough assessments to forecast potential skill shortages in critical areas of work. This involves analysing industry trends, technological advancements, and demographic shifts. In-house we carry out succession activities at least annually to identify roles that may be at risk due to potential skill shortages.

To forecast for RIIO-GD3 we've used this information and overlaid it with our age profiling to get a better understanding of where we may need to take early intervention. Examples of our comprehensive work to mitigate these include targeted training programmes, apprenticeships, or partnerships with educational institutions to develop the necessary skills ahead of demand. We have also invested in our own detailed workforce and resource modelling, as part of our dedication to continuously monitoring industry trends and reassessing our strategies to ensure they remain effective in addressing emerging challenges.

Our RIIO-GD3 Commitments

Based on stakeholder feedback and considering this time of change, we have developed three commitments to ensure the successful delivery of our plan from 2026-2031:

- 1 **To be an employer of choice** in the regions we serve by fostering a culture of inclusivity, growth and recognition, where every team member feels valued.
We'll achieve this by: Continuing to build on our effective and competitive reward and recognition programmes to ensure colleagues feel that they are treated appropriately, paid fairly and valued.
- 2 **Attract and retain diverse and talented people** who better reflect the communities we serve to deliver a Net Zero network.
We'll achieve this by: We estimate that 500 jobs will be advertised across our region, including 100 new apprenticeships that comprise technical and degree apprenticeships plus graduate programmes.
- 3 **Invest in improving our colleagues' knowledge and skills** so we can deliver a Net Zero ready network.
We'll achieve this by: Changing times call for multi-skilled colleagues. We will offer cross-training opportunities and recognise and reward colleagues who actively participate in training and development activities. We will encourage colleagues to work on cross-functional projects that require collaboration and the application of diverse skills.



Considering stakeholder engagement and views

When our RIIO-GD3 commitments were tested with our stakeholders, we received strong endorsement. Stakeholders included charities, EU Skills, Trade Unions and Council members. Many stakeholders appreciated the forward-facing nature of our commitments, with training, upskilling and diversity running through them as key elements. The wide range of actions underpinning them was to align with current labour market expectations which reinforced that we are taking steps in the right direction. Stakeholders commended the level of ambition we've shown to our commitments, specifically around colleague engagement and our continuous learning and career development plans to equip colleagues with the suitable skills needed for changing roles within a decarbonising gas network.

Our engagement showed that there was a strong consensus among stakeholders on the importance of continuing to invest in apprenticeships while widening access to our training programmes. We also received feedback that we need to create an inclusive recruitment framework and improve colleague equality monitoring. As a result, we will continue to evolve our ED&I Strategy and review and update our training to all colleagues alongside evolving our recruitment strategy to create an inclusive framework from advert to on-boarding.

Our ISG provided valuable insight and challenge to our **Workforce Resilience** plan. This included feedback regarding the potential increase in our colleague turnover, the skills shortage and competitive nature of the market across the sector, plus the rising importance of retention strategies.

In response, we are increasing our number of apprenticeships and have created our dedicated **Retention Strategy**. Our approach to resourcing will continue to evolve – focusing on attracting and retaining diverse and talented people through a range of recruitment and retention methods. This includes targeting returners to work, veterans, ex-offenders and school and university leavers. We are also taking action to build on our succession plans and use this information meaningfully to ensure we take early action where we can, to create a strong pipeline of talented people from both within and outside our business.

How we will evaluate and deliver

We have collaboratively developed a common set of metrics through the National Skills Academy for Gas working group. Workforce resilience is evaluated based on three primary areas: Attraction, Skills Development, and Retention. To comprehensively measure these aspects, 12 metrics have been identified. As a participating company we will receive both comparative and industry reports to show us how we're doing, on which we will feed back annually.



System efficiency and long-term value for money





Supply Chain Strategy

Maximising value for money in RIIO-GD3

Our Supply Chain Strategy for RIIO-GD3 outlines how we will continue to gain maximum value for money from everything we buy during 2026-2031. Adherence to the EU Regulations for Procurement are a Licence Condition. The remedies available to the courts should these regulations be breached by WWU are contracts ruled ineffective through to punitive and dissuasive financial penalties. The Utilities Contract Regulations are due to be replaced in Q1 2025, with the new Procurement Act 2023. The Act is aimed at simplifying the Public Sector regulations and pulling the Public Sector and Utilities together under a single legislative framework.

We annually purchase goods, works and services to the value of approximately £230m. Maintaining our resilient supply chain is crucial for us to be operationally efficient, comply with regulations, foster innovation, and mitigate risks, while maximising value for money for both us at WWU and gas consumers. Conversely, inappropriate or ill-advised spending could result in investing in assets of low and marginal value, therefore exposing us to significant long-term risk.

Management of our supply chain is about making informed decisions. It involves options, appraisal and critical 'make or buy' decisions, which describes the process behind choosing to provide services in-house or through external contractors. We also acknowledge our role as a good corporate citizen and our part in being a responsible procurer of goods and services.

In more detail, a supply chain for a GDN is the network of all the individuals, organisations, resources, activities and technologies that are involved in distributing gas to homes and businesses in their region. A supply chain encompasses everything from the delivery of source materials from the supplier to the network, through to delivery to the end users.

Resilience in the supply chain includes the ability to respond quickly to operational disruptions. This can be carried out through flexible contingency planning and forecasting; and monitoring supplier resilience, stability and quality.

Our strategy for RIIO-GD3 is a continuation of the plan we undertook in RIIO-GD1 and RIIO-GD2, which has been proven to be robust and resilient through challenges across the last half decade. This includes the Covid-19 pandemic where we experienced no major supply chain issues, and the Ukraine conflict, during which time we managed the supply chain issues that arose.

Providing value for money and putting customers first are among our key priorities and values as a company, and investing money wisely is therefore a guiding principle of our Supply Chain Resilience strategy.

Strategic Initiatives for RIIO-GD3

Our RIIO-GD3 Strategy is largely a continuation of the expertise we embedded into our RIIO-GD2 Strategy and is aligned with the Procurement Act that comes into force in 2025. The strategies are driven from legislation and to ensure we deliver value for money.

The initiatives that we will carry out are as follows, and for more detail please refer to our [Workforce Resilience and Supply Chain Strategy](#).

- Robust and thorough pre-qualification and tendering processes
- Forward plans and advance ordering
- Pre-market engagement, supplier days and information sharing
- Collaborations with the gas distribution and utilities sectors
- Maximising competition
- Enhancing flexibility
- Improving commerciality.

Challenges faced by our supply chain

In a post-pandemic world, the challenges faced by our supply chain have evolved. The supply chains supported the UK gas industry well and there were no significant disruptions to UK GDNs during the pandemic. However, global uncertainty, moving away from offshoring, and challenges with skills shortages in the domestic market are all real risks today and in RIIO-GD3.

Headlines that doubt the future of gas have proven challenging in terms of retaining contractors in the industry or encouraging new operators to join. RIIO-GD2 has witnessed the withdrawal of several major players from the UK gas distribution market. This was also confirmed during the recent Mains Replacement and Reinstatement tender in 2024 that is detailed in our [Cost Assessment and Benchmarking Approach](#).

The impact of a 30-year Iron Mains Replacement Programme entering its final six years cannot be overstated. Its impending closure will take with it a supply chain that has taken twenty-five years to mature, and supply chain partners that have helped GDNs achieve their regulatory targets, include suppliers of Polyethylene (PE) pipe and fittings to state an obvious example. The integral tooling, equipment and hire companies will also be impacted. Winding down these businesses or diversifying away from gas are the two clear options for suppliers in the industry; which will lead to reduced competition, increased costs, and a greater unwillingness to accept risk. To mitigate this risk, we have gone to market for six-year contracts for pipe and fittings.



Labour remains a risk for contractors in our Supply Chain, where competition for skills and experience is fierce. We have continued to face threats to fulfilling our recruitment needs, because of the two new nuclear reactors being built at Hinkley Point and the inflated wages this has created. Additional challenges include the rollout of rural fibre; expanding and upgrading the water infrastructure; green energy projects; and the reinforcement of the electricity networks – all of which require skilled labour right across the country, with the areas around Bridgwater and Bristol experiencing the shortage most acutely. To mitigate this, we have adopted an insourcing model during RIIO-GD2 and tested its effectiveness against the market twice.

The Ukraine conflict reminds us of the fragility and complexities of modern supply chains – examples include no longer being able to access wiring looms that are manufactured there; and witnessing vans assembled in Turkey being delayed in their journey to the UK market. Microchip shortages impacted everything from laptops to cameras and manufacturing plants, where upgrades and replacement parts for the technology were suddenly in short supply. And it is not only links in the supply chain that are being challenged, but expectations of the modern supply chain have also increased beyond finding a source of supply and contract. We observe laws on providing a real living wage, and being vigilant for illegalities including slavery, anti-bribery and corruption in our supply chain.

The requirements for protecting the business from Cyber and other security threats are crucial elements of our planning. We must remain vigilant and as such, we require suppliers (particularly in the IT and Data industries) to comply with relevant standards and protocols. This has made the pre-qualification of suppliers even more important. The pre-qualification that 'data risk' suppliers must now undertake, is far more thorough than in RIIO-GD1 and the beginning of RIIO-GD2.

Ensuring the highest level of competition

In the gas distribution industry, enabling competition among suppliers is known more formally as maximising competitive tension. This means ensuring that multiple suppliers or contractors are competing for opportunities relating to services, such as developing infrastructure, maintaining the network, or supply contracts. Enabling this competition ensures that we secure the best prices, quality of service, and contract terms. By keeping options open and not committing to a single provider too soon, we encourage all parties to improve their offers and performance, insisting on the best for our network.

Market testing remains a key part of identifying fit-for-purpose solutions from quality partners that maximise value for the gas customer. Testing can be carried out in the form of quotes, formal tenders, best and final offers, negotiations, or combinations of some or all of these. To ensure the best value for our consumers we make sure to reach the widest possible supplier base by encouraging new entrants, building relationships, and tendering for longer terms to bring unit prices down.

In RIIO-GD2 we found that supplier appetite for risk – particularly from American owned companies – is vastly diminished. This has made risk pricing, risk allocation, contract schedules, incentives, and the risk we must assume-all items for negotiation. We have used, and will continue to use risk workshops, pricing, and our own risk position to negotiate lowest risk and best value for the gas customer to mitigate supplier appetite.

Another key challenge that has arisen for our supply chain since 2021 is the long lead times that are now in place for key components for products from governors to light commercial vehicles and steel pipe – especially for short production runs. We have had to adopt longer planning horizons, greater transparency, earlier ordering and combining volumes to avoid these timing challenges.

Our relationships with many of the suppliers in our supply chain are long-standing. There is a balance to be struck between value creation and innovation versus overreliance and familiarity. We pair effective contract and commercial management with periodic market testing, to ensure that standards are being maintained.

We envisage adopting AI solutions for spend analysis, market trends, decision support and other functions during RIIO-GD3. These will be assessed on merit and deployed where there is a benefit for the gas consumer and WWU. The technology is developing rapidly in other areas and already some niche providers are identifying where AI can add value, reduce manual work and improve decision making. One such area is scenario planning, where a decision in one area may impact a decision in another.



Secure and resilient supplies



System efficiency and long-term value for money





3.5 Innovation Strategy

We recognise our vital role in developing options for our network in a range of future energy system scenarios, while maintaining secure, reliable and cost-effective services for gas customers today and through the transition.

RIIO-GD3 is a critical time for innovation to support this effort, recognising and addressing the policy and technological uncertainties around the future role of the gas network, and moving at pace to meet Net Zero targets.

As outlined in our [Innovation Strategy](#), innovation underpins decarbonisation by introducing new ideas, facilitating learning for networks and consumers, and is a critical enabler for net zero and long-term value for money.

We are responding to policy signals to increase speed and ambition, such as the Clean Power 2030 mission, consumer expectations around high quality and efficient service, and commitments around the scale of change needed to meet Carbon Budgets. Our stakeholders support our ambition to accelerate the pace of change, with a continued focus on the energy system transition and supporting vulnerable consumers.

RIIO-GD3 will support the planning and delivery of Net Zero operation, facilitate green gasses and support vulnerable customers during the transition to net zero, all of which were considered important by our evidence and stakeholder groups. Delivery will require a whole energy system approach which considers factors such as increasing digitalisation; more sophisticated interactions between energy vectors; and rapidly developing technology, all of which require a strong culture of innovation.

Our planned approach is a combination of challenging but potentially game-changing innovation. It will facilitate research and development to prepare the network for increasing blending of green gasses and repurposing our network for a range of future decarbonisation scenarios, which includes pure hydrogen. We'll also continue to develop solutions to support operational emission reduction and vulnerable consumers priority needs. Where possible we will look to use innovation to inform Net Zero delivery projects, as set out in more detail [Chapter 3.1 Net Zero](#).

Achieving RIIO-GD3 outcomes

Our [Innovation Strategy](#) has been developed in line with Ofgem and stakeholder expectations for us to develop infrastructure fit for a low-cost transition to net zero. These plans also aim to develop new ways to support vulnerable consumers and explore options to decarbonise our network while maintaining secure and resilient supplies. By understanding how we can prepare for repurposing or decommissioning the network in the longer term, our plans will support system efficiency and long-term value for money.

Innovation is rightly recognised as essential to the operation and development of networks, including for considerations around the potential need to prepare gas distribution assets for repurposing for hydrogen. We have followed the guidance set out in Ofgem's Sector Specific Methodology Consultation and will be seeking alternative funding outside of RIIO-GD3 for major hydrogen related projects. We will also continue to explore and develop technologies and techniques which could help prepare and deliver reuse of existing gas network assets.

The process of developing our innovation strategy to achieve these outcomes has included robust planning activity from the ground up, supported by our RIIO-GD2 innovation and Net Zero activity. We have engaged with a wide range of stakeholder groups and taken into account up to date external evidence and developments such as the 2024 Future Energy Scenarios¹⁸ and the Committee on Climate Change Progress report¹⁹, which has evidenced the need for ambition and pace to meet the 2030 Clean Power and 2050 Net Zero targets, particularly where electrification may not be the most economical route to decarbonisation.

External evidence which has shaped our Innovation Strategy includes:

Legislation, government policy and strategies

Legislation – notably the [Energy Act 2023](#) – and official policy documents such as the [UK Hydrogen Strategy](#) and the [British Energy Security Strategy](#). In addition, the [Hydrogen Blending Strategic Policy](#) decision was an example of where innovation project outputs fed evidence into discussions with the Department of Energy Security and Net Zero (DESNZ) and the HSE.

Industry and internal strategy development

The gas and electricity networks' joint ENA Innovation Strategy which remains valid until 31 January 2026 – and will inform activity beyond that date when the strategy is updated and republished through ENA and Future Energy Network (FEN). Also our [Sustainability Strategy](#), and Chapters [2.1 Consumer Voice](#), [3.1 Net Zero](#), [3.3 Digitalisation](#) and our [Environmental Action Plan](#).



Input from internal and external stakeholders

We gathered evidence from external stakeholders, including our Critical Friends Panel, Business Panel, and Local Area Energy Plan (LAEP) consultations. We also considered the impacts on our consumers by engaging with stakeholders who champion their interests, such as our Citizens Panel, charities, and consumer body representatives. We obtained input through internal workshops, direct engagement with innovators and other stakeholders, collaborative efforts with other gas networks, and industry-wide innovation strategy development and events. By using evidence synthesis reports, which are scrutinised to resolve conflicts, we analysed and triangulated insights. Throughout this process, we sought challenges from our Independent Stakeholder Group.

Our commitment to addressing key challenges

Evidence outlines RIIO-GD3 as a critical time for gas networks to innovate to help accelerate the transition to net zero and we propose to continue using the Strategic Innovation Fund (SIF) and outside funding mechanisms for innovation, alongside an expanded Network Innovation Allowance (NIA) portfolio, to innovate around three core challenges which we have identified through the business planning process:

- 1 Planning and delivering Net Zero operations
- 2 Facilitating green gasses
- 3 Supporting customers in vulnerable situations

Funded innovation, in response to evidence and stakeholder input, will be committed to the future of the energy network to meet these challenges. This will include research on technologies and techniques which will help prepare our network for repurposing in a range of decarbonisation scenarios. Additional outcomes will be: maintaining high standards of resilience; supporting the introduction of increasing volumes of green gases, and helping meet the needs of vulnerable customers now and in the future. Across these challenges we intend to use a combination of Network Innovation Allowance (NIA) and the Strategic Innovation Fund (SIF), depending on the challenges and opportunities that emerge through RIIO-GD3. We also intend to use NIA in combination with other funding sources e.g. Net Zero Re-opener Development UIOLI Allowance (NZARD UIOLI) and externally sourced.

Innovation funding works within an ecosystem so it's critical that funding to support the energy system transition is joined up and aligned to enable an end-to-end transition, recognising future roll out requirements e.g. funding via the Hydrogen Transport Business Model (HTBM).

To demonstrate our ongoing commitment to innovation and the energy system transition, we intend to continue to make a 10% shareholder funded contribution to RIIO-GD3 funded innovation projects. We'll also undertake self-funded BAU innovation activity, particularly around compliance and safety. These are unlikely to have tangible cost savings, but any financial benefits will contribute to delivery of our stretch ongoing efficiency challenge across the RIIO-GD3 plan, with any project shared 50/50 with consumers to support equal distribution of innovation benefits.

The proposed allowances in our [Innovation Strategy](#) have been estimated based on our extensive portfolio experience gained from:

- activity in previous price controls
- taking a robust, ground up approach to identification of the challenges
- external and internal stakeholder feedback
- cost estimates that utilise previous price control projects as a basis for justification.

Further detail on our innovation plan, which includes a full breakdown of the areas along with further information on the benefits, costs and basis for these estimates is provided in our [Innovation Strategy](#) and includes a BAU innovation summary table. Any projects taken forward will be subject to our robust governance processes to ensure value for money and adherence with Ofgem guidance.



Key areas of focus for our RIIO-GD3 innovation plan

Network Innovation Allowance funding

We have identified key areas of focus for our NIA funding during RIIO-GD3 which are outlined below. Innovation is inherently uncertain and high risk and will be committed to the future of the energy network, including preparing our network for repurposing in a range of decarbonisation scenarios, supporting vulnerable customers, and energy system resilience.

We plan to use NIA funding to support the Strategic Innovation Fund in RIIO-GD3 to develop a pipeline of projects to support large scale, high impact demonstrators, subject to sufficient base funding to develop ideas in response to SIF challenges and supporting third parties through this process. We'll use NIA funding in combination with other Net Zero funding as outlined in the Net Zero Strategy document e.g. NZARD UIOLI and other externally sourced funding (such as HTBM). We also plan to utilise new implementation funding made available in RIIO-GD3 to roll out several previously proven vulnerable customer innovation projects.

We plan to use NIA to innovate around three core challenge areas:

Challenge to be addressed using NIA	Total Cost (£m)
1 Planning and delivering Net Zero operations	22.75
2 Facilitating green gasses	13.70
3 Supporting vulnerable customers	1.45
Total Cost	37.90

Network Innovation Allowance funding

1 Challenge 1: Planning and delivering Net Zero operations

Total NIA Cost
£22.75 million

Focus area

Improving energy system planning

Playing our role in developing the data and tools which will help deliver effective national, regional and local area energy planning. Continuing to innovate and add new capabilities to the Pathfinder tool we developed in RIIO-GD1 and used and refined in RIIO-GD2.

These updates offered new analysis and insights.

They developed further evidence and understanding on consumer and local choices, plus new technologies, in relation to energy planning, network demand and the role of retrofit in future demand reduction.

Anticipated benefits

Whole energy system modelling and decision support tools for different technology choices that have predefined scenarios and bespoke energy systems that will align with: Future Energy Scenario (FES) modelling, the National Energy System Operator (NESO) Strategic plans, and the Regional Energy System Plan (RESP) development and ambitions. Meeting expectations from Local Authority engagement which has highlighted a role for networks in exploring future options and supporting change.

Preparing the business for a Net Zero future

Evolving the business, processes and systems for a Net Zero future as outlined in the Net Zero Strategy 'Preparing for our future: Business Evolution' workstream.

Future tools and systems for network readiness to transition, managing first movers and exploring alternative uses or delivering effective decommissioning for areas that do not transition.

Data and digitisation

Supporting the central Ofgem and industrial innovation strategy themes, this area is under increasing stakeholder and regulatory scrutiny to provide opportunities to increase efficiency over the long-term energy transition; and this work supports our Digitalisation Strategy.

Pressure management, digital twins of gas assets and protection of our assets which includes delivery of zero emission stations and data, implementing tools that can be productionised and reduce costs, and improved quality of analytics and data to support optimal future investment decisions, asset safety and the environment.

Ultra-low emission fleet

Supporting our Environmental Action Plan by plugging gaps in existing technology, particularly around rurality and range, on-board power requirements and tow weight to outline viable routes to meet Net Zero targets and the Net Zero emission vehicle mandate set by the government.

Understand how to decarbonise our fleet of light commercial vehicles that fulfil network operation and maintain our gas network, while delivering our year-round, 24/7 gas emergency service.

Reducing environmental impacts

Responding to health, safety and environment challenges with greater efficiency.

New technologies and techniques to improve operational transition, reduce venting, emissions, and embedded carbon.



Network Innovation Allowance funding

Total NIA Cost
£13.70 million

2 Challenge 2. Facilitating green gasses

Focus area

Facilitating green gasses

Enabling us to reduce environmental impacts to support our Environmental Action Plan and improve the processes and systems which will allow us to connect increasing volumes of biomethane and hydrogen into our network and respond to policy and technology developments. Assessing repurposing of our network for a range of scenarios including hydrogen at 100% and addressing requirements to implement blended hydrogen.

Anticipated benefits

Short term emission reduction of the gas network alongside preparing hard to decarbonise areas such as industrial and commercial decarbonisation, long-term storage, and green hydrogen production which are highlighted in the ambitious government targets.

Create a range of decarbonisation option scenarios, including in areas such as domestic heat. Significant uncertainties need to be addressed by innovation as new technologies emerge and new policy decisions are made.

Network Innovation Allowance funding

Total NIA Cost
£1.45 million

3 Challenge 3. Supporting customers in vulnerable situations

Focus area

Supporting consumers through the transition

Supporting the Consumer Vulnerability Strategy by using information from sources such as regional and local area energy planning and stakeholder feedback, to ensure those considered vulnerable are not left behind in any future energy system scenario, while also continuing to support their day-to-day safety and concerns.

Anticipated benefits

Create non-digital means to communicate with consumers with barriers to technological fluency. Understand impact of consumers living in multiple occupancy buildings and other housing options for heating and transition.

Options for keeping consumers warm during gas supply interruptions, advice and digital tools for consumers and the third sector, improved registration to the Priority Services Register.

Innovation deployment funding

We plan to use innovation deployment funding allowance made newly available in RIIO-GD3, to deploy previously proven innovation to realise benefits for vulnerable consumers that, as a network, we would be unable to fund outside of uncertainty mechanisms.

Innovation deployment funding

Total Cost
£1.03 million

3 Innovation Deployment Funding to support Vulnerable Customers

Focus area

Increase safety at StreetWorks

To support wheelchair using customers, and those that are visually impaired or require assistance.

Vulnerability support

Implement a data visualisation tool into business processes.

Gas safety

Technology to understand different alarms and provide alerts within the home and send message to family member or a carer.

UK energy transition

Support customers and their agents to ask questions in their own language and get answers and advice to support the UK energy transition.

Anticipated benefits

Deployment of better ramps, lighting and signage for StreetWorks, support customers or representatives to understand environmental decisions and energy options for their home or area, including costs, grants and installers, an AI driven chatbot and roll out of smart alarm hubs.

Infrastructure fit for a
low-cost transition to net zero



Our track record of innovation deployment

Innovation criteria in RIIO-GD2 enabled us to support the Net Zero energy system transition on the role of the gas network in a decarbonised future alongside customer vulnerability. This was a significant change from RIIO-GD1 where innovation was typically focussed on ongoing operational efficiency, reduction of emissions and vulnerable customers.

To show the criteria change impact on outcomes and benefits, we've separated innovation deployment into two areas for each price control and have given an example of each:

1. RIIO-GD2 Net Zero energy system transition and/or vulnerable customers
2. RIIO-GD1 innovation

Detailed examples of deployed innovation from RIIO-GD1/2 can be seen within our [Innovation Strategy](#) 'Implementation and roll out evidence' section, alongside current innovation implementation plans for RIIO-GD3 and beyond.

RIIO-GD2 innovation benefits summary

We will deploy RIIO-GD2 innovation in RIIO-GD3 and beyond...

Our RIIO-GD2 innovation work has focused on the innovation criteria to support the Net Zero energy transition and/or vulnerable customers and is primarily supporting transformational change in the gas network for a decarbonised future. These project areas are inherently high-risk innovation that moves between low and high Technology Readiness Levels (TRL), fails fast or inspires innovation in new areas as we build learning and knowledge.

...as we are already demonstrating

As of 2023/2024 regulatory period we've led on 29 flexibly funded innovation projects with 25 of these projects developing very early, high-risk research of TRL 2-3, with four projects TRL 3 to 4. We have directly deployed innovation in RIIO-GD2, by using fundamental research and early stage developments to develop ambitious transformational projects.

RIIO-GD2 Case Study: Hyline Cymru

Early stages of our Hyline Cymru project were supported by innovation projects. This demonstrated the benefits of early TRL innovation in RIIO-GD2 that combines to become the backbone of future transformational activity that could be implemented in RIIO-GD3 and beyond.

Benefits: Hyline Cymru is developing the potential to support decarbonisation of the South Wales Industrial Cluster, historically responsible for around 10% of Britain's industrial emissions, and helping understand the potential for future repurposing of our South Wales network.

Earlier innovation is continuing to benefit WWU and our customers

RIIO-GD1 was focussed on innovation that primarily drove cost efficiency, emission reduction or support for vulnerable consumers.

Not every innovation was successful, but for those that were, we've continued to track RIIO-GD1 benefits during RIIO-GD2.

BAU innovation continues in part to contribute towards realisation of planned ongoing efficiency benefits as part of the RIIO-GD2 Business Plan which has been built into the cost base for the RIIO-GD3 Business Plan.

Case Studies: RIIO-GD1 innovation

The 'Ductile Iron Window Cutter' tool and A Rapid Steel Pipe Cutter

Between the two projects, three new tools were rolled out in total to our business as usual (BAU) with adoption by other GDNs, UK hire companies and utilities companies in USA and Australia.

Benefits: This generated a total of £1.4m in cost avoidance in RIIO-GD1, and with probable future benefit of £6.5m which was included in the Business Plan assumptions and cost base for RIIO-GD2. We continue to use ductile iron window cutters for suitable operations in RIIO-GD2 as they partially mitigate the longer operational times required for this type of activity. There are additional intangible benefits around reduced customer disruption.

A Zero Emission Odorant Pumping System

This project aimed to reduce the amount of gas that is vented into the atmosphere as part of the odourisation process.

Benefits: Based on a non-traded carbon price of £72/tCO₂eq, carbon savings delivered would equate to an estimated £144k p/a saving, and there were additional benefits relating to expansion tank system repairs. This has contributed to ongoing cost efficiency measures built into our cost base for RIIO-GD3.



4. Maintaining a safe and resilient network

The safety of our network is paramount, and we invest over £3m each week ensuring we consistently achieve the highest standards.

Each of the chapters in this section outline the work that we're doing to keep our 35,000km of gas pipelines and 7.5 million customers safe. We discuss our methodical approach to investment and risk when maximising our assets from pipes to storage facilities; and how we use precise metrics to measure success when it comes to maintaining our gas network, both buried and above ground. We detail the unique challenge for us as a GDN managing the Local Transmission System (LTS) pipelines in Wales, and our approach to maximising our significant investment to meet the PSSR and the Pipeline Safety Regulations.

Climate change factors into planning for our network, as we consider the impacts in our region both now and into the future. We detail how we manage fit for purpose vehicle fleets, depots and offices to ensure efficient operations. Our focus for IT and Telecoms is on strengthening our system defences and cyber resilience, in addition to bringing organisational resilience through continuous improvements.

What's in this section:

4.1 Asset strategy (approach to managing assets)

4.2 The distribution network workload

4.3 Transmission and pressure management workload

4.4 Property and transport assets

4.5 Climate resilience strategy

4.6 IT & Telecoms Strategy

Mapping to the UN Sustainable Development Goals

In Chapter 1.3, we introduce how we align with the SDGs and are committed to sustainable practices. In these business areas in RIIO-GD3, we will contribute to the following goals:



4.1



4.1 Network Asset Management Strategy

Investing in our assets and the benefits this brings for consumers

Our strategy during RIIO-GD3 will continue our work of RIIO-GD2, to take care of our assets at the lowest cost across their lifespan. Our detailed plans and strategic goals for RIIO-GD3 are outlined on the next page. When we talk about assets, we're referring to the pipes, pressure regulating installations, storage facilities and associated equipment that we use to distribute gas safely and reliably to homes and businesses in the region we serve, that spans from Conwy to Cornwall.

We make investment decisions based on high-quality data and on sophisticated predictive and prescriptive analytics. While predictive analytics forecast outcomes to help with decision-making, prescriptive analytics recommend the optimal course of action or strategy. With this methodical approach to investment, we manage risk, keep costs as low as possible, and will always ensure that there is no 'gold plating' – which would be adding a feature or service to our work that stakeholders or customers have not asked for. In fact, our approach always involves input from our stakeholders. In this time of change in the energy industry, we will also make sure that each investment we make is appropriate for all credible future of energy scenarios and build upon our reliability to prepare for what is next.



System efficiency and long-term value for money

Our investment drivers – the reasons behind the money we invest on our assets – can be broadly split into three categories:

- **Mandatory** investment is essential to adhere to the law of the land, e.g. iron mains replacement
- **Discretionary** investment is to deliver a stakeholder-required outcome or is driven by CBA and/or NARMS. e.g. Investment in pressure optimisation systems to minimise methane emissions from our metallic gas pipes
- **Customer driven** investment is as a direct result of customer requests to connect to our network or to move our assets, e.g. a request to divert a pipeline due to major road reconfigurations.

Managing risk with NARMS

Under Ofgem guidance, GDNs developed NARMS during RIIO-GD1, and today NARMS play an important role in assessing the benefit of asset intervention plans across all sectors.

When we gather stakeholder views about what is important to them in terms of the gas network, we can use NARMS to target the outcome they want. It enhances our understanding of where to invest to achieve outcomes such as low levels of customer interruptions.

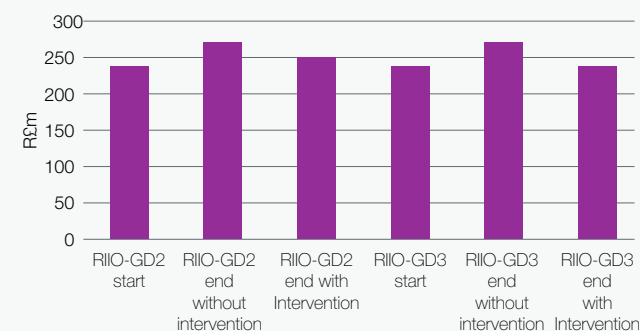
As well as in focused investment, NARMS help us to demonstrate benefits of investment to consumers such as environmental, safety and network reliability. By monitoring NARMS we can forecast future risk over the short, medium and long term and optimise plans so the future network will be fit for purpose.

As assets deteriorate over time, the risk associated with these assets grows, and our strategy for investment in our assets counteracts this increasing risk. Due to our planned risk management in RIIO-GD3, we forecast that we will keep risk levels broadly the same throughout the price control period, from beginning to the end. This matches our approach in RIIO-GD2 which has delivered all primary outputs for our consumers.

The charts below show the risks associated with assets without intervention. It is likelihood x consequence of assets failing to deliver the safe and reliable network that NARMS is describing. This demonstrates that our plan will manage the risk on our network to current acceptable levels. By acceptable, we mean that consumers will continue to benefit from the safe network where unplanned supply interruptions occur just once in 250 years, and therefore consumers are unlikely to see an interruption in their lifetime. We will publish annual progress throughout the RIIO-GD3 period.

Mains, services and risers

Monetised Risk Levels Across RIIO-GD2 and RIIO-GD3





Through the remainder of RIIO-GD2 and RIIO-GD3 we will further develop NARM modelling to improve risk assessment and transparency for consumers to share the benefits of our network investments.

Area for review	Timeline	Impact
Scope of NARMs – assets included in the methodology	2024	Addition or removal of asset types
PRI consequence modelling	2024	Long term risk assessment in GD NARMs
Emissions – modelling of emissions considering use of new technologies such as the Digital Platform for Leakage Assessment (DPLA)	2025	Potential improvement of impact assessment on emissions benefits
Health assessment – comparing techniques employed across sectors	2025 - 2026	Potential for common methodology for health and condition assessment
Riser interventions – review model nodes and associated calculations following Institution of Gas Engineers and Managers (IGEM)/ HSE review	2026	Changes to the riser risk assessment reflecting changing perceptions from HSE
Complex Distribution Systems (CDS) – assessing risk on commercial MOBs	2026	Potential to include in NARMs, possibly built into the riser risk map
Climate change – impact of climate on risk of assets	2027- 2028	Likely to create new nodes on risk maps to link likelihood to consequence.

Strategic RIIO-GD3 goals

Our detailed plans for RIIO-GD3 address risk management from long term investment through to winter planning, and our overview outlines what we plan to achieve:

- **Maintain asset health** - We will preserve the average overall health of our assets at their current levels by offsetting any deterioration and making interventions at the right time.
- **Lowest whole of life cost** – Making sure we use our funds in the most responsible and efficient way, we will look after the health of our assets at the lowest whole life cost.
- **Enable continued customer benefits** – By maintaining our assets, our customers can continue to benefit from what is an extremely reliable and safe gas network.
- **Risk management** – We will manage risk to individual homes through to wider communities and society, while keeping costs as low as possible.
- **Long term investment** - Our investment decisions will be in the long-term interest of customers and will not close off future opportunities.
- **Ongoing safety** – We will maintain the highest levels of asset safety through effective process management. This will be monitored via an intelligent set of key performance measures.
- **GS(M)R safety case** – The Health and Safety Executive (HSE) will accept our GS(M)R Safety Case, which is our plan for meeting the Gas Safety (Management) Regulations 1996, the legislation in place to minimise the risk of a gas supply emergency occurring or continuing.
- **Control of Major Accident Hazards (COMAH)** – We will maintain compliance to COMAH regulations through good process / procedure, a competent workforce alongside effective assurance and governance. This will be validated via review of policy / procedure by HSE intervention.
- **Severe winter planning** – One of our obligations is to be prepared for a 1 in 20 winter, which is a severe bout of cold weather likely to occur only once in a twenty-year period. Our plan continues to include measures to make sure we will be able to supply our customers even in these severe winter conditions.
- **Maintaining records** – Our plan to ensure our records are accurate and up to date as the network changes, demonstrates how we will track the health and needs of all our assets.
- **Innovation** – With the aim of reducing costs and improving performance, we will continue to innovate in our approach to asset management.
- **Minimise environmental impact** - We will lessen our impact on the environment, reducing our carbon footprint, maximising the reuse of materials and optimising the operational life of assets by refurbishing them at the right time prolonging asset life.



Prioritising legislation for safety and reliability

The network of assets that we own and operate is critical for a reliable energy supply across Wales and the South West of England. This is true today and for all credible future energy scenarios through to achieving net zero.

Whether our gas powers a central heating system to warm a home at the height of winter; or fires a furnace in a factory; or provides uninterrupted supply to gas-fired power stations when wind and solar fail to provide the requisite demand especially in the winter months - our assets are vital for fulfilling our duties to both domestic and commercial users, so that they in turn can do what they need to do, with the gas they pay for.

We are a conscientious company doing all we can to look after customer needs; as such the correct management of assets is a central motivation for our asset strategy. We have built a methodical process of developing, operating, maintaining, upgrading, and disposing of assets in the most cost-effective manner, which we know reflects best practice having consistently maintained our long-held accreditation to ISO55001, an international benchmark for asset management. The consequence of our approach is compliance with all applicable regulations and delivering the utmost safety and reliability for our customers.



Secure and resilient supplies

Stakeholder and customer feedback from RIIO-GD2 to RIIO-GD3

Another important factor in our approach to asset management is stakeholder expectation. We listen, embed feedback and improve, continually taking account of how our assets impact the environment and customer satisfaction. In doing so, during RIIO-GD2 we met all our stakeholder requirements for safety, reliability and environmental emissions. This included delivering our Iron Mains Replacement Programme, outperforming our customer interruption targets and overachieving on methane emission reductions.

While we consult with stakeholders, much of our plan is put together to ensure compliance with health and safety legislation, and the HSE is the key stakeholder in this space. Clearly, consumers are stakeholders, but the decisions we take over the stewardship of assets are long term, so we need to consider the consumers of today and tomorrow.

One area where consumers particularly have a strong view is interruption to supply. They have consistently fed back that they don't want to see a deterioration in network reliability. Within the last year, there were approximately 7,300 unplanned interruptions to the gas supply across 2.5million households, so the chance of an unplanned interruption was just 0.0029%. Our asset investment plan will maintain this excellent performance, using high quality data to target assets with potential to fail without intervention.

In RIIO-GD3, our strategy, based on further feedback from stakeholders and customers, is to maintain the health of the assets at current levels and to offset any deterioration. We're managing a large population of ageing assets, and our replacement and refurbishment activities keep the overall average health the same over time. This ensures that consumers continue to benefit from what is an extremely reliable and safe gas network. What's more, our work on the future of energy for RIIO-GD3 and beyond is re-shaping our approach to the management of assets in operation today. In line with Ofgem Sector Specific Methodology, we will innovate and deliver small Net Zero facilitation projects but are not otherwise planning direct investment in hydrogen assets. However, where efficient we will make sure that the investments we make in today's assets to keep them safe will not exclude the use of hydrogen in the future. For instance, when we need to replace a metallic main, we choose a PE replacement, so it is hydrogen-ready (in addition to offering reduced leakage rates, described in [Chapters 3.2 Environment](#) and [4.5 Climate Resilience](#)).

We're also mindful of the uncertainty of the future of energy and we test all our investment using CBA to ensure they deliver value for money over the life of the asset. And while customers are not materially affected by our work, the investment that we place into our assets means reduced costs in the long term. For example, we assess the cost of replacing a non-mandatory iron main compared to costs of continuing to maintain and repair. Where replacement is lower cost, we take that action and as these savings are enduring, consumers will continue to benefit into the future.



Promoting asset health and long-term resilience

In 2013, we were the first gas network in the world to achieve accreditation to ISO55001, which recognises our strong leadership and demonstrates that our asset investment strategy is understood and embraced at all levels of our organisation. The structured approach required to achieve accreditation and uphold this every year since helps us to manage the lifecycle of assets to maximise value, control risks, and ensure sustainability. Our asset management strategy aligns with our organisational objectives, resulting in clear guidance for our asset team in the actions we need to take, to manage our assets efficiently.

We will continue to use our NARMs models to quantify the risk associated with our assets. The risk metrics are derived by multiplying the likelihood of each failure mode – which is related to asset health – by the consequence of failure for each of our key asset groups. We determine the health of our assets through a programme of periodic inspection, and we use modelling to predict the expected deterioration over the asset lifecycle, refining based on the physical inspections as appropriate. We select appropriate interventions to optimise investment over the long term to maintain the safety and reliability of our assets at current levels. For further details see our [Asset Management Strategy](#).

Evolving challenges such as cyber resilience, increased security threats and closer integration of the gas and electricity networks mean that we have adapted our approach to include new ways of looking after our assets that we did not previously need to consider. This has resulted in proactive replacement of telemetry and communications assets on operational gas sites, addressing any vulnerabilities to cyber-attack. A similar approach has been applied to identify where specific sites or equipment needs additional protection from physical security measures. In terms of security, we keep critical sites under constant review, considering the latest threat.

Our people and partnerships

An important part of our strategy is the value we place on collaboration and partnerships – by working closely with many others we share best practice and innovation and stay at the forefront of asset management. We engage actively with regulators, industry partners and other stakeholders, responding to industry consultation on changes to legislation, industry codes and standards, and the future of the UK energy system.

We are active members on several panels and governance committees led by The Institution of Gas Engineers and Managers (IGEM); and we support staff and managers across the business to become members and attain professional registration with IGEM. We are also members of the Institute of Asset Management and the UK Onshore Pipeline Operators Association (UKOPA), where we are represented on the board of directors and all working groups. Membership and engagement with these organisations provide many opportunities for personal and professional development to keep our Asset Managers and our wider business community up to date with industry changes and to contribute to its future direction.

Our people are the living and breathing assets of our organisation, who bring their skills, dedication and experience to look after our operational assets. We are committed to supporting their growth, and team members take pride in maintaining their competencies to keep us at the leading edge of asset management. We will continue to build our knowledge and capabilities through training and continuous professional development during RIIO-GD3 by delivering continuous improvement via regular performance reviews, audits, and agreed improvement actions.

Our asset management model and how we measure success



Our graphic summarises our approach to asset management, demonstrating our ongoing cycle of considering our practices, checking the status of our assets, updating our plans, making change, and evaluating those actions. We will continue with this approach in RIIO-GD3, and we measure the success of our work in several ways as follows:

The HSE, through their Planned and Unplanned Intervention Programme, monitors our performance and compliance to relevant legislation and statute. The feedback received from the HSE indicates a high level of compliance is being maintained by the business. With our ongoing retention of the ISO 55001 accreditation, we demonstrate excellence in asset management, by making ongoing improvements. In terms of measuring our environmental impact, our Business Carbon Footprint (BCF) is quantified, and minimised/reduced by 16% in RIIO-GD3.

We have a management structure, with senior management committees and meetings with our Executive Team; and we track our operations on a monthly basis using our Key Performance Indicators.

4.2



4.2 The Distribution Network Workload

We operate in the heart of our communities, and many of us also live in the communities we serve. Delivering a high quality of service is personal, and we are often stakeholders as well as colleagues, doubly invested in upholding our reliable gas supply. The Distribution Network is fundamental to delivering that supply and is the collective term for the pipes that deliver gas to consumers' homes and businesses across cities, countryside, towns and villages.

Houses and businesses are largely supplied by buried distribution mains and services; while above ground pipes known as risers and laterals feed MOBs such as flats, together with pressure regulating installations. The Distribution Network allocation of our RIIO-GD3 investment plan will enable us to continue to deliver a safe and secure gas supply while improving standards right across our region that spans one sixth of the UK.

Buried mains and services

We own and operate a population of 32,945km buried distribution mains (as reported in RRP for 2023/24), that transport gas to our consumers at pressures ranging from 21mbar to 7bar. There are three distinct operating pressure tiers; Low Pressure (LP) 21-75mbar, Medium Pressure (MP) 75mbar-2bar and Intermediate Pressure (IP) 2-7bar.

The IP network is subject to the Pressure Systems Safety Regulations 2000 (PSSR) due to operating in excess of 2bar pressure. These assets total 1,552km and are constructed in either steel or PE. As mandated by PSSR, the steel is protected by Cathodic Protection (CP) systems. These assets rarely fail, and investment is primarily in maintaining the CP systems in good health.

The MP and LP networks total 31,393km and are a mix of PE, steel and iron. PE is very reliable and rarely fails. The steel and iron however, are at the end of, or beyond, their expected life and we respond to circa 8,000 leaks per annum from these assets.

There are circa 2.5m customers connected to our network. These connections terminate at an Emergency Control Valve (ECV) which is generally situated at the inlet to a consumer's gas meter. WWU's network ends at the ECV and we do not own or manage the gas meter or any downstream pipework.

Services are predominantly constructed in either PE or steel. PE services are incredibly reliable, and a leak is extremely rare. We have laid services in PE since the 1970s. Steel services were generally installed prior to this so they are mostly over fifty years old with many much older. They are also at the end of their life, and we experience circa 7,000 calls per annum to investigate issues with these assets.

A large proportion of our MP and LP iron mains are subject to a replacement programme (mandated by the HSE). This requires all iron mains up to and including 8" in diameter and within thirty metres of a building to be decommissioned by 2032. It also requires all >8" iron pipes that exceed a safety threshold to be replaced within a reasonable timeframe. This is a 30-year programme and we have delivered it successfully since 2002. Pipes that do not qualify as HSE mandated are considered for replacement based on a cost benefit assessment.

Our stakeholders have told us they want us to maintain the current levels of safety and reliability from our network and do not want to see this degrade. Stakeholders also want us to reduce methane emissions which relies on older metallic mains being replaced with low emission PE. Consumers have told us they would like to see the mains replacement programme accelerated to improve safety and deliver environmental benefits. This is countered by feedback from local authorities who do not want an increase in replacement work due to the disruption to transport and the public that it causes. Our plan balances these stakeholder requirements.

One of the areas on which the public and Local Authorities agree is that when we replace mains in an area, we should do this in one visit and not return year after year. To achieve this, we group mains into larger, more efficient projects and clear all metallic mains from an area during one period of work.





In summary, we need to invest in our Mains Replacement Programme to:

Meet our stakeholder requirements to reduce our carbon footprint, maintain our safety performance and reduce disruption from gas escapes

Comply with our legal requirements under PSR

Reduce Opex costs associated with unplanned repairs.

Failure to deliver our planned programme would mean failure to meet the needs of our stakeholders, it would lead to rising Opex costs and would be detrimental to our goal of meeting our emissions targets and delivering our contribution to the UK Net Zero target.

We will measure the success through various metrics:

Length of metallic mains abandoned

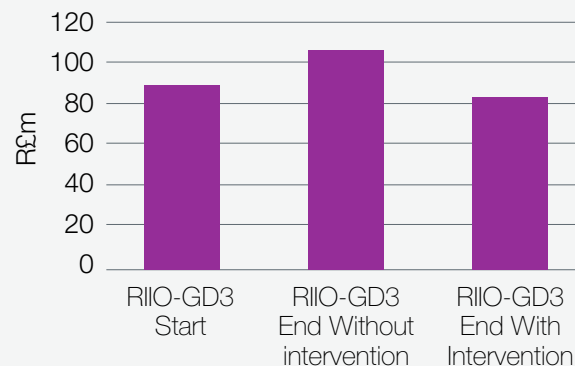
Volumes of gas escapes and occurrences of gas entering a building

Methane emission reductions.

NARMS risk targets

We will continue to engage with our stakeholders as we deliver the mains replacement programme. HSE will regularly inspect delivery of the plan and review and feedback on the key metrics that demonstrate the success of the investment.

RIIO-GD3
Monetised Risk for distribution assets



Ensuring the safety of risers

Our Riser Intervention Programme commenced in RIIO-GD1, and during RIIO-GD2 we have continued to inspect, and risk assess the gas assets on MOB. Our inspections have evolved based on learnings from the Grenfell inquiry and the experience and knowledge gained from our own work, alongside that of the other GDNs. The riser intervention programme for RIIO-GD3 reflects the data collected and the subsequent risk assessments. This has resulted in a higher workload volume when compared to RIIO-GD2. It is however a workload that meets the current HSE expectations and is compliant with guidance written by the Institution of Gas Engineers and Managers (IGEM) – a collaborative document, authored by all GDNs and supported by the HSE following the Grenfell Tower fire on 14th June 2017 – which significantly changed the social risk perception of high-rise MOB.

Risers/Laterals are above ground gas pipes which we own and operate, and which supply gas to properties situated in MOB or Complex Distribution Systems (CDS). Manifolds are above ground gas pipes before the ECV, typically in meter rooms where banks of gas meters are situated, we are responsible for the pipe work up to the ECV, but the individual properties are supplied via outlet pipework, i.e. after the ECV and meter, that is the responsibility of the building/property owner.

MOBs are defined as buildings with three storeys or greater, usually in the form of a block of flats although some also house commercial properties, for example a block of flats with shops on the ground floor. MOB are split into three classifications: Low-rise (3-5 storeys); Medium-rise (6-9 storeys); and High-rise (ten+ storeys).

Complex Distribution Systems (CDS) are defined as MOB which consist entirely of industrial and/or commercial units that do not meet the classification of either a High-rise or Medium-rise building, where supplies are to more than two primary meter points, for example a shopping centre with three or more meter points that are supplied by risers/laterals.

Our population of risers in 2024 confirmed as:

High rise (ten storeys and above) – 189 risers (43 MOB)

Medium rise (6-9 storeys) – 271 risers (74 MOB)

Low rise (3-5 storeys) – 6,390 risers (2,876 MOB).



Our planned work manages deterioration of the population due to effects such as the corrosion of mild-steel gas risers that are exposed to a damp or wet environment or ocean salt causing metal to rust quickly. During the surveying of our coastal MOBs we have seen evidence of these effects.

If the condition of risers is not addressed in a timely manner, there is a risk of a failure resulting in gas entering a MOB. The consequences of a 'gas in buildings' incident in a MOB should there be an ignition resulting in fire or explosion, could be catastrophic with multiple fatalities. This could be due to structural damage to the fabric of the building, or the difficulty evacuating large numbers of residents. Gas in the building is almost certain in the case of internal riser systems, and likely in the case of an external riser system.

Our plan is built around the proactive replacement of risers in poor condition with stainless steel. This is proven through the CBA template to be the most cost-effective option in terms of payback. Furthermore, prior to failure, it also mitigates the risk of unplanned customer interruptions (rather than a planned interruption of minimal duration when work is done within a programme), which are measured by Ofgem under Guaranteed Standards of Performance (GSoP). This is the Standard for Supply Restoration, with a target to restore the gas supply within 24 hours. We have experienced cases where the poor condition of metallic risers has given cause to disconnect a gas supply without notice when a riser has leaked, causing an unplanned gas supply interruption. This can lead to customers being left without their gas for heating, cooking, or hot water for a considerable period due to the time required to design, gain the relevant permissions, and replace the pipework.

These delays are exacerbated where the ownership of the building and individual flats spans different individuals and organisations, and where an MOB is a Listed Building. Along with the other GDNs, we must comply with the requirements of the HSE, as noted above, and now in addition, those of the Building Safety Regulator (BSR) in England. The arrangements for Wales are yet to be confirmed by the devolved administration. We continue to invest time to ensure that designs intended for MOBs in our network meet the Building Safety Regulations standards for fire safety. The HSE have undertaken several intervention visits to us in recent years and have scrutinised the MOB management system and the surveys/inspections we have undertaken of our MOB population. The results from these interventions have been positive and no actions legal or improvement notices have been received in respect of this asset group.

To meet the justified safety requirements, there are several supporting activities that we plan to conduct to manage our MOB asset base:

— **Golden thread of information** – It is imperative that we continue to inform the golden thread of information (The Building (Higher-Risk Buildings Procedures) (England) Regulations 2023, Section 31 – Information about higher-risk buildings that must be kept by clients, principal designers, principal contractors and accountable persons) and provide associated support when work is required on the risers and laterals located on higher risk buildings in England (7 stories and/or 18 metres and above, with two or more residential units). This includes proactive liaison with the building owners and the provision of an agreed design and project completion information.

- **Non-gas related safety issues** – The high-rise MOB population in WWU requires an in-depth post survey review and detailed reports are maintained in accordance with our WW/PR/LC/21A Work Procedure for inspection, maintenance and monitoring of supplies to MOBs. For all MOBs, regardless of their classification, we uphold our role as a responsible network and inform building owners where non-gas related safety issues are identified by us on site. This process has been initiated in RIIO-GD2, however we recognise the importance of working more closely with building owners, helping them to identify issues and therefore plan to increase support activities for this in RIIO-GD3. This will become more significant in Wales as the Welsh Government has indicated its plans in a recent consultation to roll out an even more stringent building safety regime than has been introduced in England.
- **Data collection** – We place great importance on the data being collected through our MOB survey programme. We have trained surveyors and a validation process to ensure quality of data. Our Asset Integrity team review and audit the information to define and schedule the programme of intervention based on risk.



— Support for work in Listed Buildings —

A number of the MOBs in our network hold Listed Building status and hence any work carried out on these buildings has to be in line with tight restrictions to preserve the appearance and/or fabric of the building. We plan to increase resource levels in RIIO-GD3, including external specialist support for completing planning applications and Listed Building consents, to plan projects effectively and to drive a quick response if a riser leaks and consumers are left off gas. In cases where risers have failed and local planning authorities refuse permission for us to install replacement gas infrastructure that is compliant with industry standard IGEM/G/5, we are left with no option other than to terminate the gas supplies. This is delivered through a Buy-out Process, where we agree with the building owner(s) to terminate supplies and pay for the conversion of heating/cooking to an electric alternative.

In RIIO-GD2, we advanced our inspections of Complex Distribution Systems (CDS). The results have highlighted that a degree of intervention is needed on some sites in RIIO-GD3.

To meet the expectation from the HSE for gas networks to risk assess our MOBs with PE riser installations, we have included a workload element to replace existing PE riser systems in our network. We have also included a workload element to replace existing copper installations in the network because copper is not in line with the material requirements set out in IGEM/G/5 Edition 3 for riser systems on MOBs.

In addition, recognising the safety compliance achieved with the installation of a Pipe Isolation Valve (PIV) on a MOB, we have included a workload element for the retrospective fitting of these valves where they are not found on site during an inspection.

The condition and compliance MOB workload has been costed based on historical costs and is summarised as a cost per riser or manifold. The intervention on our MOB riser systems contributes towards our NARMS) which demonstrates the risk removal from this asset group.

Delivery of the RIIO-GD3 intervention programme for this asset group will result in improved average health across the population of Risers/Laterals and deliver an improved level of safety risk. The success of our plan will be measured by the NARMS mechanism and by tracking faults and failures on our riser population.

Detailed Engineering Justification Papers to support the investment plan of these assets have been submitted separately and can be found on our [website](#).



System efficiency and long-term value for money





4.3 Transmission and Pressure Management Workload

Our RIIO-GD3 ambitions and vision

Another essential part of our process to safely transport gas to homes and businesses across our region; the Transmission System is the collective term for all 'above 7 bar' pipeline storage and pressure management assets. We use transmission pipelines to transport gas from where it enters our network to the UK's national infrastructure, and they can range in length from our longest pipeline at 81km to our shortest at 88m.

Never compromising on safety, during RIIO-GD3 we will invest £56.7m a year in our transmission and pressure management assets. This will ensure we maintain our current high-performance levels in safety and reliability while meeting the needs of our stakeholders from consumers to power generators and the renewables sector. This level of investment is broadly consistent with RIIO-GD2, with the exception of investment to undertake wholesale replacement of three LTS pipelines which have reached the end of their asset life, compared to one LTS pipeline replacement in RIIO-GD1.

Our plan will ensure that we continue to comply with the regulations governing this critical part of the gas distribution system: the Pressure Systems Safety Regulations (PSSR) and the Pipelines Safety Regulations (PSR). These regulations reflect the inherent safety risk of transporting gas and require us to keep these assets in a good state of health. This section also includes pressure management assets within the Distribution Network.

Our plan

To deliver best value for customers we adopt a whole-life cost approach, supported by extensive CBA. This approach means we intervene throughout the life cycle of the asset, with smaller periodic interventions to maintain asset health and deliver the lowest cost management of each asset. This approach has led to lower costs to the consumer from the start of RIIO-GD1, throughout RIIO-GD2 and will continue through RIIO-GD3.

These assets transport large volumes of gas at very high pressures; as such there is a significant safety and security of supply risk if we do not continue to maintain and manage them well.

The transmission network has substantial storage capacity and is critical to balancing supply and demand to meet stakeholders' needs. We deploy up to 59.9GWh of storage each day to manage the diurnal demand profile.

In most intervention categories, our RIIO-GD3 plan is broadly in line with RIIO-GD2. Our balanced programme of replacement and refurbishment has been successful in RIIO-GD2 as evidenced by NARMS, interruption event volumes and reviews of faults and failures.

We plan to continue this strategy through RIIO-GD3, maintaining the health of our assets and managing risk at an acceptable level, in line with published Health and Safety Executive (HSE) guidance on management of risk as low as reasonably practicable (ALARP).

Change from RIIO-GD2 to RIIO-GD3: our unique transmission network

However, one area where there is significant change from RIIO-GD2 to RIIO-GD3 is our Pipelines Plan.

We operate a number of LTS Pipelines that were constructed and commissioned in the 1950s and 1960s, before the introduction of recognised standards for materials or construction methods and quality assurance procedures. Most of the old, pre-modern pipeline standard (IGEM/TD/1) pipelines in other areas of the UK have either been:

- Replaced by reinforcement schemes required to meet growing demand
- Downrated to distribution pressures (below 7 bar), where viable
- Upgraded to meet IGEM/TD/1 Edition 2 requirements .

Due to the minimal load growth in the small, remotely located population groups in Wales, these old pipelines have remained an integral part of the transmission pipeline network in Wales. Downrating is only viable in very limited cases where there is sufficient capacity at a lower pressure to avoid substantial reinforcement, effectively replacement. Upgrading to meet TD/1 Edition 2 is not viable or cost effective due to the construction techniques utilised in the late 1950s and early to mid-1960s.



These pipelines are now routinely exhibiting failures, including loss of containment, indicating that they are at 'end of life' and are at significant risk of no longer being considered fit for continued operation as Major Accident Hazard Pipelines.

Pipelines in this category (~380km) have additional levels of monitoring due to deterioration of weld integrity. A subset is reaching end of life and exhibiting condition issues and failures. Funding was granted in GDPCR1 ([Gas Distribution Price Control Review 1, 2008-2013](#)) to replace three such pipelines, but further investment was not forthcoming in RIIO-GD1 to continue the programme of pipeline replacements, proposed at 75km in our RIIO-GD1 Business Plan. Instead, a targeted programme of short-length replacement and other interventions was approved. On a number of pipelines, this approach has enabled us to manage risk and delay replacement. There are exceptions however and based on the experience of continued failures and the costs incurred in RIIO-GD1, a single 13km LTS pipeline replacement was approved in RIIO-GD2 based on a CBA justification.

We continue to see a deterioration of this subset of our unique pipeline population and three pipelines (HW009, HW010 & HS007) have been included as they now require wholesale replacement, plus a further pipeline for targeted short-length replacement in RIIO-GD3.

The total length of ~50km of pipeline replacement reflects the minimum workload required to address risk, comply with legislation and minimise whole-life cost. The inclusion of this investment is justified by third-party specialist integrity studies, CBA assessment, and the need to manage safety of the public and our operatives.

This investment forms part of a long-term management plan that minimises cost and manages safety.

The long-term plan is summarised in the table below:

GDPCR1	Three pipeline replacements, totalling 91km
RIIO-GD1	No wholesale replacement but short-length diversions around significant sections of risk, as well as refurbishment and downrating of 26km of LTS
RIIO-GD2	One pipeline replacement, totalling 13km
RIIO-GD3	Three pipeline replacements, totalling ~50km along with downrating of a further 29km, and a number of short-length diversions
RIIO-GD4	60km of replacement

The detailed justification for this investment can be found in the [Investment Decision Packs](#) (IDPs) for each pipeline in our plan. With regards to the remaining transmission and pressure management assets, we plan to complete the following workloads to manage these, to keep the gas supply safely flowing to consumer households and businesses:

- Undertake ~200,000 maintenance visits
- Carry out ~1,800 targeted interventions on LTS pipelines
- Replace ~50km of pipeline that has reached end-of-life, as supported by our CBA
- Undertake ~2,000 refurbishments or replacements on pressure reduction installations
- Undertake ~3,000 targeted interventions on our electrical and instrumentation assets

These RIIO-GD3 activities and associated investment are explained in detail through a series of IDPs, which are provided as appendices to our business plan.

These packs are combinations of CBAs and EJPs that expand on, and evidence, the investment decisions we are making.

A Summary of our work and learnings in RIIO-GD2

Our transmission and pressure management assets move substantial volumes of gas at high pressure from the National Transmission System (NTS), reducing in pressure stages throughout the LTS, to the local distribution pipe network and our consumers. The assets represent a critical part of the network, as a single failure could impact on tens of thousands of customers. As the network is used to transport gas at very high pressures, any leaks could have very serious consequences.

Much of our planned investment is to ensure compliance with the law and with requirements that are scrutinised by the HSE. We maintain best value for customers by adopting a whole-life cost approach and using CBA so that we are neither 'gold plating' nor under-investing.

The RIIO-GD2 price control has been a successful one so far, with the interventions carried out maintaining the health and risk of both buried, and above ground assets. We have remained compliant with all legislation, and we expect to achieve our NARMS targets for RIIO-GD2. The following section sets out some key pieces of work:

- We are on track to deliver our Capital Project Price Control Deliverable – which is the replacement of our HN039 pipeline – by the end of the price control. This replacement is in line with our plan to deal with our oldest cohort of pipelines. This configuration is relatively unique to WWU and restricted to our Welsh region. Building on the case accepted for the replacement of HN039, we have progressed feasibility studies to replace a further three similar pipelines, which are included in our RIIO-GD3 Business Plan.
- RIIO-GD2 has also seen us incur significant costs related to development claims and we welcomed the ability to recoup this expenditure through the re-opener mechanism should they reoccur in RIIO-GD3.



- A programme of work to replace legacy venting controllers on Pressure Reduction Installations (PRIs) with a non-venting solution continues to progress, reducing methane emissions to atmosphere and addressing obsolescence of components. We are also designing a solution to install electric actuators on existing flow control valves and planning further rollout across our larger PRI and Offtake sites in RIIO-GD3.
- A programme to replace the communication solution for the distribution pressure management system commenced in October 2023, this is currently delivered via fixed telephone lines – also known as the Public Switched Telephone Network (PSTN) – which are to be retired in or before 2025/26. The mobile solution chosen to replace the PSTN lines to sites includes replacement of key components, and we aim for completion early 2025.

Key challenges and risks

Developing and implementing an investment programme for these critical assets carries a range of risks, given its high importance to national security, economic stability, and public safety. Below are key risks associated with these programmes:

- **Policy and regulatory changes** – Shifts in government policy, regulatory frameworks, or energy strategies can impact project priorities, funding, or scope.
- **Misalignment with national goals** – Failing to align the investment plan with national energy, security, or economic objectives can lead to wasted resources or public criticism.
- **Cost overruns** – Unexpected expenses from material shortages, labour, or unforeseen technical challenges can strain budgets.
- **Economic uncertainty** – Inflation, fluctuating exchange rates, and rising interest rates can significantly affect project costs.

- **Climate change impacts** – Extreme weather events (floods, storms, heatwaves) can disrupt construction, damage infrastructure, or necessitate redesigns for resilience.
- **Community opposition** – Resistance from local communities or activist groups can lead to delays, increased costs, or reputational damage.
- **Skills shortages** – Lack of availability of specialised skills or labour can hinder project progress.
- **Insufficient future-proofing** – Failing to anticipate future demands, climate resilience, or technological changes may limit the asset's utility or lifespan.
- **Interdependencies with other sectors** – Disruptions in energy, water, or telecommunications infrastructure may cascade, amplifying risks to the investment plan.

To mitigate these key risks, we plan to carry out the following:

- **Comprehensive risk assessments** – Conduct rigorous risk analysis during planning stages to identify and address vulnerabilities.
- **Robust stakeholder engagement** – Collaborate with government bodies, regulators, and the public to align priorities and gain support.
- **Adaptive design** – Incorporate flexibility into designs to accommodate future technological, regulatory, or environmental changes.
- **Contingency planning** – Develop robust contingency plans for financial, supply chain, and operational risks.
- **Sustainability focus** – Align projects with sustainability goals to mitigate environmental risks and ensure long-term viability.

Effective management of these risks is essential for the success of our investment programme, ensuring that they deliver the intended economic, social, and security benefits.

Our Commitments

This part of the network moves substantial volumes of gas at high pressure and controls that pressure down until it enters the distribution network. The significant consequences associated with these assets are:

- Interruptions to gas supply, leading to economic damage or harm to vulnerable customers
- A loss of containment, resulting in a fire/explosion, leading to injury or death
- Environmental damage, because of large gas releases at high pressure.

Reflecting on these, and how we reduce the probability of a consequence occurring, we maintain and operate this network governed by various sets of legislation, most notably the (mentioned earlier) Pipelines Safety Regulations (PSR) 1996, the Pressure Systems Safety Regulations (PSSR) 2000 and the Electricity at Work Regulations 1989. Much of the investment that we plan for RIIO-GD3 is driven by these regulations. To satisfy these regulations we have inspection and maintenance programmes in place that periodically confirm the condition, functionality and reliability of these assets.

Based on the data from our inspection and maintenance programme, along with our Asset Investment Models, we define a planned programme of intervention. This delivers compliance with the regulations; assurance of the safety and reliability of the network; maintenance of the overall asset risk at current levels and in line with the As Low As Reasonably Practicable (ALARP) principles, defined by the HSE.

Our RIIO-GD3 commitment is to, 'keep the level of risk in relation to these critical assets at their current acceptable levels in order to maintain our excellent performance on safety and reliability'.

In RIIO-GD3 we will continue to develop our detailed prescriptive and descriptive analytical capabilities, underpinned by high-quality asset and financial data, to inform our decision making.



We will also continue to invest in our geo-spatial information system, which allows us to assess aspects including: the number of people, the type of property, and the infrastructure, within the vicinity of each asset. This assessment informs our understanding of the risk of death, injury or damage in the event of an asset failure.

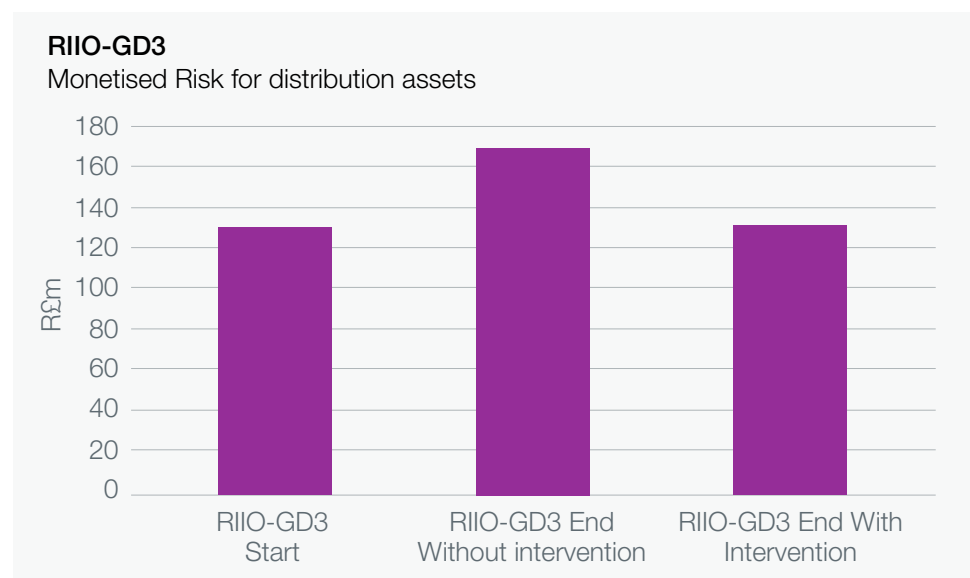
The key output measure for this group is the NARMs (formerly network output measures, NOMs) NARMs have an important role to play in assessing the benefit of asset intervention plans across all sectors and measuring the performance of a GDN in managing asset risk.

Monetised risk is a metric that gives a monetised value to an asset based on its condition, probability of failure, and consequence of failure. It then determines the cost associated with that consequence.

The value is derived for:

- Start of a price control
- End of a price control without any investment
- End of a price control with investment.

The difference in monetised risk between the 'with' and 'without' investment scenario is the value given to the investment plan and is the output target. The figure below shows our RIIO-GD3 forecast and our plan to remove £31m of risk from our network through a targeted investment plan, compared with the risk level with no investment plan.



The above risks have inflation removed from RIIO-GD3 in a like-for-like comparison to RIIO-GD2.

NARMs has a significant role to play in assessing the benefit of asset intervention plans across all sectors. Our RIIO-GD3 plan is designed to keep network risk at the end of RIIO-GD3 at a broadly similar level to that at the start.

While this approach may not seem ambitious, it is driven by feedback from our stakeholders stating they are happy with current safety and reliability performance and do not wish to pay more for improvements. Therefore, we'll focus on ensuring continuity of our expertise, doing what we've always done to raise the bar and uphold gas safety and continuity of supply, while refining where needed to address evolving challenges.

We see RIIO-GD3 as being a key price control for learning from the NARMs assessment and testing its potential as a benchmarking tool across networks.

Stakeholder engagement

Striving for clean and affordable energy, understanding the needs of businesses and how our network will be used in the future, we actively engaged with a diverse range of stakeholders. This included local authorities, emergency services, other energy networks and community representatives to gather feedback on our asset management approach.

Most stakeholders appreciate the current levels of safety and reliability in the network. We have sought views from key regional and national stakeholders through events across our network. In summary:

- HSE, Department for Energy Security and Net Zero (DESNZ) and emergency planning committees stress that large-scale supply issues or gas explosions are not tolerable to society.
- The electricity sector and power generators tell us that reliable gas generation is critical to balance intermittent renewables (solar and wind) and that storage in our network is vital to balancing the region's energy needs – and that this will continue to be the case in the short, medium and long term.



Investment in the transmission network

A key driver for investment in the transmission network is compliance with the law.

For assets with such a high consequence of failure there is a balance to be struck between 'gold plating' and making sure that events that are unacceptable to society are highly unlikely to occur. We have discussed key aspects of our plan with HSE, including the planned pipeline replacements, through our regular liaison activities. We have discounted age-based or time-based investment plans in favour of more sophisticated risk-based plans derived using predictive and prescriptive analytics. To ensure that our investment plan is no regrets and does not result in asset stranding, we test our plan against all credible future energy scenarios. One of the key ways we do this is to test investment using a detailed CBA with varying payback periods considered.

Our RIIO-GD3 plan is designed to maintain the level of network safety and reliability risk. This will ensure that interruptions and safety performance are maintained at high performance levels. This is driven by feedback which tells us that stakeholders are happy with our current safety and reliability performance.

Deriving an intervention plan that will deliver these outcomes requires:

- Decision making based on high-quality asset and financial data
- Testing our investment plans against likely future uses
- Understanding the likely impacts of the environment in which we operate the assets.

Asset and Financial Data

At our inception, data on our transmission and pressure management assets lacked any granular detail and was often held in local depots and in spreadsheets.

As part of our ongoing maintenance programmes, we take the opportunity to collect condition, fault and failure data including:

- **Critical installations:** real-time site monitoring from control room systems
- **Pressure reduction installations:** annual inspections of safety features and condition
- **District governors:** risk-based maintenance, but condition assessment at least every six years
- **Pipelines:** ~450km of LTS pipelines condition inspected per year, all inspected within five years.

The threat of malicious damage has grown significantly in modern times both from a physical and cyber perspective. An element of managing risk in relation to Operational (OT) and Information Technology (IT) assets at operational sites, is to ensure that they are physically secure. Details of this are in our confidential Cyber Security Business Plan; and proposed investment can be found in [Chapter 4.1 Network Assets](#).

Gas has a vital role to play in future of energy scenarios. Our investment plan not only ensures that the gas network will meet our stakeholder requirements of a safe and reliable gas supply, but also that our network supports the whole system operation. We will do this by providing connections and capacity for capacity for biomethane injection.

We are very aware of uncertainties in the long-term future of energy and concerns around stranded investment in the gas network, and the specific intervention programmes have been tested against future scenarios as set out in our EJPs.

It is also important we consider the impact of a changing environment on our assets and their ability to function. Our Transmission and Pressure Management Workload plan is in line with our [Environmental Action Plan](#).

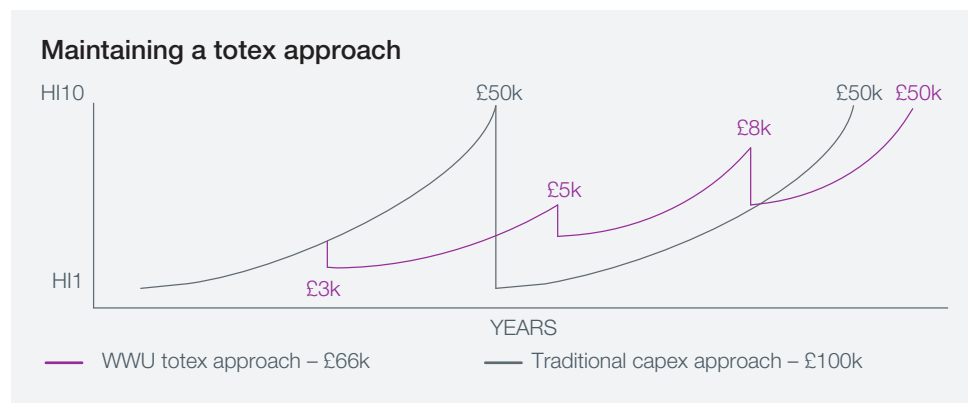




How we will evaluate and deliver

We will have removed £15.9m of risk by the end of RIIO-GD3 in this asset class. In addition to maintaining and managing our assets we need to ensure that we operate our network effectively, safely, and efficiently every day. To do this we forecast short, medium and longer-term requirements and make sure that we have the physical infrastructure, people, systems and processes in place to meet those needs.

Our approach means we intervene regularly and in a targeted way to maintain the asset health and deliver the lowest cost management of each asset over its lifetime.



The illustrative figure above shows two approaches to the management of a typical district governor (DG). The black line represents a Capex plan with full DG replacement, which in this illustration typically costs around £50k. The purple line represents our Totex approach. Here, relatively low-cost early investments to refurbish the asset (in this case costing £3k, then £5k, then £8k) extend its life considerably, thereby pushing out into the future the need for a more costly replacement.

This approach requires excellent quality data on asset condition, performance and the consequence of failure. As outlined above we put ourselves in a strong position during RIIO-GD1 and RIIO-GD2 in this area, and this will continue to be a focus for RIIO-GD3.

The detailed breakdown of our costs is shown below:

Cost of investment plan

£m 2023/24 prices	Average RIIO-GD2 annual spend	Average RIIO-GD3 annual spend
Routine maintenance	12.3	14.7
Non routine maintenance and refurbishment	3.9	7.6
Holder demolition	0.4	0.0
Capital investment	–	–
Governors	2.5	3.6
LTS storage	0.0	0.0
LTS pipelines	13.5	20.9
LTS Above Ground (installations (AGIs))	7.4	9.2
LTS diversions	2.5	0.7
Total	42.5	56.7

We have perfected techniques for refurbishing and extending the lives of our assets. These techniques are significantly lower cost than asset replacement. Evaluation of our refurbishment strategy is highly positive and our RIIO-GD3 plan reflects a continuation of this approach, along with the associated savings.

The investment plan required to deliver our stakeholder requirements and outputs is broadly similar in total cost to the level of investment in RIIO-GD2, although work types vary. The exception to this is LTS pipelines where the workload is set to increase, with ~50km of pipeline replacement planned to deal with integrity issues on our oldest pipelines.

The cost of the RIIO-GD3 investment plan for our current asset base is £42.5m. This compares to £42.5m in RIIO-GD2. Our RIIO-GD3 plan will enable compliance with UK law and will maintain the health and therefore the performance and service provided by our transmission and pressure management assets. With our plan, we will deliver a network that supports future energy scenarios and satisfies the needs of key stakeholders – from end users to power generators and the renewable sector.

4.4



4.4 Property and transport assets

Fit-for purpose property and fleet in RIIO-GD3

Property resilience and transport resilience relate to those resources of value that we own or lease that help us run our business but are not immediately involved in the transporting of gas, compared to gas pipes and valves. In terms of property, our plan is to maintain fit for purpose depots and offices that continue to underpin operational effectiveness and support colleague wellbeing. When it comes to transport, our strategy is to maintain a fit for purpose fleet to enable operations to deliver effectively and efficiently.

More specifically, our plans for our property in RIIO-GD3 include improvements in insulation, solar installations, car charging facilities, accessibility (lifts/ramps/door widths), smart controls and other wellbeing measures. We will carry out improvements or new construction at Weston Super Mare, Bridgwater, Plymouth and Carmarthen. This work will bring these sites up to modern standards with the rest of the depots and offices. Investment is on a 'no regrets' basis. i.e. the enhanced value of the property is expected to offset the investment.

Actions that we will take as part of our transport strategy include exploring the use of light commercial vehicles (LCV) with Ultra Low Emission Vehicles (ULEV) and we will have 70 units in action before RIIO-GD3. We also plan to order more and deploy them into service, in a manner that does not impact operational efficiency. Our plan includes improving the charging infrastructure at depots and land holdings. This will enable us to adopt zero emission vehicles as and when suitable options come to the market. Following our hydrogen van trial in 2024, we also plan to pilot hydrogen Heavy Goods Vehicles (HGVs), with a view to these replacing diesel units in RIIO-GD3 with a view to adopting these in the future if successful.

We will continue to invest in our fleet assets to ensure effective delivery of operational activities, while exploring those alternative non-ICE solutions as they become available.

RIIO-GD2 summary to date

Throughout RIIO-GD1 and RIIO-GD2 our property strategy has aimed at rationalising our leased sites and maximising the effectiveness of our existing depots and offices through targeted investment. This has resulted in our new depots at Redruth, Bristol, Panteg and Cullompton. The new depots all meet the latest standards for insulation, solar power generation, EV charging points, accessibility and improve the working environment for colleagues.

Our company car fleet has transformed during RIIO-GD2, from primarily a diesel fleet to a fleet of ULEV, 95% of which are electric or hybrid. The average carbon emissions (CO₂) rating has reduced from 120g/km to 40g/km, (a 67% reduction). The LCV and HGV fleets have all adopted the latest technologies and emission ratings. We have purchased our first 70 units of ultra-low emission vehicles in the commercial fleet.

Key challenges and risks

Effective transport solutions are critical to the efficiency of our operational delivery. Both LCVs and HGVs must be safe and efficient to operate and available for use. For us, this requires a variety of LCVs and HGVs with specialist racking, lifting, on board power, lighting, payload, effective duty cycles and mechanical robustness. Current EV models limit the allowable payload, and therefore the equipment we can carry. Discussions with other GDNs have revealed they face the same challenges, with their trials being generally unsuccessful. We will continue to engage with the market as technology develops. Our plan to build our own charging infrastructure in RIIO-GD3 will ensure we are ready to respond quickly when the vehicle producers deliver.

The ownership model we deploy for LCVs and HGVs is purchase and own. This is because the discounts, cost of capital and residual values are a lower total cost of ownership than leasing the equivalent vehicles. The ownership model we deploy for LCVs and HGVs is 'own and operate'. This is because the discounts, cost of capital and residual values achieved provide a lower 'total cost of ownership' than leasing the equivalent vehicles.



System efficiency and long-term value for money



4.5 Climate Resilience Strategy

Our commitment to deliver a safe and reliable gas network while providing value for money to customers, means that we must think about climate change impacts and how these could affect our business and customers, both now and for the rest of the century.

We support the commitment of the UK and Welsh governments to reach Net Zero carbon emissions by 2050. We also expect the investments we are making to reduce emissions and decarbonise heat, power and transport to support our commitment to environmentally conscious operations will help deliver a Net Zero energy system. While acting to address the causes of climate change is important, it is equally important to adapt to the consequences which will increasingly become a part of all our lives in the decades to come.



Infrastructure fit for a low-cost transition to net zero

Transition and Physical Climate Risks

To understand how WWU will work in a changing climate, we conducted a risk assessment in July 2024 that identified a range of physical and transition risks that could affect our assets – such as buildings or pipes, the land that we own, and our people. When we talk about physical climate risk, we're describing the potential for physical damage and disruption to people, property, gas supply, and productivity. Transition risks on the other hand, come with a company's move to lower carbon activities and The International Sustainability Standards Board explain the impacts can range from legal through to reputation with changing demands from customers, updated climate regulations and the need for new technology all potentially bringing increased costs for an organisation.

Using the results of our risk assessment we have created a [Climate Resilience Strategy](#). This is an evolving document that will change in line with our increasing understanding of climate change impacts in our region. All the risks we have currently identified have been documented and are maintained and updated in a climate risk register that is structured to fit with DEFRA's Adaption Reporting Power (ARP) requirements. The UK's approach to tackling and responding to climate change is based on The Climate Change Act 2008. In line with this, ARP was introduced for certain organisations that are funded to carry out important public or government services – such as WWU – to make sure that climate change risks are being properly prepared for and reported.





Stakeholder Views

Climate resilience is generally discussed at specialist forums that involve other utilities and infrastructure operators. We are participants in the CS-NOW Project (Climate Services in a Net Zero Resilient World) that is funded by UK Government, members of the cross-sector Climate Change Resilience Working Group, and the Infrastructure Operators Adaptation Forum. These connections mean that we are well informed on news of best practice, the latest analysis, and support tools. A clear and consistent response from other business and economic sectors engaged via these groups is as follows:

- There is agreement on the proposed long-term GDN approach to embedding climate resilience, acknowledging it will take time, for example, the need for a careful cost benefit analysis of capital investments while the exact format of the UK's future energy system is still under review.
- Climate resilience should be considered as one aspect of wider business resilience and addressed collaboratively with stakeholders and customers.
- There are distinct physical differences between electricity and gas networks, which result in different climate change risks.
- There is a need to balance reactive and proactive activities and a mechanism to apply for funding as proposals develop further.
- Balancing climate resilience and security with consumer value and decarbonisation is challenging.
- Agreement with the approach for embedding climate resilience into RIIO-GD3, consistent with evolving requirements of mandatory financial sustainability reporting.

Where the topic has been discussed with a more general audience, stakeholders have stated the importance of addressing the needs of vulnerable customers and enhancing community resilience through work on our own company resilience. Our [Climate Resilience Strategy](#) will continue to evolve as we engage with stakeholders, other networks and specialist advisors.

Climate Resilience Strategy Approach

To help us develop our strategy, we commissioned Frazer-Nash Consultancy whose expertise includes analytical and technical support of the gas and clean energy industries. They established the background for relevant staff by delivering a webinar on climate models used in the UK and the climate change scenarios used to inform UK policy and business planning. We then ran a risk scoring workshop with our consultant following DEFRA guidance for Adaptation Reporting Power (ARP) 4 reporting which requires organisations to consider the predicted climates for 2050 if the world warms by two degrees of warming, and for 2100 at two and four degrees of warming using UK Climate Impacts Programme (UKCIP) 2018 and Representative Concentration Pathway (RCP) scenarios. The workshop was attended by managers from Operations; Health & Safety; Procurement; Facilities; Net Zero and Sustainability, and Environment.

The exercise identified which parts of the business would be affected and whether risks were specific, business-wide or cascading – that is, they are part of a wider system change that could involve other energy sources, utilities or parts of national infrastructure.

Our Strategy will address short term risks in RIIO-GD3 by updating our adaptation processes with a refreshed Climate Adaptation Plan which will identify risk owners and current control processes, monitoring the effectiveness of these and taking action where appropriate. We deal with longer term risks by committing to a deeper analysis in RIIO-GD3, working with other energy companies, Ofgem, government, academics and specialists to develop a regional approach that is coherent with UK-wide infrastructure resilience.



Overview of Risks

Risk is identified by establishing the climate variable – such as rainfall, windspeed or temperature – that produces a hazard. The impact of this hazard is next considered in terms of vulnerability, exposure to the hazard, and our existing response capability. From a consideration of these we can then identify the risk.

Thanks to their position mostly underground, gas pipes and linked assets are usually less vulnerable to extreme weather hazards. When extreme weather causes ground movement however, the safety of assets beneath the surface is threatened. Above ground gas installations (AGIs) are vulnerable to the same hazards that affect any physical structure, from buildings through to pylons – such as floods, extreme heat/cold, fire, and high winds. In the long-term, sea-level rise is relevant to coastal assets both above and below ground.

Customers and staff are of course exposed to all climate-related hazards. For example, flooding can prevent staff from reaching gas installations and customer emergencies. Extreme heat can affect colleagues working outdoors, particularly in hotter urban environments.

Extreme weather and long-term shifts in climate and sea-level can disrupt supply chains and/or lead to geo-political instability; in other words, a political and economic imbalance within a region or country, that upsets its peace and security.

We have pinpointed cascading risks where climate hazards produce consequences that cascade, across interlinked systems, causing a sequence of events that lead to social, physical or economic disruption.

Transition Risks are defined by the International Sustainability Standards Board as:

“Risks that arise from efforts to transition to a lower-carbon economy. Transition risks include policy, legal, technological, market and reputational risks. These risks could carry financial implications for an entity, such as increased operating costs or asset impairment due to new or amended climate-related regulations. The entity’s financial performance could also be affected by shifting consumer demands and the development and deployment of new technology.”

In addressing transitional risks, there is overlap between the Climate Resilience Strategy and the Sustainability Strategy, Net Zero Strategy, and Business Evolution Approach (which is informed by Future Energy Scenarios). A blend of all this forward-looking work will also enable us to provide a statement on transition in our financial statements and keep in step with Financial Conduct Authority requirements in this area.

Strategic Approach to Risk

An important component of the [Climate Resilience Strategy](#) is an explanation of how we use our management structure to respond to risk. Our company’s Board of Directors is responsible for recognising the long-term strategic risks faced by the company and deciding on a suitable response.

The board members are selected by shareholders to oversee management, alongside protecting the interests of shareholders and stakeholders. While they review the effectiveness of how our key business risks are run, they delegate power to the board Risk Management and Compliance Committee or board Environmental Social Governance (ESG) Committee as appropriate.

Internal governance is provided by our ESG Management Committee, Strategy Development Committee and Net Zero and Sustainability Steering Group, all of which have Executive membership. Detailed actions and Key Performance Indicator reports referring to operational resilience are overseen by Executive and senior managers through the Business Performance Delivery Committee.

The active management of climate risks is built into our risk-based approach to scheduling inspection and maintenance activities, which would result in more frequent checks on assets identified as potentially at risk from environmental effects such as flooding or erosion. This approach is described in more detail in our [Network Asset Management Strategy](#).

An example of this is when active erosion is identified during a river crossing survey, and appropriate actions are taken to mitigate the risk, such as rebuilding a riverbank or reprofiling a riverbed before a pipeline becomes exposed. In some cases where this is not possible, e.g. where the Environment Agency or Natural Resources Wales deem it necessary for the river to establish, or re-establish its own route, we may need to divert a pipeline crossing.

We undertook a proactive review of our infrastructure resilience to severe weather effects in previous price controls, following actions from Department for Energy and climate Change (DECC) and more recently Department for Business, Energy and Industrial Strategy, this was based on data from the Environment Agency and identified a small number of specific assets at risk. We have progressed interventions to mitigate these risks in previous price controls and periodically revisit this area as updated data sets become available.

When designing new projects such as depots, or/and when planning major infrastructure in support of a Net Zero energy system, we think about the impacts of climate change that are predicted for the relevant locality. From there, we adjust the project design to ensure it will be durable and long lasting.



Climate Resilience Strategy for RIIO-GD3

Based on the evidence we gained through the first (2011), second (2015), third (2021) and fourth (2024) rounds of ARP analysis and risk assessment; investment to increase climate resilience during RIIO-GD3 is already included in our plans.

Work to safeguard against climate hazards and the connected risks is included in our baseline spending assessment – known as operational expenditure or Opex – for managing assets plus health and safety operations during that period. Where we have identified a need for capital expenditure (capex), such as replacing a gas main, we have included climate resilience in our calculations.

The unpredictability of climate change, however, means that we should also accept the possibility of a rarer but impactful event such as Storm Dennis (2020) which caused millions of pounds worth of damage in South Wales and South West England. We provide a detailed example of this category of event in our full Climate Resilience Strategy, where Storm Dennis caused significant damage to a pipeline crossing a river. While our base Opex and Capex funds can cover actions to repair the routine wear and tear of a changing climate, we believe that it is essential to maintain a climate change re-opener to protect against such events. This describes a type of flexible funding that can be requested if unpredictable climate events occur and require funds to address. As a country we can expect at least one high impact event in RIIO-GD3, but we cannot be sure where it will cause the most damage.

We will use RIIO-GD3 to continue fine-tuning our understanding of the climate hazards impacting our region, in addition to the cascading cross sectoral risks and the transitional risks for the rest of the century. This enhanced understanding, will inform our investment decisions and business planning for RIIO-GD4 and beyond.

Next Steps and Strategy Timeline



2025-31

Review and refresh existing climate adaptation processes to create a new Climate Adaptation Plan informed by the latest ARP4 risk analysis, providing detail on risk control measures for RIIO-GD3 and forming the basis of our longer-term strategy. This will include a focus on responses to flooding, raised water tables and extreme heat.



2027

We will conduct a risk analysis exercise in line with and anticipating the fifth round of ARP reporting. This will include a review of current procedures and their fitness relative to risk scores. We will begin scoping a project for detailed modelling of regional, long-term risks considering any partnership work at a UK level and how we can both contribute to and benefit from this. We will also seek advice to undertake stress-testing for High Impact Low Probability (HILP) events.



2028-29

Building on the 2027 review, we will implement the modelling project, examining the implications of climate impacts on the scale of sub regions – for instance North, Mid or South Wales – to inform business planning for RIIO-GD4. The modelling will build on our flood analysis work to include an assessment of vulnerability to the consequences of prolonged heat, extreme heat days, and expected long-term sea-level rise. We will undertake stress-testing for HILP events.



2026-31

Analyse weather events that occurred from 2019 onwards, their impact and our response, working with others to determine the degree to which these events are attributable to climate change. Continue to develop plans, strategy and investment goals informed by the detailed regional modelling and national collaboration on UK infrastructure resilience in anticipation of RIIO-GD4 and beyond.



4.6 Our IT and Telecoms Strategy

Strong, protected and resilient systems in RIIO-GD3

Fulfilling our technology needs across WWU while meeting stakeholder expectations is an ever-evolving challenge, and during RIIO-GD3 we will continue our progress to strengthen our defences against potential attacks, protect our systems, and sustain their resilience.

Safeguarding personal data and ensuring controlled access to sensitive information are key concerns for our stakeholders that include consumers and UK and Welsh governments. Alongside a multitude of businesses and institutions across the globe, we see the risk of cyber-attack becoming ever more likely, due to the current geo-political landscape, state sponsored actors and threats growing in sophistication. With the increased adoption of technology and artificial intelligence in all our working practices, security by design and zero trust is essential. In 2026-31 we will build on our significant RIIO-GD2 accomplishments within IT and Telecoms as part of our ongoing measures to ensure we uphold our high-levels of safety, reliability and trustworthiness that have been built over decades in all areas of our operations.

Supporting environmental targets will also be important for our IT and Telecoms work in RIIO-GD3. By furthering our cloud computing capabilities, we will lower carbon emissions as well as electricity consumption, using one of the growing sustainable cloud providers. Our provider facilitates infrastructure and application deployments at economies of scale and has committed to renewable energy sources by 2025.

Fulfilling our licence conditions around data and digitalisation, mean that we must establish new capabilities to share our data across the rest of the industry and stakeholder communities.

We will need new expertise in these areas with further resources across our whole IT and Cyber estate. To achieve this, we will recruit appropriately skilled individuals to the business while also up-skilling our current colleagues. We will complete the majority of this recruitment and up-skilling in RIIO-GD2.

How we built our strategy

To build our plan for RIIO-GD3, we worked with business partners, stakeholders, and industry leader Gartner Consulting, leveraging their research of trends and Hype Cycles across utilities, businesses, and peer organisations to give an unbiased view of external factors. The Gartner Hype Cycle is a graphical representation of the lifecycle stages a technology goes through, from the initial development to its commercial availability and adoption, as well as its eventual decline, obsolescence, and replacement with new solutions; and is a way for clients to track technology maturity and future potential. Following a review of our project plan, Gartner have confirmed we are on the right track and that our cost profile is within the range they see from our peers. We have included their report as a supplementary document, and this is also summarised in our IT and Telecoms Strategy.

Most importantly, we have built this IT and Telecoms plan for our business, in full collaboration with our internal and external stakeholders, who in turn have developed their plans in full collaboration with their external stakeholders to ensure we meet their expectations and deliver a strategy that fully supports their ambitions during RIIO-GD3. For example, we have completed surveys with all our business application owners and workshops with all senior process owners across WWU to establish roadmaps in support of their business objectives. Our plans have also been reviewed by our Independent Stakeholder Group.

Strategic themes for RIIO-GD3

Our strategic themes are the high-level areas we will focus on to succeed in our goals for the next price control period. These themes are a continuation of our RIIO-GD2 focus on building and operating strong, protected and resilient systems, with even more emphasis on Digitalisation and sustainable IT.

Lifecycle management

The work to ensure existing technology is up-to-date, secure, and supportable, will include consolidating applications, re-platforming, and lifecycle maintenance. When investing for the future, we will focus on maintaining essential technology and phasing out what is outdated.

Business transformation and digitalisation

We will introduce new functions and capabilities aligned with strategic goals, including Net Zero targets, digitalisation best practices, and resilience. This will enhance safety, environment, customer service, asset management, and human resources (HR) outcomes.

Continuous improvement

To lead in new and emerging technologies, we will conduct research and development, proof of concept trials, and innovative projects. This will make sure our technology landscape continues to be robust, flexible, and forward-looking.

Sustainability

We are conscious of our responsibility to the environment and have built these values in our day-to-day culture and to the IT services we provide. We will continue this into RIIO-GD3, with a cloud provider that is committed to 100% renewable energy. We will reduce waste wherever possible including printing and encourage paperless processes, while also placing an emphasis on purchasing energy efficient equipment.



Operational resilience

Telecoms that encompass both data and voice through segregated Information Technology (IT) and Operational Technology (OT) networks to improve operational resilience and cyber security. The RIIO-GD3 plan includes programmes of work to take a whole system view of resilience and business continuity, bringing together expertise and good practice from both our IT and Engineering teams.

Strategic highlights

Our key initiatives will include:

- **Control system enhancements** – This project focuses on improving our control systems to enhance operational efficiency and safety.
- **Developing our connections and disconnections platform** – We will develop a digital platform to more effectively manage the process of connecting and disconnecting homes and businesses from the gas supply.
- **Business warehouse replacement** – Our business warehouse, in the context of our IT department, combines and formats large amounts of our data in a centralised database, enabling us to analyse and interpret information for better decision-making. Our work to replace the existing system will improve our data management and reporting.
- **Digital twin** – Creating a digital twin of our network will give us virtual models of our buildings, systems, and processes. The digital twin will be connected to our real-world counterpart by a two-way flow of right-time data, copying it in all aspects. This will help us to evaluate decisions before we make them and understand how different actions might affect the real world. It is also critical for NESO to enable the optimum decisions to be made on the low carbon energy network of the future.

– Enhancing field services applications –

By focusing on common platforms and fit-for-role applications that our engineers use during field work; we will make sure our operations are more consistent and efficient.

- **Data and digitalisation** – Investing in data and digitalisation initiatives such as creating a platform that will enable us to share more data within the industry and building interfaces to the Data Sharing Infrastructure (DSI) of the UK. These will enhance our data management and digital capabilities and play a significant role in supporting our internal and external data user needs.

- **Re-platforming our BAM** – A Business Activity Monitor (BAM) allows the real-time monitoring of business processes, operations, and activities.

- **Improving our DNCS applications** – Enhancing the applications we use within our business Distribution National Control System (DNCS) with continual upgrades will improve control and monitoring of our distribution systems.

RIIO-GD2 to RIIO-GD3: a comparison

In RIIO-GD2, we set out with a clear direction to invest heavily in replacing or updating our legacy applications, infrastructure, and core IT applications, continuing our adoption of software as a service (SaaS) and move to Cloud services. Legacy applications describe the outdated computing systems, hardware, or software still in use because they continue to conduct important functions, but the challenges can range from security vulnerabilities to a lack of available updates.

Our focus was driven by ever-changing technology, rising customer expectations for digital services, and a challenging geopolitical landscape that saw an increased threat of cyber attacks across the industry.

We have made significant progress, including establishing a cybersecurity team, transforming our Enterprise Resource Planning (ERP), our cloud computing capabilities, and moving almost half of our applications to SaaS platforms. To add extra detail, ERP means the systems that tie together a host of business processes and enable the flow of data between them. Our goal is to have the majority of infrastructure – servers, routers, storage, and data management – on cloud platforms within the first year of RIIO-GD3.

We require an increased base allowance in RIIO-GD3 compared to RIIO-GD2, because of the work to adapt to new technology challenges and cyber threats. The re-openers mechanism in RIIO-GD2 has allowed us to reach a baseline Cyber Assessment Framework (CAF) profile and laid the foundations for building towards an enhanced CAF profile. Established by The [National Cyber Security Centre](#) (NCSC), CAF is an approach for organisations to assess their management of cyber risks.

In responding to a greater demand for resilience and availability in an uncertain world, we have designed our technology plans to deliver an advanced level of protection against cyber threats. We have increased our headcount in both cyber and IT departments in RIIO-GD2 to accommodate this, under re-openers agreed by Ofgem.

An increasing global trend for subscription-based services, especially in IT, also drives a shift from Capex to Opex. As we move from RIIO-GD2 to RIIO-GD3, the Opex percentage of spend will rise from 50% to 70%.

Our work with Gartner ensures that the efficiency of our programme of work and cost profile are understood in line with peer organisation and industry expectations. We ensured our technology plans are aligned with our overarching business objectives.



Complete value supply chain

As we reach the end of RIIO-GD2 we have conducted a contract review to ensure our supply chain provides complete value and efficiency across all our IT and Telecoms services. By the start of RIIO-GD3 the most significant contracts will have been re-tendered and aligned to RIIO-GD3 scope and outcomes, such as ensuring resilience and sustainability is included by default.

Skills for the future

Technology is constantly evolving, and we must keep pace with demand from our stakeholders to deliver a resilient service, accessible data and protect against external threats. We also need to support environmental targets by exploring sustainable solutions such as cloud computing and reducing waste. This all requires continuously improving skills and investing in our people. We will continue to develop the necessary teams as we have in RIIO-GD2 to provide these core capabilities and level of flexibility in-house through either hiring or upskilling current colleagues, acknowledging the competition for similar skilled resources across the country.



Infrastructure fit for a low-cost transition to net zero

Cost drivers

As RIIO-GD3 approaches, our expenditure needs are notably shifting from Capital Expenditure (Capex) to Operational Expenditure (Opex), driven by the adoption of SaaS technologies. A major part of this transition is due to moving from regular data centre upgrades to a cloud infrastructure platform. The primary factors driving our costs include:

Increased IT and cyber staff

In response to new cyber and digitalisation regulatory requirements, we are increasing IT headcount from 30 x Full Time Employees (FTE) to 71, and cyber staff from 20 x FTE to 68. This growth began in RIIO-GD2 as a result of reopener this, under re-openers agreed by Ofgem, setting the entry point into RIIO-GD3 as the operating model required to achieve and maintain Enhanced Cyber Assessment Framework (CAF) profile by 31 December 2027, and further improve cyber resilience.

Shifting data centre infrastructure

Early in RIIO-GD3, we will migrate most business applications from on-premises data centres to cloud-based, leading to higher Opex running costs but lower Capex investment as we move away from traditional Capex projects like hardware upgrades. Some control systems and telemetry infrastructure will remain for resilience purposes.

More apps and subscriptions

Aligning with industry trends, we will transition from Capex licensing and software costs to a subscription-based SaaS model for many key licences. We will support a greater number of applications as we enter RIIO-GD3 than we did at the beginning of RIIO-GD2. These additional applications such as security, identity and Health and Safety solutions are to support stakeholder needs and bring enhanced security and resilience.

New systems

Our plan includes implementing new systems and applications required to deliver all aspects of our RIIO-GD3 plan, alongside the rationalisation of our existing estate, retiring systems no longer required. This has been determined through extensive engagement with all departments and business process owners building the Business Plan to meet the needs of external stakeholders.

Network Operations Centre

We will expand monitoring capabilities across our IT and OT systems by establishing a Network Operations Centre (NOC) for 24/7, 365 days/year proactive monitoring. This will give us even greater visibility of our systems in real-time to maximise operational performance and cyber resilience.

Re-opener for unforeseen changes

Given the constantly changing landscape in technology and cyber security, a re-opener in RIIO-GD3 is necessary to respond to unforeseen changes. The cost profile has been built from the ground up to ensure continued safe and reliable service plus all required improvements that we already know about but remaining adaptable to change.

Data and digitalisation consumption charges

Building on our foundational work in RIIO-GD2 and recognised in our RIIO-GD2 re-opener allowances, as agreed by Ofgem, costs in this area are rising along with evolving sector requirements, which are detailed in our [IT and Telecoms Strategy](#).

Cyber investments

To continuously improve our cyber resilience and ensure gas supply security, we will increase investments in both cyber and physical security. In line with UK Government and Ofgem objectives, we aim to bolster internal skills and capabilities as an Operator of Essential Services (OES) and reduce dependency on third-party providers by enhancing our in-house expertise in cyber security where appropriate. The [Information Commissioner's Office \(ICO\)](#) describes OES as organisations that operate services deemed critical to the economy and wider society. Our Opex investment in the cyber domain will grow in RIIO-GD3 due to increased adoption of cloud and SaaS security services.



5. Delivering value for money

Providing good value for money is built into all that we do to keep customers safe and reduce our impact on the environment.

We report to our regulator Ofgem every year to ensure our performance is achieving the levels of service and value we've agreed with stakeholders – performance targets we're proud to have consistently achieved.

In this section we talk about how we will maintain the efficiencies embedded in current and previous price controls; and how this generates savings and enhanced workforce resilience for RIIO-GD3.

We discuss the ongoing testing of our operating model for value for money through external tender processes, and our approach to financing our investment needs at a reasonable cost. We go on to share the impact on customer bills, and the positive feedback and support from customers on this.

While, in Chapter 5.2: Managing Uncertainty, we look ahead to the ambiguity facing GDNs that includes energy system policy decisions, and the need for structure and support from flexible funding mechanisms.

What's in this section:

5.1 Cost efficiency Strategy

5.2 Managing uncertainty

5.3 Customer bills

6 Financeability

Mapping to the UN Sustainable Development Goals

In Chapter 1.3, we introduce how we align with the SDGs and are committed to sustainable practices. In these business areas in RIIO-GD3, we will contribute to the following goals:





5.1 Cost Efficiency Strategy

Introduction

Our organisational strength and stability has been built over generations, with cost efficiency at the forefront of every decision we make. Delivering Value for Money is one of our five business priorities, and we recognise and hear that given the wider economic climate, this is also a priority for our stakeholders. Our plan embeds efficiencies from operating model changes, business as usual (BAU) innovation, and continuous improvement initiatives.

Further efficiencies will be challenging. However, we are committed to working smarter and will therefore find new ways to achieve a further stretching productivity target.

Our Totex investment plan

The work required during our RIIO-GD3 is a continuation of RIIO-GD2, focusing on delivering the mandatory works programmes required to maintain a safe and resilient network. We have aligned our submission to this; as a business that continues to deliver on our outputs; our high quality of service; and on our other obligations – as we have done for successive price controls.

The vast majority of our spend is considered mandatory to deliver on our core safety, legal, regulatory and statutory obligations. Replacement activities mandated by the HSE through the IMRRP, and the replacement of critical Wales Transmission pipelines are the main reasons for increases to our operational costs. These are offset by anticipated reductions in new connections and the resultant reduction in mains reinforcement required.

The small non-mandatory expenditure is a continuation from RIIO-GD2 and is supported by stakeholders. It includes flexible funding for ongoing delivery of our Net Zero pathway, to enable environmental management, and an apprenticeship scheme to support workforce resilience – all of which are further detailed in [Chapter 3.1 Net Zero](#), our [EAP](#), and our [Workforce Resilience and Supply Chain Strategy](#).

Efficiency is embedded in our plan

Our operating model

At the beginning of RIIO-GD2, a full business operating model review and a business-wide external tender process made clear that an in-house delivery model was the right choice for our business. We transitioned away from an outsourced operating model that was dependent on contractors, instead choosing to employ an insourcing strategy. This allowed us to deliver cost savings by removing contractor profits and partly mitigate significant cost increases. This fundamental change has greatly benefitted our efficiency and strengthened our workforce resilience. We now have greater flexibility and efficiency in how we use our industrial workforce, a fact that continues to benefit our people and the communities we serve. This has been evidenced in the continual improvement to our customer satisfaction score following the move to an insourced model.

Concurrently, we completed a number of other business initiatives to restructure and save costs which are also embedded into BAU and therefore our RIIO-GD3 plan. These include:

- **Merged departments to align business processes** – Our emergency department and network services department (responsible for network maintenance) were merged to allow cross-sharing of skills and use of staff across activities, ultimately increasing efficiency. Operational support and back-office departments were also reorganised and merged.
- **Workspaces, such as depots, were all combined** – Managers and teams, whether leakage, repair, maintenance, connections or replacement are all based out of the same depots which helps our teams to discuss, plan and react accordingly to changing demands on the network.





– A new Head of Operations structure –

With all operational delivery activities under one organisational structure. Having all staff working as one team under one organisation provides us the opportunity to train and flex a wide pool of resources across all work activities and our geography, deploying our people in the most efficient way and maximising productivity. It also provides greater flexibility to react to changing operational demands (i.e. a peak winter) without commercial pressures getting in the way.

– Changes to our workforce pay structure –

We moved from a flat pay-structure to a tiered structure that is aligned to skills and competence. This has provided a clear pathway from entering the workforce through to management positions, helping with retention and workforce resilience.

– Voluntary redundancy programme –

Put in place to enable the departmental changes above; a one-off cost was incurred to embed long term savings into the operating model.

– We have adopted a buy over hire strategy –

This particularly applies to vehicles, wheeled, core plant, and equipment where we purchased assets rather than hiring. This was another commercial opportunity to remove profit margins by maintaining ownership of assets that are critical to our business and remove the reliance on third parties.

– We closed the Defined Benefit Scheme to future accrual, providing annual saving across the business.

As gas networks, we have also completed a number of innovation projects to manage iron and steel mains risk. We are now entering the final phase of the IMRRP; innovative techniques are already adopted and embedded where possible and suitable to our network. These are discussed in greater detail in [Chapter 3.5 Innovation](#) and our [Innovation Strategy](#).



System efficiency and long-term value for money

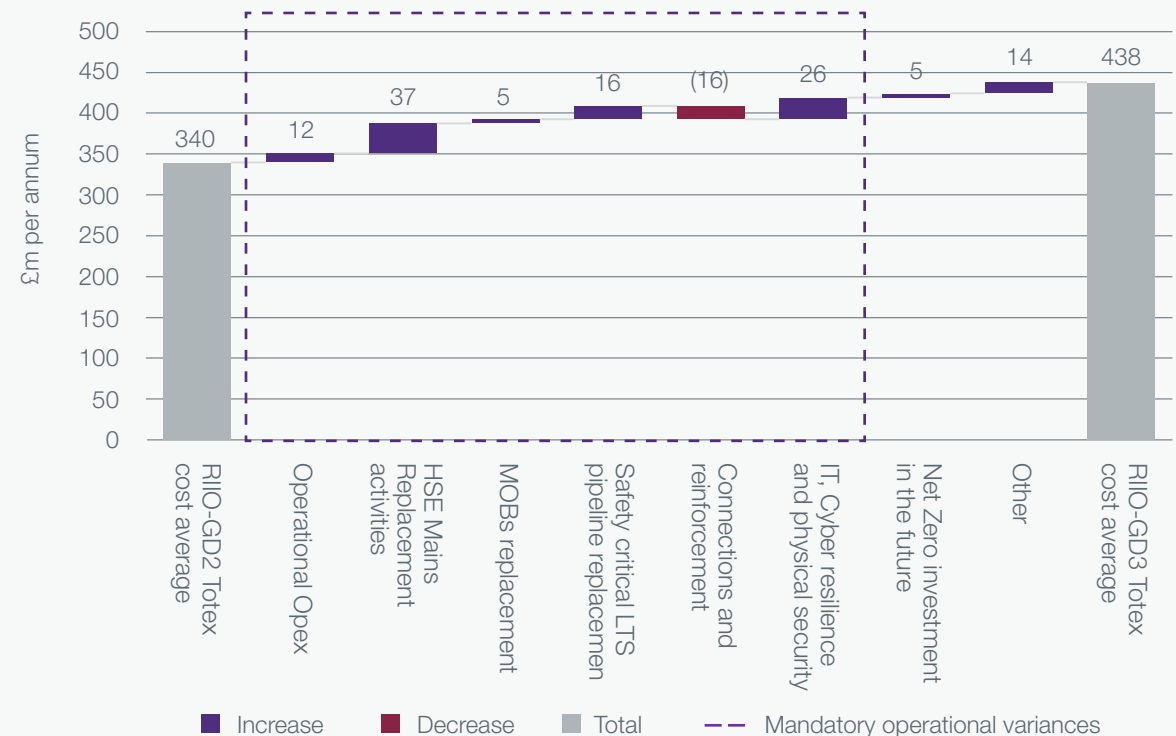
Overall impact on efficiency, resilience and quality of service

We made these changes for their clear financial and operational benefits. However, we could see the potential complementary opportunities of applying an insource model across our operational activities. As we have progressed through RIIO-GD2 the in-house delivery model continues to demonstrate we made the right choice for our colleagues and our customers. We have brought skills in-house, have direct and greater control over all aspects of the programme and have partly mitigated the pressures we identified in continuing in an outsourced environment.

Our insource model also contributes to the resilience and efficiency of our workforce; throughout RIIO-GD2 we have invested significantly in our people and training, resulting in our direct labour Build and Repair teams being skilled, competent and available to mobilise to multiple work activities as needed by our management team.

Our operating model provides us with a much more resilient workforce than other operating models, as proven in recent years when winter workload spikes have hit, and we have upheld our high quality of service and standards.

RIIO-GD3 waterfall totex





Testing our plan through robust, external tender processes

We continually assess the efficiency of our cost base, whether that be the strategic operating model we employ, the supply chain we work with, or the size of our supporting departments.

For RIIO-GD2, we completed a significant tender event that included in its scope all WWU Operational activities, which include mains replacement; connections; maintenance; leakage, and repairs. The entire process was the culmination of almost three years of work and involved a dedicated project team. Most notably, there was only interest in Mains Replacement activities, and that was focused on the M4/M5 motorway corridor areas of our network. Tenderers expected higher margins and had a lower appetite for risk.

The cost to remain outsourced was higher than the insourced alternative, but the move only partially mitigated the forecast cost pressures, and while cheaper than the external market the cost was still significantly more than the allowances set by Ofgem. We appealed this to the Competition and Markets Authority (CMA), and we are now experiencing the underperformance (spend above allowances) predicted.

For RIIO-GD3, to ensure value for money for consumers we have retendered Mains Replacement. The procurement process for RIIO-GD3 Mains Replacement was run by a third-party independent procurement specialist on our behalf.

We continue to experience similar limitations as RIIO-GD2, with limited market interest and a similar risk appetite.

A stretching ongoing efficiency target

We recognise that all businesses can make productivity and efficiency savings over time. As explained above, we delivered efficiencies in RIIO-GD2 which are now embedded in our base plan. Raising the bar and improving standards is built into our culture, so we are committed to continuing to identify and deliver efficiencies, driving value for money and helping to keep our proportion of consumer bill as low as possible.

In collaboration with other gas companies, we commissioned a report by economic advisors to understand the current macroeconomic factors relating to productivity gains and to identify the most likely range of efficiency savings that will be made in the UK over the next five years – we have used this in establishing our stretching efficiency target of c.£33m across the price control.

We consider c.80% of our Totex investment plan to be a continuation of spend on activities that are business as usual in RIIO-GD2. For these activities we propose a 0.6% per annum ongoing efficiency challenge which is ambitious and towards the top end of the range identified. This represents a 0.5% per annum ongoing efficiency challenge on 100% of Totex.





5.2 Managing uncertainty

The uncertain outlook for RIIO-GD3

With uncertainty over UK government policy, the transition to net zero and the final years of the current 30-year IMRRP – which ends in 2032 – this next price control brings greater uncertainty than those that came before. Such uncertainty brings with it operational risks such as:

- Loss of critical front line operating staff and inability to recruit new staff to support workload growth
- Loss of contractors to other industries that have significant investment plans, for example water and electricity
- Supply chain resilience, including access to tools, equipment and materials
- Policy and legislative changes that impact our operational delivery, both how we carry our day-to-day operations and the total workload demand (i.e. a change in HSE direction, government policy decisions).

GDNs face greater uncertainty in RIIO-GD3 than in any other price control period to date and so a wider range of reopeners and Uncertainty Mechanisms (UMs) is required. The alternative would be providing up front allowances for uncertain costs and risking consumers overpaying or network companies being underfunded. While we sympathise with Ofgem's aim to rationalise and simplify the reopener mechanisms available in RIIO-GD3, this can be at odds with the changing risk profile. If emerging risks and uncertainties aren't appropriately dealt with, this can cause issues for consumers and GDNs.

Reflecting on the RIIO-GD2 regulatory mechanisms

The use of Uncertainty Mechanisms (UMs) is well established across regulatory controls; mechanisms that balance unknown or unquantifiable cost and volume risk with the requirement to provide GDNs adequate allowances for investment, while protecting consumers from inappropriate charges.

The most significant of those mechanisms are:

- **Reopeners** – allows a GDN to raise a claim for additional allowances to fund costs for an activity that was deemed too uncertain prior to the price control.
- **Volume drivers/volume adjusters** – adjusts GDN allowances based on actual volume delivered
- **Use It or Lose It allowances** – provides GDNs with upfront allowances that is handed back if not utilised
- **Real Price Effects adjustments** – an index calculated adjustment to allowances that mitigates the risk of excessively high or low changes in certain costs (i.e. oil) that are unpredictable.

RIIO-GD2 mechanisms left GDNs with a material amount of risk. Along with an appropriate allowance for cost of equity which is calibrated to allow for systematic and non-systematic risks, these mechanisms should provide the basis for the toolkit to appropriately manage RIIO-GD3 uncertainty, a price control that will have more uncertainty than those previous.

The reopener mechanism has been the most significant for RIIO-GD2 and undoubtedly will be for RIIO-GD3. While we still have a few critical reopener submissions to be determined, overall, we consider the mechanism to have been an effective and fair way of dealing with uncertainty for customers and companies.

We welcome the collaborative working adopted by Ofgem through this business planning process and welcome this continuing post-submission ahead of setting of the RIIO-GD3 framework. In particular, we have looked back at the experience in RIIO-GD2 and have some recommendations to improve the governance and efficiency of the process, thus allowing both companies and Ofgem to focus on delivering the appropriate outcomes to consumers.

RIIO-GD3 uncertainty

While we understand the likely areas that will create uncertainty in RIIO-GD3, such as changes to government policy and legislation, the UK's transition to net zero and the final years of the IMRRP, we do not know the financial or operational impact that these will cause. Future UMs must be broad enough to manage this increased risk and uncertainty.

We cover our views of the reopeners in the Cost Assessment and Benchmarking Approach but principally we need to ensure the uncertain areas identified are covered within the scope of the mechanisms that are implemented. We recognise the need to streamline the volume of reopeners down to a manageable and structured level and we would advise they could be broken down in smaller number that includes the grouped uncertain areas i.e. legislative change. A grouped approach could aggregate up the materiality trigger level and ensure there is planned approach to timely reopeners. We had a similar approach in policy for RIIO-GD1 that could be reintroduced. We welcome further discussions on both streamlining and aggregation of reopeners, through policy working groups and licence drafting.

5.3 Customer bills

Consumer engagement on bill level and direction

We undertook deliberative consumer research on proposed RIIO-GD3 consumer bills relating primarily to the network distribution charge element, involving over 200 consumers across a broad range of demographics in our region. This included discussion on value for money, services to be provided and the acceptability of the bill into RIIO-GD3 and was carried out independently to ensure it was statistically valid and unbiased.

The research was structured into three parts, the background and work of WWU, the bill breakdown (current and future), and balancing the needs of consumers and shareholders.

The first section identified consumers were unaware of the level of value they receive from WWU's part of the bill such as safety, reliability and consumer/vulnerability services.

One consumer said,

"I have worked in a company that look after a warehouse, and they (WWU) detected a pressure drop which could have been a leak and they (WWU) were there within the hour which is really good. From a business and domestic homes point of view it is key to have a fast response time to have that reassurance around the safety. Also important for vulnerable people going into the winter that the service is speedy to ensure people have heating during the cold months."

Another customer stated,

"When explained in the presentation what this cost from the consumer actually covers, I think it is great value for money. I'm not someone who thinks about how my gas gets into my home but now it has been explained in depth and the safety aspect around it."

We then moved on to the bill breakdown which included information on all the movements between RIIO-GD2 and RIIO-GD3, simplified.

A consumer fed back,

"I think she (WWU representative) explained it all very well. I liked the housing analogy and the commitments and values"

Consumers responded to a specific value for money question on the bill with an 83% acceptance rate. This is reinforced by separate research, engaging 1,401 consumers (1,249 domestic and 152 businesses) on the acceptability of each of our proposed RIIO-GD3 commitments, showing over 90% acceptance for all. Additionally, we engaged 73 stakeholders from 64 different organisations, to test their acceptance of our proposed commitment and all scored above 3 out of 5.

Most respondents noted all information was presented in a fair and unbiased way.

While a small number of respondents considered the bill increase to be too high, the conclusion of this work is that a significant majority support our proposals. Most respondents believe that a higher average household bill (relating to the network distribution component) is a price worth paying if the alternative would leave shareholders unrewarded and more inclined to withdraw their support – which could have implications for the safety and resilience of the network, capacity to support the most vulnerable, and the pursuit of a low-cost transition to net zero.

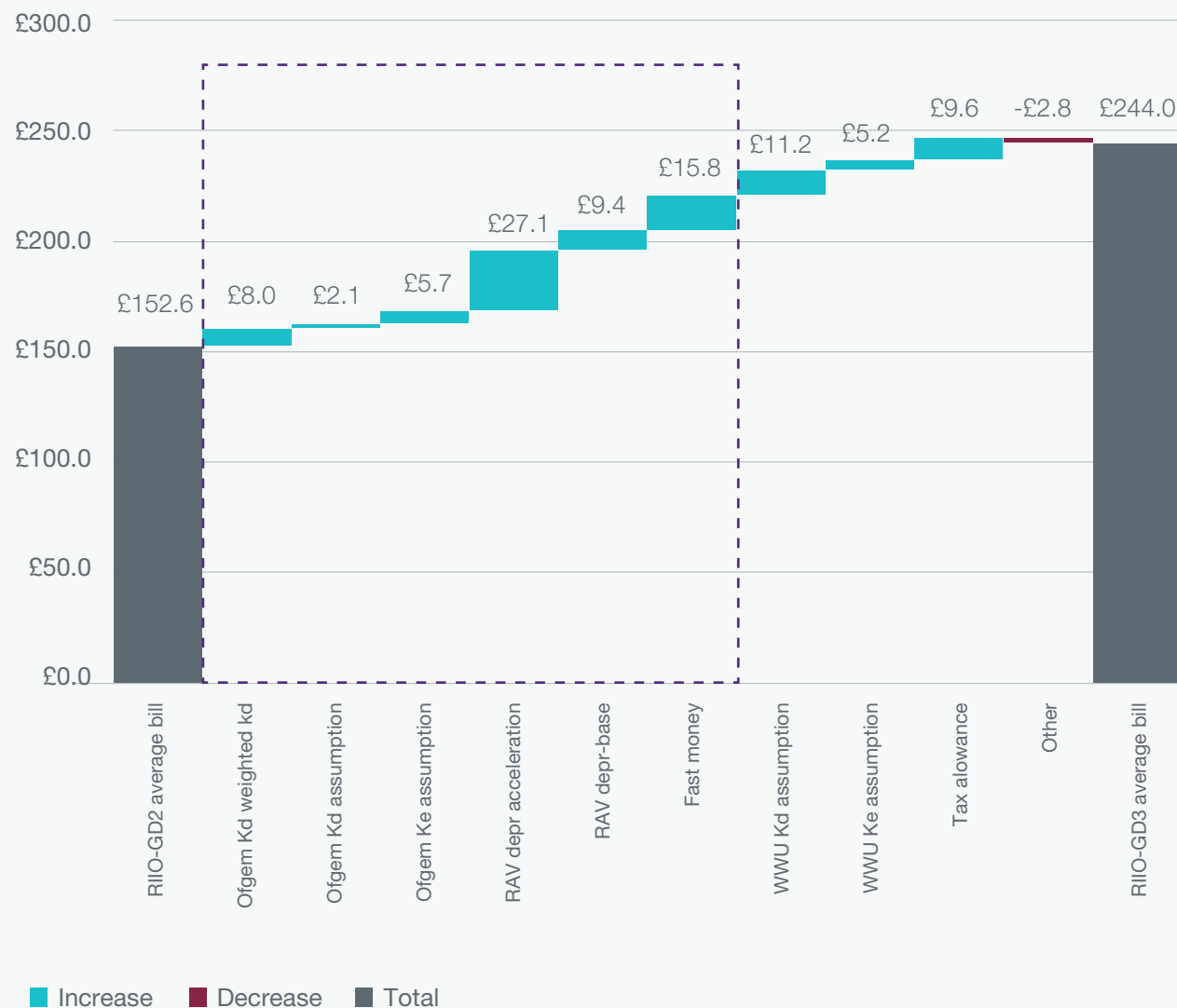
As a final confirmation of this position, respondents were asked to indicate their views on the overall acceptability of the proposed RIIO-GD3 bill and 82% indicated that they believe WWU's part of the bill proposals to be acceptable, by selecting 'fair', 'good' or 'excellent' in support of WWU's part of a consumer bill and the value for money it represents.



Customer engagement:

- Customer engagement on bill level and direction:
We undertook customer research on RIIO-GD3, including bill level and direction. This research shows positive feedback and support for WWU's RIIO-GD3 plan and bill level.
- We have considered customer bill impact in RIIO-GD3 over RIIO-GD2. We project an increase in the annual average bill from £153 to £244 (2023/24 prices), i.e. a £91 (59%) increase. This relates to the distribution element of the total gas bill.
- Of this increase, £68 (75% of the increase) is due to (i) Ofgem policy decisions on RAV depreciation acceleration and WACC and (ii) higher Totex to sustain the safety, reliability and customer service levels of the network. (represented by the bars within the purple dotted line on the graph)
- When this £91 increase is considered as part of the overall gas bill, the increase is 11.5%

Customer Bill RIIO-GD2 to RIIO-GD3 (23/24 Prices)



6. Financeability

1. Overview

We operate an efficient, prudently managed and financeable business, fully invested and with no output deficiencies. We are determined to keep customer bills as low as possible within the context of ongoing consistently strong performance in safety, reliability and customer service. We have supportive shareholders. We have engaged customers in our preparations of this Business Plan.

2. Financeability assessments required by Ofgem

2.1. Background

- a. All cost of capital rates quoted below are in real CPIH prices unless stated otherwise.
- b. Ofgem requires a financeability assessment of the Notional capital structure basis and the actual capital structure basis. We refer to these plans as the “Notional Company” and “Ofgem Actual Company” respectively.
- c. The key differences between these two plans relate to cost of capital.
 - For the Notional Company, we are required to apply Ofgem’s assumed allowance for cost of debt and equity, and an assumed dividend yield. The actual cost of debt will equate to the assumed cost of debt.
 - For the Ofgem Actual Company, the same Ofgem assumed allowances for cost of capital are applied, but we must apply the WWU actual cost of debt and dividend yield.
- d. Totex is specific to WWU and is consistently applied to each of the above plans. For each plan, the Totex allowances are assumed to cover Totex inputs.
- e. As noted in our Finance Annex, Ofgem and WWU hold different legal views on the matter of how Ofgem’s finance duty should be interpreted and discharged by Ofgem and within that, its approach to financeability assessment.

Our views on Notional Company financeability are provided to ensure compliance with the Business Plan requirements set by Ofgem and are entirely without prejudice to our legal position as presented in the ongoing litigation.

2.2. Financeability assessment – Ofgem’s specific requirements.

- a. Ofgem requires: “licensee Board assurance that the licensee is financeable both on a notional and actual capital structure basis. However, if any financeability challenges are identified, the Business Plan should clearly set out:
 - details of what these financeability challenges relate to (for example, servicing equity or debt)
 - what management efforts or mitigating actions could reasonably be made to address them
 - what regulatory measures should be taken alongside the management efforts or mitigating actions
 - that all other applicable measures to aide financeability have been considered, and
 - that statements and conclusions are supported by evidence and justification”²⁰

2.3. Notional Company – financeability assessment

- a. We conclude that the Notional Company should be financeable but with reservations both on equity financeability taking investability considerations into account and on debt financeability.²¹ Specifically:
 - **Debt financeability:** The Notional Company should be debt financeable at a BBB+ target issuer credit rating. This conclusion assumes no material adverse outcomes from the concerns we have raised in section 2.2.a)(i)-(v) in the Finance Annex and that the Draft and Final Determinations by Ofgem in 2025 will be balanced on an overall risk and return basis.

— Equity financeability:

- i. Based on Ofgem’s Business Plan assumptions for allowed cost of equity of 5.43% and base dividend rate of 3%, base dividends and return of equity through special dividend are not impeded, whilst maintaining gearing at 60%. To that extent, the Notional Company should be equity financeable provided our concerns raised in Section 2.2(a)(i)-(v) of the Finance Annex and the Draft and Final Determinations in 2025 are balanced on an overall risk and return basis.
- ii. However, and based on strong evidence provided in the Finance Annex, WWU disputes the sufficiency of Ofgem’s assumed allowed cost of equity and base dividend rates. When assessed in the context of the evidence and justifications presented in the Finance Annex, those rates would not attract new equity in the event this is needed and are therefore not consistent with equity financeability in a more appropriate wider sense when investability considerations are taken into account. Further, those rates could act as a disincentive to maintain gearing at 60% and impel equity investors to withdraw more of the existing equity, subject to financial resilience measures. We note Ofgem’s view, in the context of investability, that UK and global infrastructure investment is likely to increase significantly in the coming years.²² Therefore, it would not be prudent to assume equity investment in RII0-GD3, should it be required, at the Ofgem assumed rates for Ke of 5.43% and base dividend yield of 3%. Likewise, retention of existing equity is subject to the same investability considerations.

- b. We have considered customer bill impact in RIIO-GD3 over RIIO-GD2. We project an increase in the annual average bill from £153 to £226 (2023/24 prices), i.e. a 48% increase. (£73). This relates to the distribution element only of the total gas bill. The increase is largely due to (i) Ofgem policy decisions on RAV depreciation acceleration and WACC²³ and (ii) higher

Totex to sustain the safety, reliability and customer service levels of the network. When this £73 increase is considered as part of the overall gas bill, the total increase is 9%²⁴.

- c. We have considered remediation measures. We have concluded that Ofgem should (i) adjust its allowed cost of equity and dividend rates to the well evidenced WWU Company specific equity and equity distribution rates, (ii) ensure that our concerns raised in section 2.2.a)(i)-(v) in the Finance Annex do not lead to material adverse outcomes and ensure that overall risk and return are balanced in its Draft and Final Determinations in 2025.

2.4. Ofgem Actual Company – financeability assessment²⁵

- a. Ofgem's Actual Company plan would neither be debt financeable at a target issuer rating of BBB+ nor equity financeable. The causes are Ofgem's assumed level of allowances for cost of debt and equity that are too low and Ofgem's assumed equity distribution rate that is too low.
- b. Debt financeability is not achieved at the target rating of BBB+ despite a significant restriction to both return of equity and to the base dividend, to control gearing at exceeding 60%.
- c. Those restrictions in turn significantly impair equity financeability.

- d. This overall financeability position follows measures by WWU and its shareholders to support financeability in RIIO-GD1 and RIIO-GD2, including an equity injection of £344m in 2023, and efficient levels of expenditure in the business and capital structure.
- e. Given equity investor expectations for RIIO-GD3 noted in 7.2b of the Finance Annex, and investability considerations, further remediation from equity investors is unlikely due to a revenue allowance for WACC that is too low, a base distribution rate that is too low, and an inadequate return of equity in the context of £463.5m of RAV depreciation acceleration revenues.
- f. We have considered customer bill impact in RIIO-GD3 over RIIO-GD2. Please refer to our comments above in Section 2.3b which apply here.
- g. Ofgem should consider the evidence base and justifications contained in the Finance Annex for the allowed cost of equity and debt rates in WWU's Company specific plan of 6.89% (Ofgem's rate is 5.43%) and 5.0% (Ofgem's rate is 2.9%) respectively and:
- adjust its assumed rates to WWU's rates, and
 - adjust the base equity distribution rate from 3% to 5%, and
 - Ensure that our concerns in section 2.2.a)(i)-(v) do not lead to adverse outcomes, and
 - Remove the flaw in the calculation of excess interest for tax clawback purposes to ensure that excess interest, as a matter of policy intent, fairly reflects excess gearing, and
 - ensure that overall risk and return are balanced in the Draft and Final Determinations in 2025.



3. WWU Company specific plan²⁶

- 3.1. Ofgem permits licensees to apply different assumptions for allowed revenues for cost of capital and to submit a plan on that basis. We refer to projections prepared on this basis as the “WWU Company specific plan” for comparison with the above two plan versions required by Ofgem as we believe stakeholders, in particular our investors, will be interested.²⁷
- 3.2. Based on strong evidence and justifications, the appropriate allowed cost of equity and debt should be 6.89% and 5.0% respectively, and the appropriate distribution rate should be 5%.²⁸

3.3. Customer engagement:

- a. Customer engagement on bill level and direction: We undertook customer research on RIIO-GD3, including bill level and direction. This research shows positive feedback and support for WWU’s GD3 plan and bill level.
- b. We have considered customer bill impact in RIIO-GD3 over RIIO-GD2. We project an increase in the annual average bill from £153 to £244 (2023/24 prices), i.e. a £91 (59%) increase. This relates to the distribution element of the total gas bill.
- c. Of this increase, £68 (75% of the increase) is due to (i) Ofgem policy decisions on RAV depreciation acceleration and WACC and (ii) higher Totex to sustain the safety, reliability and customer service levels of the network and (ii) £16 (18% of the total increase) is due to higher allowed WACC required by WWU - the scale of this increase is largely due to the low baseline created by inadequate revenues for RIIO-GD2, mainly due to an inadequate cost of debt allowance and which caused a significant equity injection in 2023.
- d. When this £91 increase is considered as part of the overall gas bill, the increase is 11.5%.²⁹

3.4. Financeability:

- a. **Debt financeability.** We conclude that this plan should be debt financeable at the BBB+ target (albeit with some downward pressure on that rating level by the end of RIIO-GD3) provided there would be no material adverse outcomes from the concerns we have raised in section 2.2.a)(i)-(v) in the Finance Annex and that the Draft and Final Determination by Ofgem in 2025 would be balanced on an overall risk and return basis.
- b. **Equity financeability.** We conclude that this plan should be equity financeable.
- c. Overall, the WWU Company specific plan should be financeable. Within that there is some adverse pressure on debt financeability at BBB+. Our confirmation of financeability

4. Conclusions

- 4.1. Ofgem should make the adjustments as proposed above in 2.4.g.





Acronyms

AGIs	Above Ground Installations
ARP	Adaptation Reporting Power
BSR	Building Safety Regulator
CAF	Cyber Assessment Framework
Capex	Capital Expenditure
CBA	Cost Benefit Analysis
CDS	Complex Distribution Systems
CPIH	Consumer Prices Index, including Housing
DESNZ	Department for Energy, Security and Net Zero
ECV	Emergency Control Valve
ERP	Enterprise Resource Planning
ESG	Environmental Social Governance
FTE	Full Time Employees
GDN	Gas Distribution Network
GSOP	Guaranteed Standards of Performance

HILP	High Impact Low Probability
HSE	Health and Safety Executive
ICO	Information Commissioner's Office
IGEM	Institution of Gas Engineers and Managers
IMRRP	Iron Mains Risk Reduction Programme
IP	Intermediate Pressure
IT	Information Technology
LP	Low Pressure
LTS	Local Transmission System
MOBs	Multi-Occupancy Buildings
MP	Medium Pressure
NARMs	Network Asset Risk Metrics
NCSC	National Cyber Security Centre
NOC	Network Operations Centre
NTS	National Transmission System

OES	Operators of Essential Services
Opex	Operational Expenditure
OT	Operational Technology
PE	Polyethylene
PSR	Pipeline Safety Regulations / Priority Services Register
PSSR	Pressure Systems Safety Regulations
RAV	Regulatory Asset Value
RCP	Representative Concentration Pathway
RIIO-GD3	Revenue = Incentives + Innovation + Outputs - Gas Distribution 3
SaaS	Software as a Service
Totex	Total Expenditure
UKCIP	UK Climate Impacts Programme
UMs	Uncertainty Mechanisms
WACC	Weighted Average Cost of Capital
WWU	Wales & West Utilities

Endnotes

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- 20 Ofgem (2024), [RIIO-GD3 Business Plan Guidance](#), 30 September, ("RIIO-3 BP Guidance") para 7.11
- 21 Document 58, 'Finance Annex' section 6
- 22 Ofgem (2024), [RIIO-3 Sector Specific Methodology Decision–Finance](#), 18 July 2024, ("SSMD") para 3.23
- 23 Assuming the change to a weighted nominal and real cost of debt allowance is implemented fully from April 1, with no phased implementation.
- 24 Assuming an average annual gas bill of £793 excluding VAT. [Finance Annex](#) section 6.7.d)
- 25 Document 58, [Finance Annex](#) section 7
- 26 Document 58, [Finance Annex](#) section 8
- 27 Ofgem RIIO-3 Business Plan Guidance, para 7.3.
- 28 Document 58, [Finance Annex](#) section 3
- 29 Assuming an annual average gas bill of £793 excluding VAT. [Finance Annex](#) section 8.7.d).

How to contact us

We welcome your feedback

Thank you for taking the time to read our plan. We would love to hear your thoughts and feedback. In the first instance, please contact us using the following address.

This inbox will be monitored, and we will respond accordingly.

engagement@wwutilities.co.uk

If you have more general enquiries, please get in touch using these details.

enquiries@wwutilities.co.uk or 0800 9122999

Submitting your views to the regulator

Ofgem will be issuing a call for evidence on 18th December 2024 with responses due by 10th February 2025. The process will be shared using their communication channels and a page on their website. This is an opportunity to formally submit your views to the regulator both on our plans, and those of other gas networks.

