



I want the gas system to be safe

13. I want the gas system to be safe

What is this stakeholder priority about?

This priority is about what we do to keep the public, our employees and other people who work on or around our assets safe from the hazards inherent in our business. Failure to supply gas and major uncontrolled releases of gas from the high-pressure network are both threats to life and property. This priority also covers the occupational safety and wellbeing of our staff and contractors whilst we continue to develop the right safety culture within gas transmission.

What have stakeholders told us?

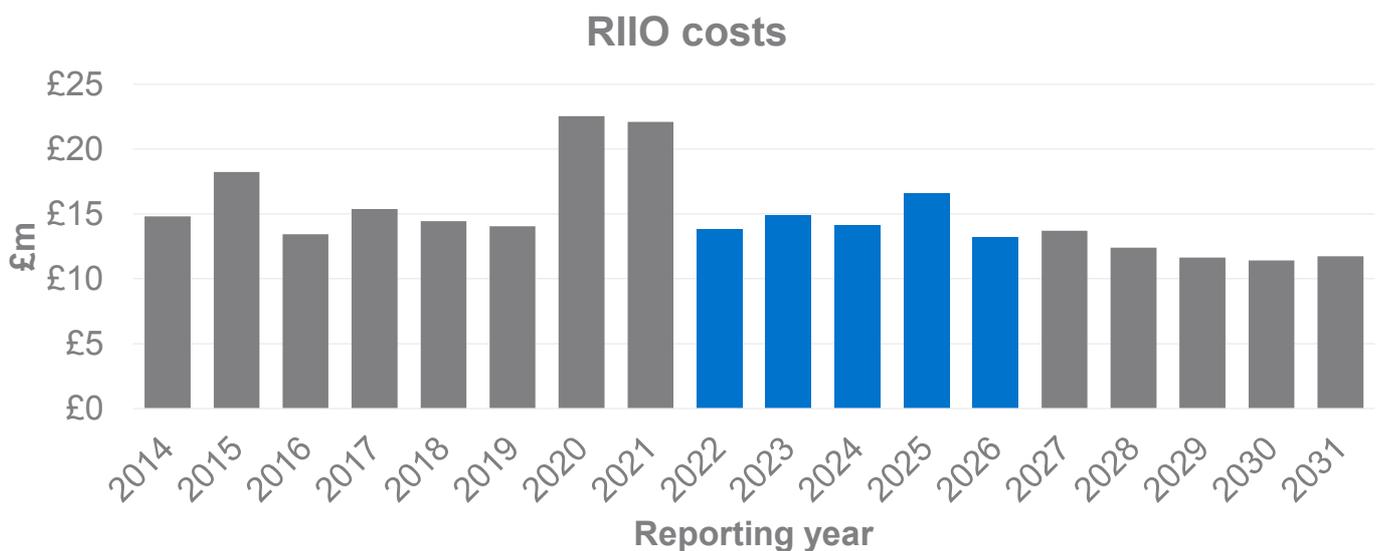
Stakeholders have consistently said that safety is a priority, they are aware of the risks to life and disruption to gas supplies associated with our operations, and they appreciate the crucial role of the gas transmission system.

During RIIO-2 we will: maintain our first-class level of safety whilst continuing to pursue the highest level of safety culture maturity. Our safety culture underpins how we undertake our work. We will comply with legislation through routine and preventive safety activities to protect the public, our people and assets. We will investigate all near misses and process safety incidents, embedding any learning in our business processes. Our RIIO-2 plan for safety continues the best practices we implemented in RIIO-1 ensure the safety of our employees and the public.

We will spend £14.5m per year (3 per cent of our RIIO-2 plan) on the routine and preventive safety activities described in this priority. This compares to £16.9m per year during RIIO-1. The spend is related to our teams who undertake strategy and assurance roles across gas transmission and our central corporate team who provides support on our corporate health and safety commitments. It also accounts for our costs associated with our network emergency coordinator (NEC) commitments, our IT systems to track performance of our activities and our operational properties to protect assets and provide appropriate welfare arrangements for employees.

This chapter is just part of our commitment to delivering a safe, reliable and resilient network. In 'I want to take gas on and off the network, where and when I want' our asset health plan, projects, and how we operate the network take into account the significant safety risk that we minimise every day to protect the public, our people and assets.

Figure 13.01 RIIO-1 and RIIO-2 spend profile 'I want the gas system to be safe'





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1. What is this stakeholder priority about?

At National Grid, safety is paramount. We continue to pursue the highest level of safety culture maturity. For process safety, our ambition is to systematically identify and mitigate process safety risks through the embedding and use of our process safety management system and to drive continuous improvement by benchmarking our performance and adopting good practices.

This priority is about our routine and non-routine activities to protect the public, our employees, people who work on or around our assets and the environment from the safety risks associated with the network. Alongside our asset and process-related safety, health and environment (SHE) compliance activities, we have included our work on occupational safety, wellbeing and health and driving the right safety culture throughout our organisation.

Accidental damage to pipelines by third parties is the number one cause of pipeline rupture in Europe. Asset failures of the UK gas transmission system can result in uncontrolled releases of high-pressure gas and could ultimately lead to a national energy supply emergency. In addition to any fatalities associated with the original asset failure, the consumer impact of an outage of greater than 30 days in temperatures below 5°C is predicted to lead to fatalities in one in ten UK households²⁵.

As a gas transporter, and in our role as NEC, we must comply with written 'safety cases' accepted by the Health and Safety Executive (HSE). These set out how we manage the safety of the gas network in line with the Gas Safety (Management) Regulations, along with the specific additional requirements associated with the sites at Bacton and St Fergus which fall under the upper tier requirements of the Control of Major Accident Hazard (COMAH) Regulations.

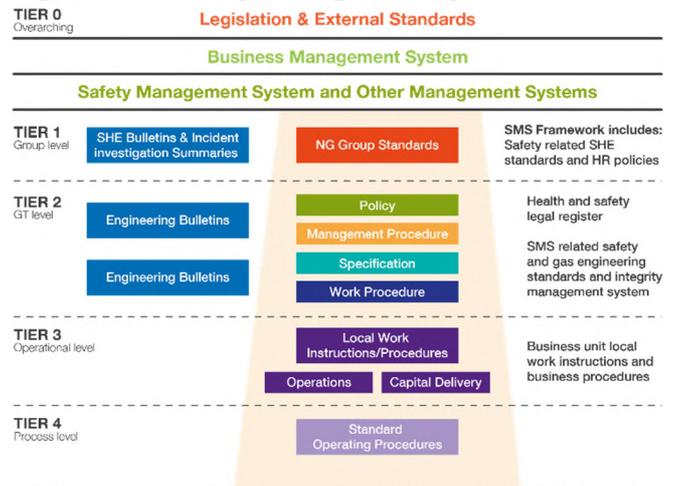
Key safety legislation for our business is predominantly based on 'goal setting' principles. This means we must manage risks down to a level that is as low as reasonably practical (ALARP). We cannot stand still. The safety standards expected of us are continually increasing as new technologies come on line and best practice evolves. At the same time, housing development and population growth is bringing increasing numbers of people into close proximity to our pipelines and other potentially hazardous facilities.

2. Our activities and current performance

We have a mature safety management system (SMS), organised to deliver our statutory and regulatory duties. We use it to ensure that we have taken all necessary steps (as far as is reasonably practical) to comply with all relevant safety legislation, primarily the Health and Safety at Work Act and its associated regulations, codes of practice and guidance. The SMS is a framework that allows us to consistently identify and control health and safety risks, reduce potential for accidents and incidents,

and continually improve performance. The framework is aligned to HSE guidance and British Standards following the 'Plan, Do, Check, Act' approach. The SMS is organised as shown in figure 13.02.

Figure 13.02 safety management system



Safety considerations underpin everything we do in both office and operational environments, but in this chapter and in table 13.03, we have highlight activities and teams where safety is their prime purpose.

Table 13.03 summary of safety activities

Activity	What does this involve?
People – to deliver assurance, compliance and emergency preparedness	Fulfilling the Network Emergency Co-ordinator role including co-ordination of cross-industry emergency exercises. Setting standards and implementing management systems for: <ul style="list-style-type: none"> • process safety • occupational safety, wellbeing and health • assurance including audit and benchmarking. Reviewing and updating safety cases. Compliance with key legislation including the Pressure Systems Safety Regulations and the Pipeline Safety Regulations, for example through regular pipeline inline inspections and pressure systems testing. Explosive atmospheres management and lifecycle management of safety systems.
Third party interference	Regular aerial surveillance of all pipeline routes to highlight any risks to integrity e.g. from farming or construction activity. Regular line-walking of all pipeline routes to identify issues not visible from the air e.g. depth of cover and damaged pipeline marker posts. Talking to land owners and local authorities to raise awareness of the safety issues of working near our assets. Providing a 24/7 emergency response to make safe and repair any pipeline damage including using specialist equipment and strategic spares.
Operational property	Maintenance of operational land and buildings. Refurbishment and/or replacement of operational buildings to provide safe and accessible working conditions for all employees and protect our assets from damage.

²⁵ <http://www.hse.gov.uk/gas/supply/nobel-denton-report.pdf> - June 2011



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Track record and learning in RIIO-1

Our safety performance is reported in our annual regulatory reporting packs²⁶. We have met our key target of compliance with all relevant HSE legislation. National Grid is well regarded by our peers and supply chain for our proactive management of safety. We actively and openly share performance data, initiatives, ideas and issues in relevant peer groups, industry forums and with our key supply chain partners to seek opportunities to continuously improve. Across our US and UK business we also share best practice on safety measures, led by our Chief Engineer. This allows us to apply further insight and best practice to our activities.

Process safety

We have a mature safety management system to manage our safety risks, which we have strengthened throughout RIIO-1. Our process safety management strategy includes; identification of our major hazards, assessment of risks and application of the Eliminate, Reduce, Isolate and Control (ERIC) principles to manage and reduce the risk from our assets and operations. We have an assurance processes implementing three lines of defence²⁷ model as per good practice. Independent experts DNV GL **benchmarked** our process safety management performance using its International Sustainability Rating System. Our performance was rated in the upper quartile within a comparator group of more than 200 worldwide oil and gas sites. This objective assessment has helped us to be clear on what it means to be 'industry leading'. It has given us a better picture of our strengths and weaknesses and sharpened our focus on areas where we can improve how we manage the inherent risks of our high-hazard assets.

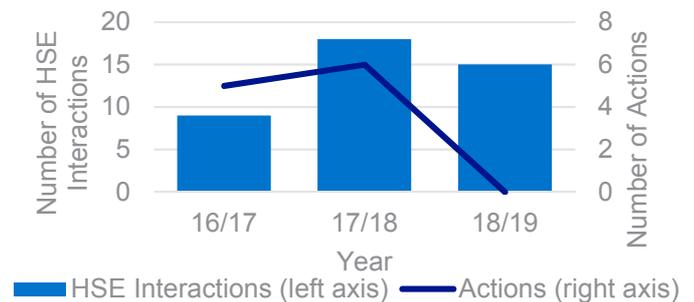
HSE requirements

The HSE is our safety regulator. To ensure we meet their requirements, we have processes in place to stay aware of all legislative and supporting guidance requirements, ensure clear policies and procedures are implemented and maintain a competent workforce to deliver these requirements and deliver risk based targeted assurance. We work closely with the HSE to ensure we are complying with key safety legislation and that risks to people from our activities are ALARP. Specifically, through:

- our activities relating to COMAH, Gas Safety (Management) Regulations, Pipeline Safety Regulations and Pressure Systems Safety Regulations
- supporting the HSE's programme of targeted inspections and investigations
- raising awareness of current safety-related issues/trends through planned liaison meetings.

During the RIIO-1, period we have developed a proactive working relationship with the HSE. Over the last two years, there has been an increased focus from the HSE on testing our compliance to legislation and safety cases. Previously, the HSE have identified potential control weaknesses requiring clarification or action. However, last year no actions were issued, and this illustrates the improved maturity and value of the three lines of defence assurance model in ensuring we meet our licence conditions. Figure 13.04 shows the number of HSE interactions over the last three years along with the number of actions raised. Also, during the RIIO-1 period we held an inspection for the NEC, which resulted in no actions and seven recommendations.

Figure 13.04 number of HSE interactions and associated actions



Innovation

As safety is a top priority, innovation to improve performance has always been important. Through RIIO-1, we have undertaken several innovation projects focused on specific safety improvements and we also seek continual improvement in our safety performance.

Table 13.05 safety innovation projects

Project	Description
Development of AGI Safe	Development of 'above ground installation (AGI) safe' software package allows better quantitative risk assessments and more efficient designs. This led to a one-off saving of £84k at Peterborough Compressor Station and will be used in future applications in RIIO-2.
PE slab protection	Use of polyethylene (PE) instead of concrete slabs to protect pipelines. The slabs are cheaper, safer and better for the environment to install. To date £767k, has been saved in total.

Keeping our employees safe whilst maintaining health and wellbeing

Our combined injury frequency rate over the RIIO-1 period up to 31 March 2019 was 0.07. This is good performance within the UK Energy Industry Safety Leaders Group range of 0.04 to 0.25. However, we regret that, over the RIIO-1 period up to 31 March 2019, our operations incurred one employee and 17 contractor lost-

²⁶ <https://www.nationalgridgas.com/about-us/business-planning-riio/how-were-performing>

²⁷ The first line of defence is provided by the first line supervisor during normal supervisory activities. The second line of assurance is conducted by a team within the business who audit and assure a range of work activities in a targeted programme. The third and final level of assurance is provided by our corporate audit function who conduct periodic audits as set out in their audit plan. Most issues will be identified and corrected or escalated by the supervisor, with the second and third level assurance teams identifying more systematic and process issues.



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time injuries (LTIs); such injuries occur against a backdrop of more than 25 million hours worked.

We work closely with our contractors to improve and maintain safety. During the RIIO-1 period numerous improvements were implemented across gas transmission via several mechanisms. These included contractor forums, joint working groups targeting specific topics, close working with designers including supporting the development of new interactive design techniques, lessons learnt sessions, safety bulletins, monthly “Focus On” briefings based on trend analysis, various workshops and improvements in data management. The improvements have been recognised through the increase in reporting of safety near misses, the uptake of dynamic “at the work face” risk assessments and improved segregation of people and plant.

Driving is one of the most hazardous activities we undertake day to day. We have promoted awareness among our employees through rollout of a hard hitting, police and emergency services backed, “Crash Course” road safety informational campaign. Since 1 April 2017, we have banned the use of mobile phones whilst driving on business, including the use of hands-free equipment. This stance, backed by our executive team and trades unions alike, is in recognition of overwhelming evidence from police and safety professionals of the distraction risk posed by the use of mobile devices.

Our employees’ physical and mental health are paramount to us succeeding as a business. We know that a holistic approach to health helps to keep our employees healthier, and engaged, for longer. Our SHE Committee continues to focus our wellbeing efforts on encouraging behavioural change within our workforce, through education and training. Our wellbeing programmes have raised awareness to employees of various risks associated with modern living and the impact it can have on their health. Campaigns have included: diabetes awareness, circadian rhythms, body weight, cancer prevention, nutrition and mental health.

Around 12 per cent of our workforce are now trained in mental health first aid. These in-depth training sessions are designed to provide employees and leaders with the knowledge and confidence to notice and respond to mental health issues in the workplace. We offer many levels of service to support with work and home life concerns. Alongside the emotional support offered through our Employee Assistance Program partners, we offer physiotherapy sessions, occupational therapy as well as our legal obligation towards occupational health.

Our services support employees to return to work more quickly than dependence on the NHS, with occupational therapy that focuses on both the physical and psychological aspects of prolonged or chronic ill health. We know we aren’t obliged to do this, however, it shows our employees the care and concern that we have for them, and it mirrors that every aspect of who our employees are is important to us. We take a risk-based

approach, understanding and managing our key wellbeing and health risks. We use internal and external data to focus on specific areas, and our immediate risk profile is mental wellbeing, musculoskeletal injury prevention and occupational health risk exposure mitigation. We have a UK Wellbeing Strategy through which we look to achieve the following:

- Create and embed a culture that enables everyone to perform to the best of their abilities knowing they are well cared for and can talk openly about their health and wellbeing.
- Build a workforce where healthy, engaged and supportive employees can succeed and thrive.
- We are recognised as an employer that leads in employee wellbeing and this enables us to attract and retain the best talent.

To help us meet our ambition as being recognised as a leading organisation within wellbeing and health, we are members of groups and organisations, supporting the government to create policy on wellbeing initiatives, or offering our support and services to help raise the profile and reduce the risk for smaller organisations. These groups include Business in the Community (BiTC), The Inclusive Economy Partnership (IEP) and Thriving at Work.

3. What have stakeholders told us?

We have asked our stakeholders on their views on safety through various channels including workshop events and webinars. We have shared our business plan proposals directly with the HSE throughout the RIIO-2 business plan process to understand their views. Most of our safety-related activities are driven by compliance with legislation and application of established best practices. This limits the amount of influence our customers or consumers can have on workload. The objective of our engagement was to understand what level of safety performance

Table 13.06 stakeholder engagement

	Engagement topic: safety
Stakeholder segments engaged	All of our stakeholder segments.
Objective	What level of safety performance is expected from us?
Channel/method	Safety and reliability were included in events, webinars, bilaterals and consumer engagement.
Key messages	Safety is a top priority and stakeholders expect us to meet legislative compliance and keep the public safe. It will be important during RIIO-2 that we address the issues of our ageing assets, ensuring they are safe now and into the future. Process safety is becoming more of a focus and we should play our part. Safety and resilience were a top priority by domestic and non-domestic consumers during acceptability testing.



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Trade-offs and stakeholder influence on the plan	We will continue to keep safety as a top priority. Given safety investment is driven primarily by the need to comply with legislation there are no trade-offs to be made.
SUG and Challenge Group feedback	We have taken on board feedback from the SUG, for example, ensuring this chapter clearly articulates the activities we undertake related to the cost, we have clarified our ambition on first class safety performance and included more on behavioural safety.

We also participate in industry wide groups in the UK and across Europe. In the UK, for example, we are part of the UK Onshore Pipeline Operators' Association (UKOPA), where we participate to share knowledge and promote best practice across the industry. UKOPA helps to develop a comprehensive and consistent view of strategic

issues that relate to the safe operation and maintenance of onshore pipelines. We engage regularly with the other terminal operators at St Fergus and Bacton. These meetings cover topics from operations to safety, including any lessons learnt.

4. Our proposals for RIIO-2 and how they will benefit consumers

In our proposals for RIIO-2, we will continue to pursue the highest level of safety culture maturity. We will protect the public, our employees and the environment from the safety risks of our transmission system and comply with all legislation that applies. We are committed to continual process improvement. Our safety priority maps to Ofgem's output category, 'maintain a safe and resilient network.'

Table 13.07 safety proposals

What our stakeholders have told us	Commitment	Output type	Consumer benefit
Safety is a top priority and stakeholders expect us to meet legislative compliance and keep the public safe.	People – We will carry out our safety strategy and assurance roles and our corporate health and safety commitments.	Commitment	"I want you to facilitate delivery of a sustainable energy system" – through managing down the likelihood of low frequency, high impact incidents; we protect society from potential disruption and damage to public health, business, transport and the natural environment that could be associated with gas transmission failure events.
	People – we will provide 24/7 standby cover, emergency planning and training. We will also undertake our activities associated with our NEC role.	Commitment	
	Third Party Interference – we will minimise the risk of others causing damage to our pipeline network by carrying out regular surveys and consider new technological options to become more effective and efficient. We will maintain an emergency response and repair service for our pipework systems across Great Britain.	Commitment	"I want to use energy as and when I want" – our commitment to safety-related inspections, maintenance and asset replacement avoids disruption to continuity of gas supply. This also affects industry and electricity supply.
	Operational properties – 22 sites during RIIO-2 to be refurbished or replaced so they are in a state to protect our people and assets from damage and weathering.	Commitment	

5. How will we deliver?

The gas transmission SMS framework structure is based on the Plan, Do, Check, Act (PDCA) model, which is an iterative process and drives continuous improvement. This will be a key process that will help us maintain our world-class level of safety whilst continuing to pursue our goal of zero harm. We will continue to embed the benefits of safety innovations into business as usual and look for further ways to improve.

Our processes are monitored by an agreed scorecard of leading and lagging indicators, consistent with good practice, and assured by implementing the widely recognised good practice of the 'three lines of defence' assurance model. Leaders are incentivised and targeted on a mix of targets (both leading and lagging). For example, our leaders have leading targets on delivering effective and engaging safety leadership visits, delivering good quality investigations into incidents and events and closing the agreed action on time. These targets incentivise the positive effort we put in to safety

management, rather than penalise the few remaining negative instances of injury or harm that still occur.

In our annual planning cycle, we refresh our view of key risks, evaluate opportunities for further risk mitigation and continuous improvement, and develop SHE plans to implement initiatives to improve. The success of SHE management is wholly dependent on the engagement and conscious effort from all our employees, particularly our field-based employees and contractors. Annually, we run a safety culture survey to understand feedback from our employees.

People – developing the skills and behaviours that support safety

We define and maintain safety and technical competencies (STCs) for our operational workforce and any person carrying out any activity that may have a direct impact on the safety of the gas transmission network.



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Over the last year, we have been reviewing our competency management process and are in the process of implementing a new system, Cognisco. We are now able to provide a detailed, comprehensive view of capability and competence across our operational workforce. We have reviewed core competencies for each role and discipline and mapped the workforce to those competencies. The results give us both a clear view of current effectiveness and a projected view of training demand to maintain the appropriate levels of expertise and experience.

During RIIO-2, we will continue to use this management information to manage training schedules more efficiently and support a more flexible, agile workforce.

Our future safety performance is underpinned by the culture of our organisation and the behaviours of our people. We're aiming for a proactive safety culture where we always do the right thing regarding safety. We have various targeted campaigns to support staff and managers to develop positive safety behaviour. We will monitor our progress along the safety culture maturity via annual surveys among our employees.

People – strategy, assurance and corporate health and safety

Our costs for strategy and assurance include a share of the costs of the central SHE function, which works across National Grid and provides efficiencies of scale by supporting our UK gas and electricity businesses. Also included are the direct costs of our dedicated safety and integrity assurance team, which provides:

- independent, risk-based second line assurance for gas transmission, as part of the three lines of defence model to ensure continued safe and compliant operations
- insightful support and guidance to mitigate key safety, environmental and business risks and to drive continual improvements in gas transmission.

People – emergency preparedness

The costs include the direct time of individuals responsible for emergency planning and independent NEC responsibilities. They also include provision of incident response training for our own staff and relevant gas distribution network staff, updating the NEC safety case and co-ordination of both internal and industry-wide emergency exercises across gas market participants including the Department for Business, Energy & Industrial Strategy (BEIS) and the HSE. Further information about how we manage network gas supply emergencies can be found here²⁸. Drivers of our emergency preparedness activity in RIIO-2 include:

- the increased operational challenges posed by more diverse supply/demand patterns
- potential changes to the network gas supply emergency framework associated with trends in decentralisation and decarbonisation

- development and adoption of new tools and systems
- the need for emergency planning co-ordination with other gas transmission operators across Europe.

Our planning assumes we maintain the same levels of 24/7 emergency standby across our business and it will require designated gas transmission staff to be trained and on call to respond to asset-related emergency events. Please see annex A14.25, on how we will develop our capabilities in RIIO-2 to continue to ensure emergency arrangements reflect the changing energy landscape.

IT systems

We will continue to invest in the technology health of core systems that support us in maintaining our safety standards. Our IT systems support our asset management processes which ensure we maintain a safe and reliable network. We need to maintain and enhance these systems through RIIO-2 to ensure we maintain our safety standards and further reduce risk.

Third party interference

Accidental damage to pipelines by third parties is the number one cause of pipeline rupture in Europe. There are well-established industry practices²⁹ accepted by the HSE to guard against accidental interference, and we must have in place the emergency response capability to make safe and repair any suspected or actual damage. Our RIIO-2 plan is based on continued application of these good practices.

We carry out regular visual checks on our entire 7,600 km network. The current best practice and most efficient method is via helicopter patrols, which we undertake fortnightly. On average each patrol checks between 2000-3000km, with around 4,500 sightings a year which are reported and then followed up by our operations teams. We also walk the pipeline on foot a minimum of once every four years to check depth of burial and look for issues that would not be seen from the air. This is usually undertaken between October and March each year to minimise crop damage to land owners. On the back of the line walks there can be actions to be undertaken such as replacing marker post, mitigating low depth of cover etc.

We actively explore alternative methods and new technologies to see if there are advantages in performance, cost or efficiency. For example, we trialled drones to see if they could offer any advantages over line-walking or traditional aerial surveillance. The technology is promising but there are limitations in relation to permitted use, privacy and data protection.

We are obliged to maintain an emergency response and repair service for our pipework systems across Great Britain. We share efficiency with other gas pipeline operators by accessing the same centralised emergency materials and equipment (CEME) scheme operated by our Pipelines Maintenance Centre. There is no other national provider of this niche specialist capability.

²⁸ <https://www.nationalgridgas.com/safety-and-emergencies/network-gas-supply-emergencies-ngse>

²⁹ Institution of Gas Engineers and Managers IGEM/TD1 Standard for steel pipelines and associated installations for high pressure gas transmission



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Operational properties

It is imperative that we ensure our buildings are in a state to protect our people and assets from damage and weathering whilst providing a safe and suitable workspace for maintenance, storage and to support the teams in running the NTS. Some of our buildings and facilities are beyond their life and most were not built with the equal access that we now expect (e.g. female facilities or disabled access). We will undertake a range of refurbishments at 22 sites to bring admin and control buildings of our operational sites up to a reasonable standard, complying with health and safety, and environmental legislation. Our proposals are based on a risk-based approach based on the condition of individual site buildings. Due to the current conditions of the buildings, failure to refurbish or replace may lead to damage and ultimately failure of the equipment that is being protected. This could lead to disruption to gas supplies. In addition, without carrying out this work it could lead to prosecution under the Health and Safety at Work Act or the Equality Act for failing to provide a safe and accessible place to work.

Innovation in RIIO-2

During RIIO-2, there will be a continued focus across our US and UK businesses as we share best practice on safety measures, led by our Chief Engineer. We will continue to collaborate and share best practice across the industry worldwide. Continuing to collaborate is vitally important to ensure we learn lessons from global safety incidents. We anticipate our innovation culture developing alongside our safety culture and see our BAU innovation activities having a particular emphasis on behavioural safety.

Table 13.08 RIIO-2 innovation

Theme	Commentary
Fit for the future	We will be focusing on network emergency simulation to support our emergency preparedness role.
Ready for decarbonisation	'Smart' real time network monitoring and notifications supporting our third-party interference mitigations.
Decarbonised energy system	Safety consequences of bio gases and hydrogen blends in the network, including skills, capabilities and behaviours.

6. Risk and uncertainty

A fundamental part of our business-as-usual responsibility to manage the safety of our operations. We carry reputational and financial risks of any failure events or lapse in safety performance that could happen under our stewardship. Asset failures can also occur because of unintentional and unconnected third-party activity close to our assets and we take the actions documented in this chapter to minimise this risk. Future safety incidents on gas transmission systems in the UK or worldwide could impact future work we need to do to maintain the safety of our system. The consequences of failures can be significant both to National Grid, to the public and to the UK economy, especially if gas supplies are interrupted.

7. Our proposed costs for RIIO-2

We will spend £14.5m per year on the routine and preventive safety activities described in this chapter. This compares to £16.9m per year during RIIO-1. This is based on assumptions of compliance with the same mature legislation, good practice for compliance remaining in place, a similar workload, stable outsourced costs and the embedding of RIIO-1 efficiencies.

Table 13.09 summary safety costs by activity

Activity spend (£m in 18/19 prices)	2022	2023	2024	2025	2026	Total RIIO-2	Annual RIIO-2	Annual RIIO-1
People and IT Systems	3.0	3.4	3.9	5.2	3.1	18.6	3.7	6.3
Operational properties	4.2	4.7	3.9	4.6	3.6	21.0	4.2	3.6
Third party interference	5.8	6.1	5.5	6.0	5.8	29.2	5.8	5.8
Corporate SHE	0.6	0.6	0.6	0.6	0.6	3.1	0.6	4.4
Pension costs	0.1	0.1	0.1	0.1	0.1	0.5	0.1	-
Grand total	13.8	14.9	14.1	16.5	13.2	72.5	14.5	16.9

Table 13.10 summary of safety costs by RRP category

RRP category (£m in 18/19 prices)	2022	2023	2024	2025	2026	Total RIIO-2	Annual RIIO-2	Annual RIIO-1
Closely associated indirects (BPDT 2.02)	1.9	1.9	1.9	1.9	1.9	9.4	1.9	2.2
Direct costs (BPDT 2.02, 2.04)	8.8	9.1	8.6	10.9	8.8	46.1	9.2	10.1
Load-related (BPDT 3.01)	0.2	0.2	0.5	0.2	0.0	1.2	0.2	3.0
Non-operational capex (BPDT 3.07)	2.9	3.7	3.0	3.4	2.5	15.4	3.1	1.7
Controllable pension costs (BPDT 2.02)	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.0
Grand total	13.8	14.9	14.1	16.5	13.2	72.5	14.5	16.9

Please note we have provided costs to one decimal place and hence some columns may not equal to the totals. Pension costs are based on proportion of total TOTEX.