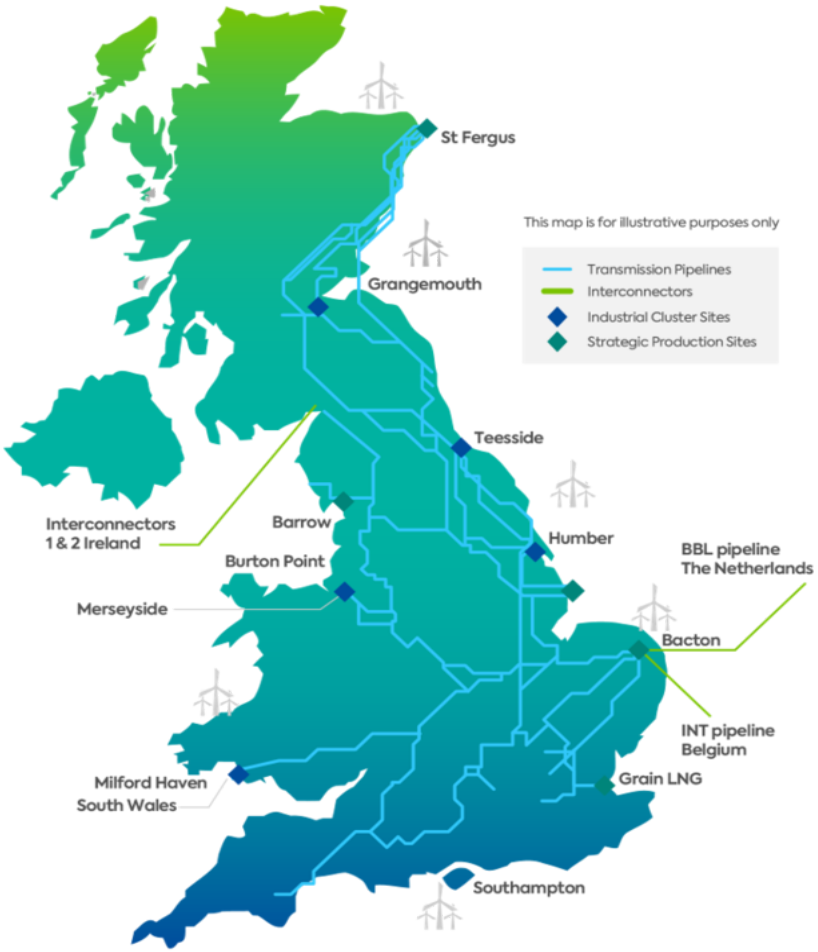
national gas

Annual Environmental Report 2023/24

Leading a clean energy future for everyone

Contents

Our business at a glance



c.5,000 miles of pipeline

>60 compressors across 21 compressor sites

>500 above ground installations

Purpose of the report

This Annual Environmental Report (AER) has been prepared to meet the requirement of Special Condition 9.1 (SpC 9.1) of the gas transmission (GT) licence.

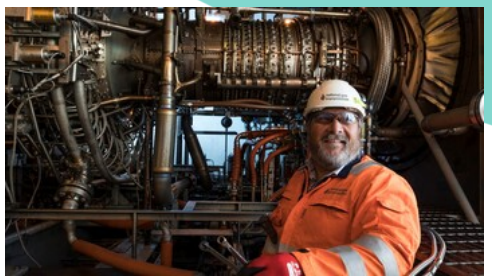
The report provides our stakeholders with an overview of progress against our Environmental Action Plan (EAP) and the activities we have undertaken over the reporting period to manage and reduce our environmental impacts. The reporting period for this AER is 1 April 2023 to 31 March 2024 in line with the RIIO-T2 price control period that applies to the five-year licence that began on 1 April 2021.

Progress against our environmental pillars are included within the Ofgem Regulatory Reporting Process narrative (RRP). National Gas considers our governance process for RRP to provide consistent and robust coverage for the sign off of data assurance activities as stipulated by Ofgem.

This report applies to National Gas Transmission including National Gas Services. This report excludes National Gas Metering as per our regulatory reporting requirements.

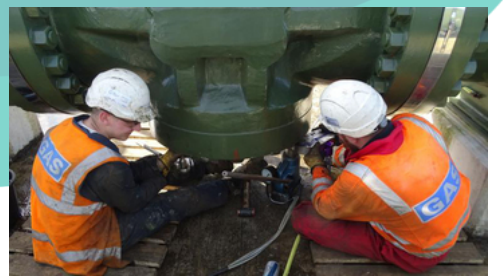
Who we are

National Gas is responsible for transporting gas to more than half a million businesses and 23 million homes through nearly 5,000 miles of pipes across Britain. We are the national gas network, providing secure energy to power Britain, whilst working to achieve net zero and maintain our industrial competitiveness. Our organisation comprises of three businesses.



National Gas Transmission owns and operates the high-pressure national gas network (National Transmission System, or the NTS) that transports gas safely and reliably to wherever it's needed in Great Britain.

National Gas Metering manages and maintains millions of gas meters throughout Great Britain. **This part of the business is excluded from regulatory reporting.**



National Gas Services provides nationally important pipeline repair and maintenance services to ensure the gas keeps flowing.

Our environmental responsibilities

Gas is, and will be for decades to come, a major contributor to the blend of energy sources powering the country. At any one time, up to 50% of the nation's energy could be supplied by gas. Security of energy supply is something many of us take for granted, and delivering it is a responsibility we take extremely seriously, but we know it is important to balance this with our environmental obligations.

We are aware of the critical role we play in solving current and future challenges for energy and are ensuring that we are flexible in how we provide and use energy. A gas like hydrogen, for example, will be an integral part of the United Kingdom's (UK) future energy mix and we want to be at the forefront of delivering the benefits of connecting supply and demand.

We strive to achieve minimal adverse environmental impacts across all our operations, while also seeking ways to enhance the local environment. Our overall ambition here is to protect the environment and act sustainably every day.

This approach aligns with Ofgem's environmental focus areas for the RIIO-T2 regulatory period:

- Decarbonising the energy networks - with a focus on business carbon footprint and embodied carbon.
- Reducing the networks' other environmental impacts, i.e. pollution to local environment; resource use and waste management; biodiversity loss and other adverse effects that are specific to the sector.
- Supporting the transition to an environmentally sustainable low carbon energy system. As a responsible business, we are committed to delivering environmental benefits for the communities we serve, while prioritising the issues that matter most to our customers, our employees and our wider stakeholders.

National Gas plays a leading role in Britain's journey to a clean energy future, and this has shaped our EAP. Prior to RIIO-T2, we worked with our stakeholders to identify 30 environmental targets where we believe we can have a positive impact.

CEO's message

I am delighted to share with you our third Annual Environmental Report for the RIIO-T2 period.

Over the year, National Gas has continued to play a critical role in delivering the United Kingdom's environmental and climate objectives, whilst powering an energy transition where no one is left behind. At National Gas we are committed to supporting the Government's ambition for clean power by 2030 and have been working hard to identify what we believe we can achieve to help make this ambition a reality.

So, while we continue to safeguard Britain's energy security today, we are also at the heart of the gas market of the future, working to decarbonise and secure energy supply and leading the hydrogen and carbon capture and storage (CCS) transition for gas networks.

We remain as committed as ever to a sustainable future – whether through the development of our bespoke decarbonisation strategy and glidepath to net zero based on future energy scenarios, or through the pioneering work we've done at FutureGrid facility, where we've proven that 100% hydrogen can be safely flowed through a replica of our transmission network.

Achieving positive environmental outcomes underpins our strategic priorities, which is supported by our Environmental Action Plan targets. Within this report, you will find more detail on our successes and all the environmental work we have undertaken this year, as well as a comprehensive update on our EAP for 2023/24.

I am incredibly proud of all that we are doing not only to make our business greener, but also of our relentless focus on what we can do to drive forward to the Clean Power 30 ambition. As always, there is still much for us to do to address the environmental challenges we have ahead of us – but we will meet that challenge with enthusiasm, drive and commitment.

Jon Butterworth
Chief Executive Officer

'While we continue to safeguard Britain's energy security today, we are also at the heart of the gas market of the future, working to decarbonise and secure energy supply and leading the hydrogen and carbon capture and storage (CCS) transition for gas networks.'

Environmental performance indicators

Climate change impact		
KPI and impact		**Unit**
2.1	Licensee's long-term greenhouse gas reduction target, aligned to science-based methodology. Where possible, validated against SBTi or equivalent	Committed to a Net Zero target of 2050 with an ambition of 2040
2.2	Annual change in licensee's business carbon footprint, excluding losses/shrinkage in comparison to last year	-6% (despite additional categories-see page 23)
2.3	Annual change in compressor emissions (Compressor related combustion and venting)	-32%

Sustainable procurement		
KPI and impact		**Unit**
4.1	Proportion of suppliers meeting the licensee's environmental supplier code or equivalent	Discussed on page 26

Resource use and waste		
KPI and impact		**Unit**
3.1	Annual total operational waste	914.3 tonnes
	Annual total office waste	75.5 tonnes
	Annual total construction waste	46,533 tonnes*
3.2	Fate of operational waste:	
	diverted	46.4%
	recycled	49.2%
	landfill	4.4%
	Fate of office waste:	
	diverted	20.2%
	recycled	78%
	landfill	1.7%
	Fate of construction waste:	
	diverted	46.3%*
	recycled	50.9%*
	landfill	2.9%*

Local Environment		
KPI and impact		**Unit**
5.1	Annual investment in schemes to enhance or restore local environmental quality on non-operational land	£1.05m
5.2	Land area treated in schemes to enhance or restore local environmental quality on non-operational land during RIIO-T2	30.6 hectares
5.3	Net change in biodiversity units from network development projects granted planning consent in the year that impact the local environment	Not quantified

The tables above summarise key environmental performance indicators relevant to National Gas.

*Based on data currently available from a proportion of projects.

Environmental commitments

Our environmental action plan

Our Environmental Action Plan (EAP) demonstrates how we work together with our employees and stakeholders to reduce our impact on the environment. It sets out 30 commitments that help guide and measure our performance against each target. These commitments are in place until the end of the RIIO-T2 regulatory period which concludes in March 2026. Each commitment is driven by both legislative and non-legislative factors and grouped under five pillars.

Five environmental pillars

Air quality – We are working to reduce nitrogen oxide (NO_x) emissions from our operations by the end of RIIO-T2.

Intended benefit: Improved air quality

Caring for the natural environment – Whenever we deliver construction and decommissioning projects, there is a requirement to ensure initiatives are developed to protect and promote biodiversity positively.

Intended benefit: Improving the natural environment

Climate change – In October 2023, we achieved our key commitment within this pillar of developing a Science-Based Target initiative (SBTi) aligned pathway for carbon reduction for our Scope 1 and 2 emissions. We have established a commitment to achieving net zero by 2050 with an ambition to meet this sooner by 2040.

Intended benefit: Reducing our contribution to climate change

Leadership for change – We are embedding sustainability in our decision making, continuing to be transparent on our progress and working with the industry to drive forward the sustainability agenda.

Intended benefit: Improving environmental awareness to increase positive environmental outcomes

Responsible asset use – We are managing our redundant assets in a manner that contributes to a sustainable, lower-carbon future by decommissioning them responsibly, refurbishing for re-use where viable, and/or or changing their purpose where possible.

Intended benefit: Reducing unnecessary consumption of resources and production of waste

2023/24 Progress	
Target status	**No. of targets**
Complete	1
On track	21
In progress	5
Off track	3

Status definition:
On track = progress against the implementation milestones is on track

In progress = progress against implementation milestones is delayed but likely to be achievable before the end of the price control period

Off track = progress against implementation milestones is at risk

More information about our commitments can be found under Our commitments in action

Target amendments

As mentioned within our 2022/23 report, we have been in discussion with Ofgem over the past year regarding some revisions to our EAP targets.

The RIIO-T2 Environmental Action Plan was developed when Gas Transmission was part of the National Grid Group. Post separation, a full review of all commitments has been completed to ensure that they remain appropriate to National Gas Transmission. Whilst National Gas continue to deliver against the T2 EAP it has been proposed that 6 commitments are amended. Reasons for this include, for example, the scope of a target no longer aligning to the business size or operational requirements, or there are restrictions that will inhibit progress against the original target.

This report includes and discusses these targets as amended. The six amended targets are detailed below:

	Original Target	Amended Target	Reason for change
1	**Act as custodians of our redundant sites by ensuring that we reinstate them to deliver a net gain in environmental value**	Act as a custodian of our redundant sites by ensuring that we reinstate them to deliver a net gain in environmental value where we are not restricted	NGT specific restrictions (planning restrictions) - however, it is not anticipated that there will be any redundant sites in RIIO-T2.
2	**Address 80 redundant assets, asset groups or sites in RIIO-2**	Address 74 redundant assets, asset groups or sites in RIIO-2 in line with Price Control Deliverable (PCD)	NGT specific restrictions - amendment to align to network requirements in line with PCD.
3	**Pilot and implement circular economy principles for raw materials, goods procured and existing assets**	Identify opportunities to pilot and implement circular economy principles	Target wording updated to better reflect outputs which remain the same.
4	**75% of National Grid's top 250 suppliers (by category/spend) will have carbon reduction targets**	75% of National Gas' top 50 suppliers (by category/spend) will have carbon reduction targets	Scope of target no longer aligns to business size/ proportionality as a standalone business.
5	**Replace 100% of our operational vehicle fleet with alternative fuel vehicles (AFV's) where there is a market alternative today (in 2019) with aim to reduce carbon emissions from operational transport by 22% on RIIO-1 averages to end of RIIO-2**	Replace 100% of our operational vehicle fleet with alternative fuel vehicles where there is a market alternative and if it is operationally viable	NGT specific restrictions - any AFV's within the fleet must be suitable to meet our operational needs. Current market options are not viable due to reduced range when fitted with required ancillary equipment.
6	**Achieve carbon neutral construction for major projects starting in RIIO-2**	We will work towards achieving carbon neutral construction for major projects starting in RIIO-2	Process development required where access to embodied carbon calculation tool was National Grid owned. Work is ongoing to calculate embodied carbon emissions for in flight projects.

Our commitments in action

Enable reduction in NO_x emissions per hour of gas turbine running from the business by the end of RIIO-T2 in March 2026

Description: Maintaining and operating our BAT equipment as the lead units for compression. We will replace 2 compressor units in RIIO-2 and, subject to FEED, start work at a further 3 sites to be delivered in RIIO-3. These will help reduce NOx emissions into RIIO-3 and beyond.

Benefit: Improved air quality

Status: On track

Performance update: The NO_x from our gas compressor running as an intensity measure of kilograms per hour (kg/h) has fallen from 6.3 in the previous year to 5.42kg/h which equates to a 13.9% reduction due to the increased utilisation of Best Available Technique (BAT) units (newer, cleaner units). There has been a reduction in run hours across the network of 30%, with a greater proportion of the hours being attributed to electric Variable Speed Drive (VSD) running (23.9% in 2022/23 to 27.4% in 2023/24).

Measure/metric: Reduction in NO_x emissions per hour of gas turbine running. Delivery of new compressors measured through price control deliverables.

Milestones:

- Monitor NO_x levels quarterly
- Complete annual network review

10% increase in environmental value on non-operational land by the end of the RIIO-T2 period

Description: Natural Capital tool is used to assess how land can be developed and used to enhance the value of ecosystem services.

Benefit: Caring for the natural environment

Status: On track

Status update: In 2023/24, our efforts towards this commitment have been on focused on Creekside *Education Trust Limited*, woodland diversification and ride management (including moorland vegetation communities) at Aberdeen Compressor Station. Creekside Education Trust Limited provide environmental education to communities while working to improve the condition of the natural environment and had an additional 500 visitors during 2023/24.

Performance update: We increased the value of the portfolio of our non-operational land by 3.15% last financial year (2022/23). In 2023/24 a 3.2% increase in natural capital valuation was achieved, contributing towards our target to obtain a 10% increase in environmental value of our non-operational land by the end of this regulatory period.

Measure/metric: £ natural capital biodiversity (# units)

Milestones:

- Review of Year 2 lessons learnt complete

Act as custodians of our redundant sites by ensuring that we reinstate them to deliver a net gain in environmental value where we are not restricted

(As amended - please see page 8 for further details)

Description: Where possible incorporate environmental value enhancement on redundant sites to deliver a net gain. Restrictions such as planning conditions may impact how redundant sites can be managed.

Benefit: Caring for the natural environment

Status: On track

Status update: A net gain in environmental value is one where infrastructure developers leave the environment in a measurably better state than when they started work. We are evaluating net gain opportunities during decommissioning to understand the best options across our portfolio of land. To date we have not identified any applicable sites.

Measure/metric: % of net gain achieved against number of sites viable

Milestones:

- Decommissioned sites established
- Review of Year 2 lessons learnt

Educate the public about environmental issues through outreach linked to major compressor emissions projects

Description: Engage with local community through school visits, local talks, including the environmental impact of our major projects

Benefit: Caring for the natural environment

Status: On track

Status update: In October 2023, National Gas collaborated with National Energy Action (NEA) to host a community-based Family Fun Day in Rugby which provided families with a free fun day out during half term, with refreshments, children's' entertainment, competitions and giveaways available with an opportunity to receive some useful energy savings tips ahead of the winter months.

Measure/metric: Community engagement reputational ODI

Milestones:

- Mobile visitor centre options drafted and progressed with procurement team
- Commitment to National Energy Action agreed

Deliver 10% net gain in environmental value (including biodiversity) on planned construction projects (including third party delivery)

Description: Net Gain target is applied on all schemes that lead to permanent or temporary habitat loss, negative impacts on the habitat condition or provision of ecosystem function e.g. screening, flood management, recreation

Benefit: Caring for the natural environment

Status: In progress

Status update: Biodiversity Net Gain (BNG) is a way of making sure the habitat for wildlife is in a better state than it was before development took place. We are completing and refining BNG assessments for appropriate projects and are in discussions with external providers regarding delivery of BNG units where on-site delivery may not be possible.

Measure/metric: #projects and % net gain

Milestones:

- Training delivered covering net gain topic to improve knowledge of net gain requirement

Reduce methane emissions (CO2e) from leaks on the network during RIIO-T2

Description: Establish a baseline for methane emissions leaks on the network through improved monitoring during RIIO-2 and use that information to inform reductions.

Benefit: Response to climate change

Status: On track

Status update: As planned, we have surveyed compressor and terminal sites as part of our existing leak-detection and repair programme. In Q4 of 2023/24, investment was secured through the MERC UM submission to fund an expanded fugitive leak detection programme. Our Emission Monitoring Team are currently developing a delivery plan for this.

Performance trends: This year (2023/24) we recorded 229 tonnes of methane from leaks compared with last year's performance of 251 tonnes.

Measure/metric: Kg of CO_2e per mcm transmitted / Tonnes of CO_2e

Milestones:

- Funding agreement from Ofgem for investment in methane leak detection equipment secured

Replace 100% of our operational vehicle fleet with alternative fuel vehicles (AFV) where there is a market alternative and if it is operationally viable *(As amended - please see page 8 for further details)*

Description: This translates as 5% of our operational vehicle fleet (including operational job requirement company cars) moving to AFVs by 2026.

Benefit: Response to climate change

Status: On track

Status update: We are keen to switch our fleet to AFV's. However, we need to meet our obligations and any AFV's within the fleet must be able to meet our operational needs.

Performance trends: We have set a target to replace 5% of our fleet by the end of RIIO-T2 - this is due to no viable alternatives currently on the market for the majority of our vehicles. We continue to utilise the telematics system installed across our fleet to monitor cars, trucks and other assets using GPS technology and on-board diagnostics (OBD). This information assists us in identifying vehicles which could be replaced and we are continually reviewing market options to identify suitable vehicles in a timely manner.

Measure/metric: % vehicle replacement

Milestones:

- Agreed replacement strategy for AFVs

Reduce carbon emissions for our business transport by 10%

Description: Reduce vehicle use by promoting rail and virtual meetings, promote EVs on company car scheme and install electric car charging points at compressor sites.

Benefit: Response to climate change

Status: On track

Status update: This target incorporates emissions resulting from our company, personal and hire cars. In 2023/24, this totalled 850tCO_2e compared to a 2019/20 baseline of 1608tCO_2e (-47% reduction).

Performance trends: -47% reduction from previous year

Measure/metric: Tonnes of CO_2e, baseline: 1608tCO_2e for FY2019/20

Milestones:

- Quarterly analysis of company car type to analyse EV update
- Produce public transport and virtual meeting communications

Focus on an efficiency-first approach to decrease carbon emissions from our office energy use by 20% by 2026

Description: Implement energy saving initiatives

Benefit: Response to climate change

Status: On track

Status update: We have been continuing to implement efficiency measures to reduce the need for heating and cooling at our main office - National Grid House, Warwick.

Performance trends: This year we have seen a 38% reduction in carbon emissions resulting from our energy usage (gas and electricity) at our main office from the previous year. In 2022/23 this figure was 688 tonnes of CO_2e. In 2023/24, this was 416tCO_2e.

Measure/metric: Tonnes of CO_2e from energy use

Milestones:

- Third party engaged to undertake Energy Savings Opportunity Scheme (ESOS) assessment
- Introduce and assess feasibility of heating controls and LED internal lights
- Revised energy reduction plan agreed

Purchase 100% of electricity for our offices from renewable sources

Description: As target states

Benefit: Response to climate change

Status: On track

Status update: We have gained a Renewable Energy Guarantee of Origin (REGO) certificate to confirm 100% of electricity supply at our Warrington Archives office is backed by renewable sources in the UK. As a tenant at National Grid House, we will continue to review contracts we control and expand this to other sites at contract renewal where possible.

Measure/metric: Tonnes of CO_2e saved

Milestones:

- Agree scope and strategy for procurement events including green tariff
- Tender event completed for our Warrington Archives office

Continue to participate in the UK Emissions Trading Scheme (UK-ETS) and use as an opportunity to provide focus on our CO2 emissions across the business

Description: Continue to follow in-house processes for 1st, 2nd, 3rd line assurance of direct carbon emissions from permitted sites

Benefit: Response to climate change

Status: On track

Status update: The UK-ETS (Emissions Trading Scheme) is a government-run scheme designed to reduce greenhouse gas emissions by creating a market for carbon reduction through tradable allowances. Assurance lines continue to operate to ensure compliance with the UK-ETS. All site activity level reports have been verified and submitted to the Competent Authority for the recent reporting year.

Measure/metric: No direct measure

Milestones:

- Site improvement reports submitted (if applicable)
- Verified Activity Level Reports (VAR) submitted

We will work towards achieving carbon neutral construction for major projects starting in RIIO-T2

(As amended - please see page 8 for further details)

Description: For major projects (projects >£50m), we will calculate embodied carbon (data dependent) to allow identification of carbon intensive aspects. From this information, we will develop a carbon neutral construction policy.

Benefit: Response to climate change

Status: On track

Status update: We have been utilising our Carbon Interface Tool (CIT) to record the embodied carbon for live major projects. For the two relevant projects which are complete as of 2023/24, we have produced embodied carbon footprints which include a design baseline and as built total. The CIT allows us to quantify the carbon associated with a construction project (whether that's the materials used, construction activities, or employees travelling to site for the purpose of the project). We recognise the importance of this to tell us where reductions could be made. We are considering the ways in which we could improve data collection for this and to support this we will be developing an embodied carbon strategy which will ensure continued efforts in the embodied carbon space for RIIO-GT3.

Measure/metric: Aligned to PAS2060 and PAS2080, tonnes of CO2e in 2026

Milestones:

- CIT updated for 2 completed projects

75% of our top 50 suppliers (by category/spend) will have carbon reduction targets

(As amended - please see page 8 for further details)

Description: Engage with our supply chain to set carbon reduction targets for suppliers engaged through the CDP supply chain program (top 50 supplier by category/spend)

Benefit: Response to climate change

Status: On track

Status update: In 2024/25, National Gas's supply chain includes around 1300 suppliers (based on spend in FY24). Our top 50 suppliers represent 70% of our spending, while the next 150 suppliers represent 23% of our spending. The remaining 7% of this spend sits with 1,144 suppliers.

Performance trends: We are committed to ensuring that '75% of the top 50 suppliers have a carbon reduction plan' in place. In 2023/24, 76% of our top 50 suppliers had plans in place. In 2024/25, we are engaging with our top 200 suppliers that account for 93% of spending through the Carbon Disclosure Project and we expect results in December 2024. Through supplier management and working with the Supply Chain Sustainability School we are looking to upskill our supply chain where carbon reduction plans are not in place.

Measure/metric: % of top 50 suppliers with carbon reduction targets

Milestones:

- Explore alternative platforms for more regular monitoring of suppliers and their sustainability plans

Install renewable generation on our operational sites for our own use during RIIO-T2 - starting with compressor sites

Description: Install renewable generation, e.g. solar panels, on our sites to generate energy for site use and export excess to the grid for free

Benefit: Response to climate change

Status: On track

Status update: We are in the process of trialling solar PV at one of our compressor stations. If successful, this will enable roll out at further sites.

Measure/metric: # sites with renewable generation or kWh generated (therefore saved)

Milestones:

- Business case drafted for selected sites to assess return on investment and payback periods

Deliver a science-based target for National Gas by 2023

Description: Establish a project team to further develop the business carbon footprint, identify costed options and develop roadmap for delivering Net Zero; linked to wider delivery of decarbonising the NTS

Benefit: Response to climate change

Status: COMPLETE

Status update: A bespoke decarbonisation strategy and glidepath to net zero were completed in October 2023. The development of our glidepath included mapping four potential pathways to achieve net zero carbon, two by 2050 and two by 2040, using the 2022 System and Customer Transformation Future Energy Scenarios. National Gas has adopted the System Transformation approach. The glidepath is aligned to the Science Based Target initiative (SBTi) Corporate Standard methodology and will be updated once the oil and gas sector specific methodology is published. As part of planning for the next regulatory period (RIIO-GT3) we are confirming where investments are required to support our net zero ambitions.

Measure/metric: target developed

Milestones:

- SBTi aligned glidepath complete by October 2023

An engaged workforce on environmental issues that leads by example

Description: Implement a comprehensive employee engagement programme on environmental issues including emissions, waste, reduction in plastics and employee travel

Benefit: Leadership for change

Status: On track

Status update: Our network of Sustainability Champions has been created to identify sustainability issues that our employees are passionate about. The Champions promote behavioural changes across the business to help reduce our impact. The topic of 'green commuting' is a focus in 2024 as we look to increase the numbers of regular members attending and contributing to our monthly meetings.

During the past two years, we conducted an ESG survey. Our 2023/24 survey asked questions surrounding air quality, supporting charities and communities. Responses (341 internal and 17 external responses) were used to build our ESG materiality assessment. We also conducted a survey to understand employee views on our strategy (208 respondents). Results showed that the important themes to National Gas were supporting charities (93% of respondents agreed/ strongly agreed) and supporting the fair energy transition (also 93% of respondents agreed/ strongly agreed). £5 was donated to our official charity partner, Barnado's, for each completed survey.

Measure/metric: % of engaged employees

Milestones:

- Identify improvements to sustainability champions network
- Engagement plan created

"A bespoke decarbonisation strategy and glide path to net zero were completed in October 2023"

Produce an Annual Environmental Report (including our BCF)

Description: Publish Gas Transmission environmental performance annually allowing feedback from stakeholders.

Benefit: Leadership for change

Status: On track

Status update: We will continue to provide this report on our website annually during RIIO-T2 to provide update on our Business Carbon Footprint and target progress.

Measure/metric: Annual publication of results and feedback where applicable

Milestones:

- 2023/24 report published

Lead in transparency on capital carbon and natural capital reporting

Description: We will drive forward industry in areas of sustainability where we are leading. We will work collaboratively through industry working groups to deliver this. We will focus on two areas: natural capital/net gain and capital carbon.

Benefit: Leadership for change

Status: In progress

Status update: Capital carbon refers to the emissions associated with creating an asset such as a compressor. Natural capital refers to the elements of the natural environment that provide valuable goods and services to society.

We are currently looking for new external opportunities to lead in transparency in this space. We are looking to setup or establish working groups and how we can liaise with other transmission operators on these topics.

Milestones:

- Internal information sharing and training session delivered

Fully embed sustainability in decision making

Description: Carbon pricing is influencing decisions and whole life costing is assessed in the decision-making process.

Benefit: Leadership for change

Status: On track

Status update: An example of how we embed sustainability into decision making is our Formal Environmental Assessment (FEA) process. FEA's for our projects are structured to identify potential environmental aspects and impacts relating to an installation throughout it's life cycle from design through to decommissioning. The process sets out the required environmental and sustainability assessments at each stage of the design and delivery of a project e.g. noise assessments, ecological studies and carbon footprinting where applicable. This process ensures that sustainability is considered throughout works.

Measure/metric: A clear framework for the different decision-making points

Milestones:

- Develop a sustainability framework to summarise decision-making points across the business

Implement the ISO 20400 sustainable-sourcing process

Description: Alignment to ISO20400 Sustainable Procurement Guidance Standard

Benefit: Responsible asset use

Status: On track

Status update: Following our separation from National Grid, we have reviewed our processes to align with our new business values of Simplicity, Ownership & Progress. New documents and processes are now embedding in the business. We will be carrying out assurance checks to ensure we continue to be aligned with ISO 20400 in 2024/2025 and identify enhancements. In our current processes all Gateway Reviews from Category Strategy, Selection, Contract sign off and Contract Management procedures include requirements to address the appropriate sustainability priorities and risks.

Measure/metric: Aligning to ISO20400 Guidance, # categories strategies considering sustainability

Milestones:

- ISO20400 assurance audit complete

Work with contractors to measure the proportion of recycled materials used on construction projects

Description: We will set a target during the RIIO-2 period to increase from this baseline

Benefit: Responsible asset use

Status: Off track

Status update: We have implemented the use of the Carbon Interface Tool (CIT) across our major projects. We are in the process of rolling out the use of the CIT to a wider project base to enable us to have the necessary level of data to allow us to set a realistic target.

Measure/metric: Baseline and measure to be established

Milestones:

- Develop a methodology to measure recycled materials

Reduce the waste intensity of our construction projects year-on-year

Description: We will continue to collect and measure our waste volumes to set a baseline. We will target the most waste intensive aspects of our project and work to identify opportunities for reduction.

Benefit: Responsible asset use

Status: On track

Status update: We have established a suitable baseline following review of the data available to use from recent years. The target is 35 tonnes/ £100,000 by the end of RIIO-T2. In 2023/24, data shows a waste intensity of 39 tonnes/£100,000 based on 18 reporting projects. We will be working to increase the proportion of projects reporting and reduce waste intensity to meet our target.

Measure/metric: Target to be set during RIIO-T2 period, baseline data dependent

Milestones:

- Waste intensity baseline established using available data

Reduce office waste by 20%

Description: Continue to roll out existing programmes to all sites

Benefit: Responsible asset use

Status: Off track

Status update: In 2023/24, our office waste totalled 75.4t. We therefore did not meet our 20% reduction when compared to our 2019/20 baseline of 54.6t.

This increase has been attributed to higher than usual levels of record disposal in the past year whilst we transition to digital record management. This waste stream equated to 49t. We also recognise that our data completeness has likely improved since this baseline was set. Waste levels will continue to be monitored closely to identify opportunities to still meet this target by the end of RIIO-T2.

Performance trends: 75.4t waste produced in 2023/24 for office sites.

Measure/metric: Waste in tonnes, % reduction for office sites

Milestones:

- Engage with main office landlord and a third party to review reduction plans

On construction projects, we will achieve zero waste to landfill and we will increase recycling and reuse materials by 2026

Description: We will achieve zero waste to landfill and set a target on recycling rates using 2020/21 data to set a baseline, applicable to waste that can be diverted from landfill in accordance with the carbon trust standard

Benefit: Responsible asset use

Status: In progress

Status update: In the last financial year (2023/24), 2.9% of the total construction waste we have data for went to landfill. The remaining was diverted from landfill or recycled. We are still working to improve the waste data we have available by working closely with our contractors. In the past year we have delivered a number of training sessions to improve reporting rates. We have set a target of 83% recycling rate by the end of RIIO-T2.

Performance trends: In 2023/24, based on the data available, 50.9% was recycled, 46.3% was diverted from landfill and 2.9%* went to landfill.

*based on 18 projects (some with multiple sites) which we have waste data for.

Measure/metric: % waste recycled target for end of RIIO-T2 = 83%

Milestones:

- A baseline is established based on available data
- Monitor total recycling and diverted waste

Identify opportunities to pilot and implement circular economy principles

(As amended - please see page 8 for further details)

Description: Analyse current projects for their circularity and refine to create circular or semi-circular processes where possible. Draft a Circular Economy Framework for National Gas aligned to industry standard

Benefit: Responsible asset use

Status: In progress

Status update: Circular economy is a model of production and consumption that involves keeping existing materials in use for as long as possible by a range of methods including reusing and recycling them. We are continuing to assess ways in which we can improve reuse and implementation of circular economy principles within the business. Over the next year, we will be developing a circular economy framework to guide the business in implementing opportunities that have been identified to date. Example opportunities we are looking to introduce are sustainable tree guards, renewable lubricants and sustainable concrete options where viable.

Measure/metric: Develop a circular economy metric for next price control period and launch pilots

Milestones:

- Analysis of current processes, identify areas for circular economy integration

Address 74 redundant assets, asset groups or sites in RIIO-2 in line with Price Control Deliverable (PCD)

(As amended - please see page 8 for further details)

Description: Prioritise highest risk assets. Decommission where assets are redundant, repurpose where possible and leave pipelines purged and filled with nitrogen.

Benefit: Responsible asset use

Status: On track

Status update:

6 assets were decommissioned/disconnected in 2023/24.

Measure/metric: Measured through a price control deliverable on the identified assets, asset groups or sites.

Milestones:

- Delivery in line with PCD

Recycle 60% of our office waste by 2026

Description: Continue to roll out existing programmes to all sites

Benefit: Responsible asset use

Status: On track

Status update: We have been making improvements to our waste data over the past year and gaining more granularity on the disposal methods for our waste. The largest office waste stream in the year was recycled confidential waste originating from our Warrington Archive office sites. Nonetheless, we met above the 60% target for this year and will be working to ensure this remains the same in the next two years of RIIO-T2.

Performance trends: For 2023/24, 78% of our office waste was recycled.

*Please note, assumptions applied to waste data provided in the previous report have since been revised. The figure provided above represents waste disposal defined as recycled only. There is no longer a recycling assumption applied to waste classed as diverted.

Measure/metric: % of waste recycled

Milestones:

- New reduction plans reissued

Reduce water use in our offices by 20%

Description: Implement a water reduction programme at all office sites owned and operated by National Gas.

Benefit: Responsible asset use

Status: On track

Status update: ADSM have continued working across our sites to ensure water savings wherever possible. From the revenue generated by water savings, 1% is donated to water.org, a not-for-profit organisation working to bring water and better sanitation to worldwide communities. In the Annual Sustainable Water Report (2023/24), as produced by ADSM for National Gas Transmission and Metering, this water conservation revenue has provided 2,510 individuals access to safe water.

Performance trends: We set a baseline figure for water use in our 2019/20 financial year of 7,380m3. Our office water usage for our last financial year (2023/24) was 3,124m3 (a 57% decrease). We hope that continued work by ADSM will help to make reductions wherever possible, across both our office and operational sites.

Measure/metric: % water usage

Milestones:

- Engage third parties to manage water reductions by checking the accuracy of water-meter readings, checking for leaks and questioning behaviour to reduce water consumption

Assess and report on our risk from climate change on our assets

Description: Actively assess risks from climate change

Benefit: Responsible asset use

Status: In progress

Status update: We are undertaking a climate-change risk assessment at our sites and prioritising them for investment based on those which present the highest risk from climate change as a piece of Critical National Infrastructure. Where we believe that there is an immediate risk, we are building these investments into our RIIO-T3 business plan. National Gas will report in the fourth round of the climate change adaptation reporting power by the end of 2024.

Measure/metric: Production of climate change risk assessment mitigation plan, implementation of risk mitigation strategies.

Milestones:

- Task Force on Climate-related Financial Disclosures (TCFD) steering group
- Initial needs assessment complete

Extend the life of equipment where appropriate by refurbishing it

Description: Refurbish equipment where possible over 2019/20 baseline then target the most waste intensive parts of our work and work with our supply chain to reduce waste in these areas

Benefit: Responsible asset use

Status: Off track

Status update: Our asset management policies already drive refurbishment where technically possible and efficient. We are working to develop a process to capture the data for these activities.

Measure/metric: #refurbished assets

Establish a baseline and target. Work with our supply chain to reduce waste in these areas.

Milestones:

- Data collated on assets repurposed for FutureGrid test facility

Case study

Addressing redundant assets

FutureGrid Phase 1:

Our FutureGrid hydrogen test facility in DNV Spadeadam, Cumbria has marked a significant milestone by completing Phase 1 of its groundbreaking operations. In 2023/24, our pioneering facility, created from decommissioned assets from the NTS has been celebrated as the world's first to successfully flow 100% hydrogen. As FutureGrid transitions into Phase 2, it is poised to further revolutionise the energy industry with its innovative Compressions and Deblending projects.

FutureGrid Phase 2:

FutureGrid Compression is a Strategic Innovation Fund (SIF) Beta Project that investigates the key challenges associated with compression of hydrogen using existing NTS assets. This project has two key aims:

1) Demonstrate the hydrogen blend that the existing compression fleet can operate at with minimal modification

2) Identify the level of modification that needs to be made to an existing compressor system for it to operate with 100% hydrogen

Advancing from the successful completion of the award-winning HyNTS FutureGrid Phase 1 project undertaken by National Gas and DNV, expansion of the test facility is vital to demonstrate that hydrogen can be transported safely and securely nationwide, just as it is today for natural gas. As part of Phase 2 Compression, we are currently collating decommissioned assets that are fit for purpose and storing them ready for re-use as part of the design for Phase 2. Some examples of these assets are shown below:

Example assets planned for reuse for Phase 2 (TBC)	
Pipe	1460m
Valves	151
Fittings - e.g. bends, tees, reducers	55
Actuators	30
Insulation Joints	4
Fuel gas metering & pressure reduction skids	4
PIG Traps	2
Gas Compressor	1
Gas Turbine	1

The HyNTS FutureGrid NIC project at DNV's Spadeadam Test and Research Centre

More information about the FutureGrid test facility can be found in our Innovation Annual Summary.

Implementing circular economy principles

National Gas Services (NGS)

NGS continue to carry out repair work on our network and for external Gas Distribution Networks. For example, fitting sleeves on pipelines that displayed signs of corrosion. This prevents us having to cut out a section of pipe and re-laying it, thus extending the life of sections of pipe that are otherwise operating safely. Such repair works are a vital aspect of circular economy by keeping the asset in use for as long as possible and prolonging the need for full replacement and raw materials.

RIIO-T2 output delivery incentives (ODIs)

The table below provides a summary of our ODIs. These are agreed with Ofgem to encourage improvement beyond the existing commitments in our EAP. The environmental ODIs cover the measurable parts of our EAP and the existing Greenhouse Gas Emissions (GHG) incentive.

Environmental Incentive	Baseline levels	Performance			Baseline comparison
		2021/22	2022/23	2023/24	
Operational transport emissions (tCO2e) (% change)	1,748 (2021 forecast)	1751	1797	1743	0%
Business mileage (tCO2e) (% change)	1,608 (2019/20)	606	741	850	- 47%
Percentage of recycled operational and office waste (%)	-	34%	41%	51%	-
Office waste generated in tonnes (% change)	54.60 (2019/20)	40	64	75	38%
Office water use in m3 (% change)	7,380 (2019/20)	1,699	3,910	3,124	- 58%
Environmental value of non-operational land (£m) (% change)	32.92 (2020/21)	2.1%	4.5%	3.2%	-

* We mentioned in our last report that previously our "diverted" waste was assumed to be "recycled". Over the past year we have worked with our waste contractors to gain more detailed data on the specific quantities of diverted waste that is recycled. We have now revised waste data for the previous years of the RIIO-T2 period.

Decarbonisation

As a business, our fundamental purpose is to deliver a clean energy future for everyone, while operating a resilient and reliable network.

Our network is already being tested by climate change and extreme weather, both of which add additional pressures and challenges to the way in which we operate the network and manage our assets. This is becoming of increasing focus as we conduct our climate risk assessments for our compressor stations. Adapting to climate change now and reducing the impact of our operations on the environment are crucial if we are to succeed in meeting our business purpose.

National Gas continues to focus on its own greenhouse gas emissions and look for ways to reduce them. As summarised on pg 14, we have developed a bespoke decarbonisation strategy and glidepath to net zero to inform how we will reduce our emissions. We continue to explore the feasibility of converting the NTS to carry hydrogen as a greener alternative to natural gas and facilitate biomethane connections.

The following table shows the number of enquiries received, the capacity of connections and the actual flow of biomethane and other green-gas connections to the transmission system. There have been no changes over the past 3 years of RIIO-T2. However, there are in the region of 35 biomethane projects considering a connection to the NTS. We will update with any formal progress in next year's report.

Connection enquiries

Biomethane connections	Unit	RIIO-T2 to date
Enquiries	Number	1
Connections	Number	1
Capacity connected	SCMH	200/4800scm/day
Average monthly flow rate	SCMH	0.000868 scm/hr
Volume of biomethane injected	GWh	0.000955
Other green gas		
Enquiries	Number	Non recorded
Connections	Number	Non recorded
Capacity connected	SCMH	Non recorded

Case Study – Multiple Gas Detection

National Gas currently operates a system of safety sensors to detect flammable gases in enclosed spaces and work areas. We are now trialling new installations of fugitive emission detectors to help us in our drive towards net zero operations, and to help us to reduce network shrinkage. These new sensors can detect extremely low concentrations of both natural gas and hydrogen from a single calibration, meaning we can get to work detecting and repairing leaks today and in the future - on a blended and 100% hydrogen network.

We have partnered with Nevado Nano Technology to trial their MPS sensors at two of our sites: FutureGrid (hydrogen testing facility) and Bacton Gas Terminal. Nevado Nano's sensors are installed in arrays with an anemometer, for continuous and remote leak detection, quantification and location. Following a technology landscape assessment and laboratory trials, Nevado Nano were chosen as the ideal solution - as they are able to offer detection of both natural gas and hydrogen.

A full installation of the system was completed at Bacton Gas Terminal in October 2023, including 120+ sensors and two anemometers Bacton Operational teams have tested sensor readings by comparing with handheld gas sensors and by comparing against operational activities. The system has already proved useful. Operational teams are able to prioritise repairs by reported leak volumes, and carry out leak repairs using locations provided by the system.

At FutureGrid, an array of sensors have been installed around the site and has been put through its paces since April 2023. The sensor system has been measured against controlled deliberate releases from the loop, through increasing natural gas/hydrogen blends, and finally against 100% hydrogen. The sensors also provide useful information about the leak behaviour of 100% hydrogen, compared to natural gas. The National Gas Emissions Monitoring team visited FutureGrid in January 2024 with OGI cameras to record leak plumes for better sensor operations.

Learnings and experiences taken from the project will help National Gas to improve our emissions reduction strategy and work towards our net zero operation ambitions, both for the existing National Gas network and for the network of the future.

How we define our emissions

As of our 2023/24 Business Carbon Footprint (BCF), our data sources include direct measurements from invoices and emission monitoring reports, modelled data using industry methodology and National Gas specific measurements.

We are always looking to improve our carbon accounting, whether reviewing emission sources, seeking data that was not previously available or maturing our methodology. We recognise the importance of our BCF being as complete as possible, particularly as we monitor our emissions in line with the reductions required to meet our net zero target.

Last year we mentioned that we have identified the opportunity to calculate and estimate additional emissions associated with our gas specific processes and equipment. This recent improvement means that previous year data cannot be compared. We have now fully embedded these categories into our BCF and retrospectively updated 2022/23 data (total Scope 1 and 2 for 2022/23 updated from 405 to 481ktCO2e). Our decarbonisation strategy and glidepath was produced inclusive of these additional categories using this retrospective 2022/23 data as the baseline. Due to this change, we have not provided a graph for cross year comparison. This will be provided in future years.

Scope 1 and 2 emissions - (BCF)

Scope 1 emissions cover the Greenhouse Gas (GHG) emissions that a company makes directly — for example while running boilers and vehicles which are not electrically powered.

Scope 2 emissions are the emissions a company makes indirectly – like the electricity or energy it buys for heating and cooling buildings which is being produced on its behalf.

Our current BCF related target is to reduce our Scope 1 and 2 emissions by 21% by 2030/31 as per our net zero glidepath. Most of our BCF is made up of the emissions from compressor fuel combustion and compressor venting. In the last financial year (2023/24), these two emission categories accounted for ~64% of our overall Scope 1 and 2 emissions, as reported within our RRP submission to Ofgem. We are committed to reducing our emissions, while ensuring resilience and security of supply.

Please note that some data may be revised in following year reporting. Eg. data originating from electricity invoices may be revised due to resolved estimations after year end.

A key component to delivering the net zero commitment is reducing methane emissions from our operations. NGT submitted a funding request to support methane emission reduction in 2023. In March 2024, funding was secured for the Methane Emission Reduction Campaign (MERC). This comprises of 3 themes:

1) Expansion of fugitive emission detection and repair (LDAR) programme and establishment of a measurement-based fugitive emission baseline

2) Combined Gas Recompression and Zero Loss seals (CMT)

3) Recompression Units - trials continue for the CMT and recompression themes

Scope	Emission	Category	2023/24 (tCO_2e)
1	Energy consumption (excl electricity)	Energy consumption	397
	Transport	Direct commercial vehicles	1,748
		Business mileage	528
	Fugitive Emissions	Leak detection & repair	5,720
		Pipeline & AGI's	26,285
	Venting Emissions	Venting (compressor only)	51,646
		Pipeline Venting	26,343
		PIG Trap Venting	791
		Gas Using Devices & Maintenance and Inspection Vents	37,246
	Other	Incidents with gas release	242
	Fuel combustion	Diesel Minor Combustion Plant	277
		Natural Gas Compressors	191,086
		Natural Gas Minor Combustion Plant	839
	Total scope 1		**343,149**
2	Electricity consumption	Electricity consumption	37,306
		Fleet & company cars (EVs)	88
	Total scope 2		**37,394**
1 & 2	**Total scope 1 & 2**		**380,543**

Scope 3 emissions (as per RRP)

As of Year 3 of the RIIO-T2 period, we continue to report two out of seven of our Scope 3 GHG Protocol emission categories, namely Category 5 (waste) and Category 6 (business travel). Our Category 5 reporting involves waste generated at our office and operational sites.

Category 6 includes business travel via air, rail, hire cars and in employees' personal vehicles. To calculate the carbon emissions associated with these activities, the appropriate Department for Energy Security and Net Zero (DESNZ) conversion factors are used. We are continuing to assess how we can collate the information required to report more of our Scope 3 emissions. For example, conducting an employee commuting survey.

Emissions from waste generation included in reporting from year 2022/23 onwards. Increase in business travel is associated with "return to normal" in travel patterns following the Covid-19 pandemic. Sustainable travel continues to be a focus to encourage behavioural changes if travel can be avoided.

Category as per Ofgem RRP	Methodology and assumptions	Data Source	Confidence in data (completeness and accuracy) RAG status
Purchased goods and services	Continuing to investigate methodology for calculation		Not yet available
Capital goods	Continuing to investigate methodology for calculation		Not yet available
Fuel and energy related activity	Trialled calculation in 2023/24. Intend to incorporate into reporting from Year 4		Not yet available
Upstream transportation and distribution	Deemed to not be applicable during Scope 3 applicability screening. This exercise will be repeated if there are any significant business changes likely to impact the categories which are relevant to NGT.		
Waste generated in operations	Tonnes of waste converted to tCO2e using DESNZ current conversion factors	National Waste Contractor Reports for waste totals	Some assumptions required to allow application of available conversion factors
Business travel	This category includes business mileage not already included within Scope 1 and 2 emission reporting, such as travel undertaken via rail, air, hire vehicles and personal vehicles	Internal and external reports that quantify mileage taken (via booking systems or expense entries)	
Employee commuting	We are continuing to collect data on employee commuting via annual surveys, Once data is sufficient and representative, we intend to report this emission source.		Not yet available

Embodied carbon

The UK Green Building Council defines embodied carbon as 'the total greenhouse gas emissions (often simplified to 'carbon') generated to produce a built asset'. This includes 'emissions caused by extraction, manufacture/processing, transportation and assembly of every product and element in an 'asset'. Our internal Carbon Interface Tool (CIT) allows us to record the embodied carbon of our construction projects. The CIT calculates the carbon footprint of a project, comparing the 'in design' figure to the 'as built' figure.

We have the complete embodied carbon footprint of two of our major projects which have come to an end in T2 to date. For one, the carbon footprint increased between the design figure and as built. This is due to additional items being required and transport distances of materials and equipment being higher than expected at the initial design. Due to the time of the carbon assessment, completed at the end of the project delivery, it was only possible to provide an as-built footprint for a project at St Fergus Terminal, Scotland. We will continue to take learnings to ensure all projects assessed in the future have both and initial and as built carbon footprint to ensure effective measurement and carbon reduction. Due to the time lag between designing and completing a project - which can span several years - there is a lag in gaining an as-built footprint.

Energy shrinkage and emissions within the NTS

NTS Shrinkage is a gas-industry term describing energy we use to operate the NTS, and other energy lost from the system, that cannot be charged to consumers or allocated to another user.

These costs are recharged back to users as part of general non-transmission charges. As a NTS Shrinkage provider, we are responsible for managing the procurement of energy (and any subsequent emissions from using this energy) covering three broad areas:

- Own Use Gas, or the fuel we use to run our compressors
- Calorific Value Shrinkage, which is gas that cannot be billed for various reasons under the terms of the Gas (Calculation of Thermal Energy) Regulations 1996 (amended 1997)
- Unaccounted for Gas (UAG) (as amended) which is the volume of gas left after we have accounted for parts of the system we can measure.

For RIIO-T2, we are working within a shrinkage incentive scheme that encourages us to minimise the energy costs associated with operating the network. Under the scheme, annual gas procurement costs from 2022 to 2023 onwards are compared to benchmark costs that were based on our forecast volume requirements, the actual volume supplied and the price of gas in the markets at the time.

The following table provides a breakdown of gas shrinkage in the NTS per gigawatt hour (GWh), which is the quantity of energy produced or consumed by a piece of equipment for one hour at a power level of one gigawatt.

	Unit	2021/22	2022/23	2023/24
Compressor fuel usage	GWh	1,139	1,648	1,040
Calorific Value Shrinkage	GWh	317	491	443
UAG	GWh	2,051	4,655	1,607
Venting from all compressors	Tonnes of CO2	208,051	307,987	191,086

National Gas Transmission undertook projects to investigate why UAG has increased since November 2019. These projects include historical and future patterns or trends.

The projects and their status are described in the UAGCVS Report May 2024.

More information about shrinkage and access to the archive of UAGCV's report.

Sustainable procurement to boost carbon reduction

National Gas is committed to working responsibly to embed sustainability into decision making throughout our sourcing processes, contract and supplier management.

Following a review of our Procurement Operating Model in December 2023, we are now reviewing and developing a revised edition of our 'Procurement Sustainability Strategy'. This aims to set a strong direction in relation to sustainability within the supply chain and to give greater direction to sustainability considerations within the sourcing processes and supplier management at National Gas. This will include but is not limited to additional guidance on Environmental, Social and Governance considerations in;

- Category Strategies
- Tender Process & Requirements
- Contract Management
- Supplier Relationship Management
- Performance Reporting

This will build on our current focusses on reduction in carbon emissions, responsible natural resource use, enhancing biodiversity, having a positive impact on our communities, diversification of our supply chain, operating ethically and complying with all relevant laws.

Our Supplier Code of Conduct (SCOC) sets out our minimum standard of expectations for our supply chain in supporting National Gas to make a positive impact on environmental factors linked to our operations. All suppliers of National Gas are required to comply with our SCOC, which sets out our expectations, values and principles as a responsible business and covers a broad range of requirements from people, communities, environment and governance. The SCOC is available on our website, embedded within National Gas Standard Terms & Conditions and into our tender processes. Therefore, by accepting a Purchase Order from National Gas, suppliers in turn accept our SCOC. Our SCOC is updated and communicated to our suppliers annually to ensure continued collaboration.

	2021/22	2022/23	2023/24
% of suppliers meeting licensee's supplier code	% not available	% not available	% not available*
% of suppliers that have their own sustainability metrics or KPIs	Not available (Pre-seperation from National Grid)	Not available (Pre-seperation from National Grid)	76

*Supplier Code of Conduct (SCOC) is embedded within our standard T&C's. By accepting a PO from National Gas, a supplier in turn accepts our SCOC.

In FY24 we have 8 other Supply Chain commitments/ metrics that all have a focus on sustainability;

#	Commitment	RAG Status
1	75% of top 50 suppliers with carbon reduction targets	G
2	100% evidenced of our top 50 suppliers having implemented Real Living Wage (RLW)	G
3.1	# 100 suppliers actively engaged through Supply Chain Sustainability School	G
3.2	# 2 Supply Chain Sustainability School forums actively engaged in	A
4.1	# 100 suppliers invited to Supply Chain Sustainability School	G
4.2	# 50 suppliers signed Skills Accord	R
5.1	ISO 20400 compliant procurement processes	G
5.2	75% of category strategies consider sustainability through formal gated processes	A
6	100% contracted suppliers legally bound to adhere to modern slavery act (MSA)	G
7	25% of onboarded providers of SME/ Diverse background as a % of overall suppliers	G

Efficient use of resources and waste

We recognise that the use of resources, waste and climate change are inherently linked.

That's why our EAP includes ten targets in relation to using resources responsibly, such as addressing redundant assets, extending the life of our assets, implementing circular economy principles, reducing the quantity of waste and increasing the proportion of recycled materials used on projects.

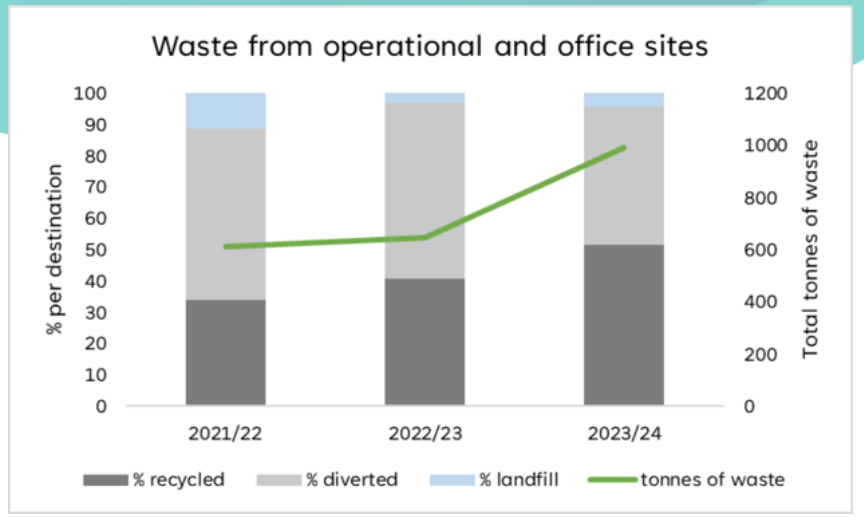
For an update on the progress already made against these targets, please refer to pages 16-19.

We continue to carry out an appraisal of waste segregation and disposal as part of managing our compliance for the Environmental Permits held at our compressor stations. The appraisal is used to identify trends in types of waste, volumes of waste and areas where we can improve or minimise it. The results of the appraisals are submitted to our environmental regulators for review so they can approve any identified actions.

Waste data provided below for transparency. As discussed elsewhere in the report, we have improved our data collation for this topic. The below waste reflects the waste totals from our office and operational sites:

	2021/22	2022/23	2023/24
Total metric tonnes of waste	612	647	990
Office & Operational Recycling Rate (%)	34	41	51

Over the past year, the increase in total waste has been attributed to higher than usual disposal of metals, confidential waste and waste oil across our operational and office sites. Waste oil disposal was a result of waste oil tank replacement works. We will be reviewing waste disposal monthly over the next year to identify and investigate any other higher than usual waste streams. As displayed on the graph, despite this increase in total waste, the % of waste that is being recycled has increased and % to landfill has decreased in comparison to 2021/22.



Our duty as a responsible landowner

National Gas has a significant landholding, with our area of operational and non-operational land totalling 1,174.75 hectares. Following assessment of all our land in the financial year from 2021 to 2022, we established the total habitat area is 878.16 hectares and we have a baseline of 4,165.61 biodiversity units. Our EAP includes targets for how we intend to put nature first on our land, for example by:

- Ensuring new construction and demolition projects include initiatives to protect and promote biodiversity
- Setting targets to increase the value of natural assets on non-operational land
- Setting a target in relation to environmental education and outreach on major projects.

For an update on the progress already made against these targets, please refer to pages 9-10.

Biodiversity

No projects have started and finished so far within the RIIO-T2 period that had an adverse temporary or permanent impact on valuable habitats.

The scope and quality of our data

Data relating to our business carbon footprint, waste data and data related to the natural environment have been taken from the data submitted in our RRP. We consider our governance process for RRP to be consistent and robust.

Furthermore, each EAP target and associated data has an accountable manager who provides the annual performance information provided.

During preparation of this AER, we have endeavoured to ensure that:

- The reported data is accurate and meaningful
- The reported data reflects our performance in the last financial year (2023/24) and is consistent with the scope of requirements detailed in the Ofgem guidance – RIIO-T2 Environmental Reporting

The assumptions made regarding our calculation and measurement methods are detailed throughout. We maintain methodology documents internally to enable year on year consistencies.

The content of this report is reviewed and approved by an initial expert signatory, a senior manager and an executive team member prior to publication.

Within this report, we have provided the data and updates to reflect our environmental performance based on knowledge and information available to us at the time of reporting. We strive to have complete, consistent and transparent data in order to inform performance improvements. However, where data is not available or gaps are identified, we will work to address these in the following years.

Data gaps identified	Reason for data gap
The change in biodiversity units from network development projects has not been quantified.	No projects have started and finished so far within the RIIO-T2 period that had an adverse temporary or permanent impact on valuable habitats.
Percentage of suppliers meeting the licensee's environmental supplier code or equivalent.	Each supplier is legally bound to adhere to our Code of Conduct within our general terms and conditions. We therefore expect all of our suppliers to be meeting the code.
The key materials (maximum of ten) by value and/or mass consumed directly by the company and, where relevant, the supply chain. Licensees should comment on the environmental impact of materials where possible.	The volumes of consumed materials are not yet quantified.

Reporting boundaries

This report provides data and information for the period 1 April 2023 to 31 March 2024 across National Gas Transmission.

Business Carbon Footprint data is reported based on an operational control reporting boundary.

Glossary

Term	Acronym	Description
Annual Environmental Report	AER	Report submitted to Ofgem by licensees to ensure they remain accountable on a yearly basis for implementing their RIIO-T2 EAP Commitments.
Best Available Technology	BAT	National Gas has a legal obligation to ensure that all equipment complies with the requirements of Best Available Techniques. This is a stepwise approach (a simple, standardised method for collecting, analysing and disseminating data) following a defined methodology set out by the UK environmental regulators: the Environment Agency (EA); the Scottish Environment Protection Agency (SEPA); and Natural Resources Wales (NRW).
Biodiversity Net Gain	BNG	An approach to development, and/or land management, that aims to leave the natural environment in a measurably better state than it was before hand.
Calorific Value Shrinkage	CVS	Energy that cannot be billed due to CV capping under application of the Gas (Calculation of Thermal Energy) Regulations 1996 and subsequently amended in 1997.
Carbon Interface Tool	CIT	An internally developed tool to measure the carbon footprint of all schemes.
Environmental Action Plan	EAP	Plan outlining our approach to environmental management and environmental performance during RIIO-T2. The plan was formed from our Business Plan Commitments and consists of specific targets under five pillars, with clear accountabilities and work programmes, that will drive improved environmental performance.
FutureGrid		Part of our HyNTS programme, the project is testing the suitability of the NTS to transport hydrogen by constructing an offline hydrogen test facility, representative of our network, which will be used to test decommissioned assets at a range of different hydrogen concentrations.
HyNTS programme		Hydrogen in the NTS is focused on understanding how we can safely and efficiently transition our network to hydrogen.
ISO 20400		Sustainable sourcing process providing guidance to organisations on integrating sustainability within procurement, as described in ISO 26000.
Methane Emissions Reduction Campaign	MERC	Work programme with Ofgem to implement a plan to reduce methane emissions and increase detection of leaks across the NTS during RIIO-T2.
National Gas Services	NGS	Formerly the pipeline maintenance centre. Specialises in gas pipeline repair, replacement, maintenance and intervention to deliver in-field solutions to a range of emergency and planned projects across the gas pipeline network.
Output Delivery Incentives	ODI	Scorecard agreed with Ofgem to encourage us to improve the environment beyond the existing commitments in our EAP.
RIIO Price Control Framework		Revenue = incentives + innovation + outputs. The price control framework for high pressure GT networks which lasts for five years. RIIO-T1 ran from 2013-2021. RIIO-T2 started on 1 April 2021 and runs until 31 March 2026.
Science Based Targets initiative	SBTi	The SBTi defines and promotes best practice in science-based target setting. SBTs provide a clearly defined pathway for a business to reduce their greenhouse gas emissions, helping to prevent the worst impacts of climate change and futureproof business growth. Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement - limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.
Task Force on Climate-related Financial Disclosure	TCFD	Framework for consistent climate-related financial risk disclosures for use by companies, banks and investors in providing information to stakeholders. Created by The Financial Stability Board to improve and increase reporting of climate-related financial information.
Unaccounted for Gas	UAG	This is gas that is lost, or otherwise not accounted for, delivered to or taken off from the NTS. It is one of the components of NTS shrinkage.

Get in touch

This AER and the previous reports are accessible via our external page: https://www.nationalgas.com/responsibility/environment

If you have questions, feedback or suggestions, please email us at box.gtshe.envsust@nationalgas.com

National Gas Transmission & National Gas Metering
NG House
Warwick Technology Park Gallows Hill
Warwick CV34 6DA
United Kingdom