

Safety & Sustainability: Our focus now and for the future



Who we are

We are Cadent

Your Gas Network

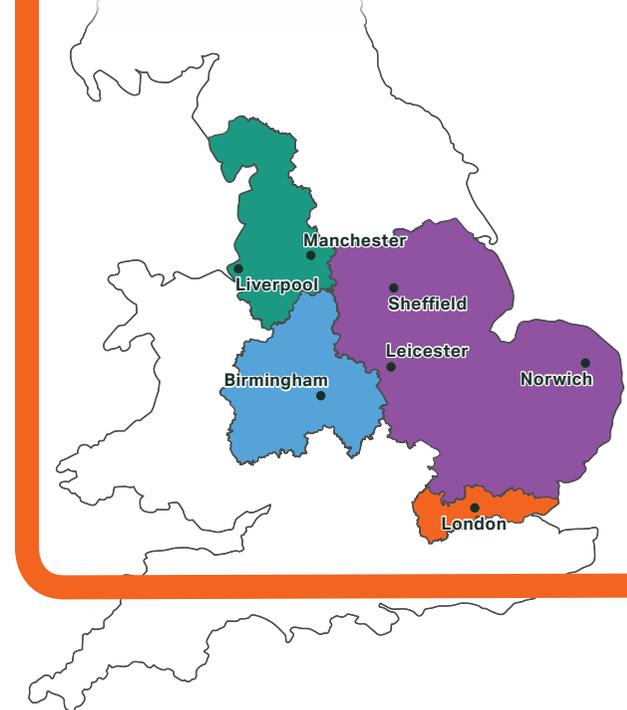
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Welcome to our Safety & Sustainability report

This report reflects the actions we have taken to deliver our business activities in a responsible way, aligning to meet the needs of our customers, reducing our impact on the environment and ensuring safety remains a priority.





We provide the energy our customers need to stay safe, warm and connected

Our responsibility is to look after the gas pipes so they can continue to deliver safe, reliable and low carbon energy for years to come. We are continually finding smarter and more sustainable ways to develop our networks and work closely with local communities to deliver a high quality service that our 11 million customers expect. We are proud to keep the energy flowing.

Our sustainability framework



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Welcome from our Chief Executive Officer



Welcome to our second Safety & Sustainability report

I'm proud to introduce our second ever Safety & Sustainability report, focusing on safety performance over the last year and outlining our progress towards reducing carbon emissions. Whilst I'm pleased that it shows solid performance in both safety and sustainability measures and highlights where we have made improvements, I'm also determined to focus on the areas where there is more to do. We are a responsible company trusted by our stakeholders and shareholders to operate with transparency and integrity. We will not be satisfied until we remove all accidents and make significant strides towards reducing carbon emissions and we will work relentlessly towards this mission.

We are very focused on the long-term sustainability of our planet by reducing carbon emissions to net zero and we are committed to our role in helping to make it happen. Through the UK's vast network of gas pipelines, we can deliver low carbon gas to heat our homes and power our industries. Our projects, HyDeploy and HyNet, are at the cutting edge of proving this right now. We are working with stakeholders and Government to ensure that this valuable asset can continue to keep customers safe and warm and is part of a whole systems transition to net zero.

Our people have very much impressed me with how passionate they are about safety and about serving our customers. Our emergency response in Wirksworth is a great example of this – 150 colleagues restored gas to 900 houses after water had entered into our network from a burst water pipe. Customers in the area fittingly renamed them 'angels in orange' – and there are many examples of this. People quite rightly expect big business to be more responsible, and transparent with the communities they serve and the people they employ. I am pleased to say that we are committed to this. I hope that, in reading this report, you will see what I see: a responsible company, trusted to keep the energy flowing to 11 million customers safely and ethically while at the same time forging ahead to meet the environmental challenges of our society.

Our commitments

On 9 December 2019, after significant stakeholder engagement, we submitted our final 2021-2026 RIIO-2 Business Plan to Ofgem. In it, we have set out a stretching ambition which will help us to transform the experiences our customers have whilst keeping a clear focus on managing affordability through reducing bills in real terms over the period. On the 9 July 2020, Ofgem released their draft determinations of the plan and we will work closely with Ofgem ahead of their final determination in December 2020.

As we finished the year, we were confronted with the COVID-19 pandemic. We have all had to learn and adapt quickly during a difficult and challenging time. I have been impressed by the commitment and support shown throughout the business. You can read more about our response in the Annual Report and Accounts 2019/20. I'm very proud to work for Cadent and delivering the vision we have for the coming years.

Steve Fraser

Chief Executive Officer



We are very focused on the long-term sustainability of our planet by reducing carbon emissions to zero."

Looking to the future



Firstly, I'd like to extend my sincere thanks to my colleagues on the Committee – Catherine Bell and Ian Coucher and also the Management of Cadent who have worked tirelessly to improve the safety and sustainability performance of the business. I would also like to welcome Perry Noble who has joined the Committee and will replace Ian Coucher going forward.

In last year's report we outlined our Sustainability Framework and set out our ambition across a number of both Safety and Sustainability measures. It is pleasing to report that improvements have been made in all our goals and again further improvements have been targeted for 2020/21.

Public safety and customer service are at the forefront of the business. Cadent provides the National Gas Emergency contact centre on behalf of the UK gas industry and receives approximately 1.4 million calls per year from members of the public.

The calls are allocated on a geographic basis to one of the Gas Distribution Networks and last year the four Cadent networks received 356,879 emergency calls.

Upon receipt of a call, an engineer is dispatched to investigate and where possible execute a repair. Of the calls received, approximately 80% were found to be defects on the gas installation or appliances within the customers premises. Where possible, the engineer will endeavour to repair the fault. Where this is not possible and the customer is registered on the Priority Services Register, they will receive additional support with temporary cooking and heating facilities.

Cadent exceeded the regulatory standard of 97% in 1 hour for responding to uncontrolled gas escapes with the average attendance time of 34 minutes.

Throughout 2019/20 we have expanded the use of robotic CISBOT technology to rehabilitate large diameter gas mains in busy city centres across the networks. Aside from the improvements in safety, CISBOT significantly reduces disruption. Another critical area is the management of the gas infrastructure in multi-occupancy buildings. Many of these buildings are over 50 years old and arising from the regular surveys, substantial renovation works are often required. The challenge for the engineers overseeing this work is to minimise the impact upon the gas consuming customers and is an area where substantial improvements have been made in the last year.

As 2019/20 drew to a close, the business was preparing to operate in a COVID-19 environment. As we look back over the last six months, it's been interesting to see the emissions impact of the various lockdowns around the world. In early April, global carbon dioxide emissions were reported to have reduced by 17%, predominantly due to reductions in surface transport and industry. In the UK, the reduction was even higher – 31% attributed to a higher level of surface transport and a full lockdown. However, the National Oceanic and Atmospheric Administration from their base in Hawaii recorded the highest ever levels of atmospheric carbon dioxide – 417.1 parts per million (ppm), up 2.4ppm on the previous year.

The trouble with carbon dioxide is it traps heat and disperses slowly and whilst we all talk about "net zero" by 2050, the scientists are predicting that unless global carbon dioxide emissions are reduced by 3-7% per annum in the years to 2030 the damage due to global warming will be irreparable. It is with this background that Cadent is leading in the adaptation of the UK gas distribution networks to transport low carbon gas and several of our projects are highlighted in the report. Additionally, we continue to work with the business to identify environmental improvement opportunities and set challenging environmental targets- most notably methane emissions from the network which are targeting reductions of more than 3% per annum for the next five years.

Howard Higgins
Chair of the Safety & Sustainability Committee



Cadent is leading in the adaptation of the UK gas distribution networks to transport low carbon gas."

What we do

We distribute gas to 11 million homes and businesses across our four networks, with more than 131,000 km of pipeline

- ✔ What we do
- ✘ What we don't do

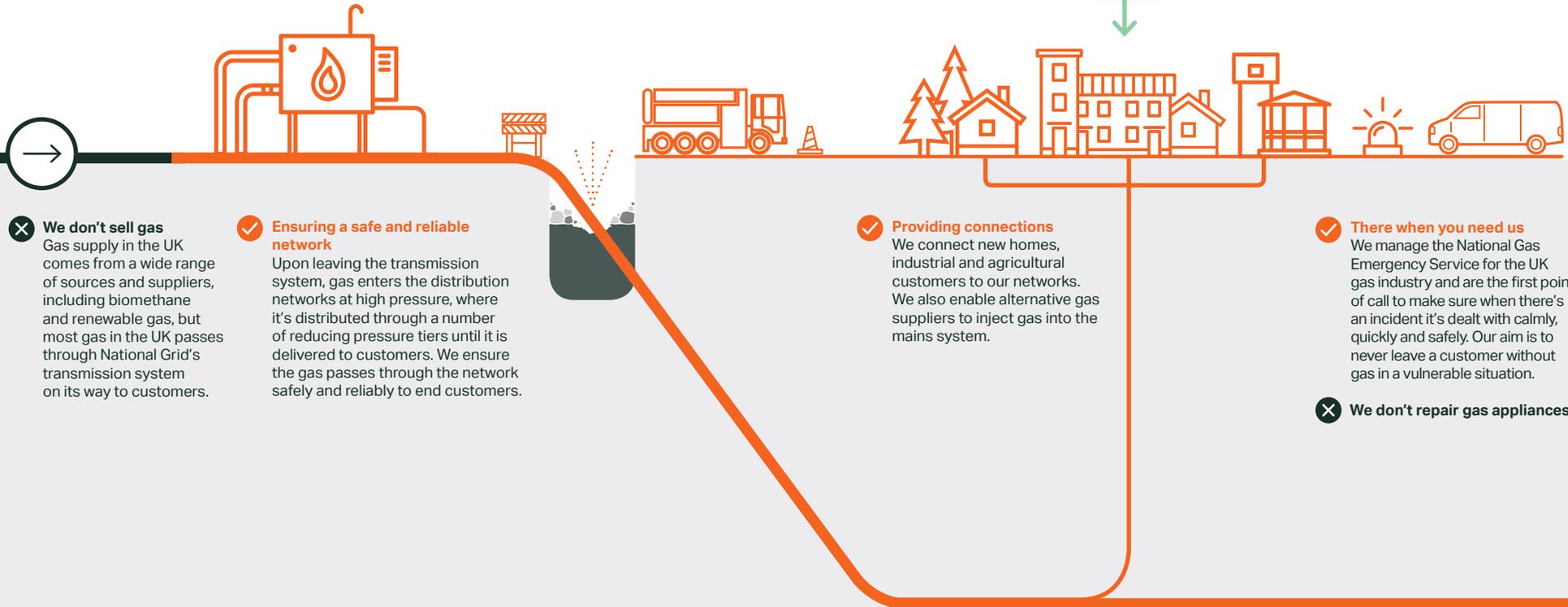
✔ **Keeping the energy flowing**
In 2019/20 we replaced 1,809 km of pipework above and below ground to ensure a safe and secure service for our customers.

✔ **We provide great quality service and value for money to our customers, whether that means minimising disruption during our works or keeping them updated.**

✔ **We protect and enhance our environment**
We are leading the development on the future of gas.

✘ **We don't own the gas**

✘ **We don't send out gas bills**



✘ **We don't sell gas**
Gas supply in the UK comes from a wide range of sources and suppliers, including biomethane and renewable gas, but most gas in the UK passes through National Grid's transmission system on its way to customers.

✔ **Ensuring a safe and reliable network**
Upon leaving the transmission system, gas enters the distribution networks at high pressure, where it's distributed through a number of reducing pressure tiers until it is delivered to customers. We ensure the gas passes through the network safely and reliably to end customers.

✔ **Providing connections**
We connect new homes, industrial and agricultural customers to our networks. We also enable alternative gas suppliers to inject gas into the mains system.

✔ **There when you need us**
We manage the National Gas Emergency Service for the UK gas industry and are the first point of call to make sure when there's an incident it's dealt with calmly, quickly and safely. Our aim is to never leave a customer without gas in a vulnerable situation.

✘ **We don't repair gas appliances**

Our sustainability framework

Making a positive impact through our strategy

Trusted to act for our communities

Acting in a responsible and ethical way

Our Board and leadership at all levels are committed to operating as a responsible business, from our regulatory commitments and practices to our social actions.

UN SDGs



Ensuring a resilient network

Renewing our network for the future

Delivering a reliable and resilient network to keep the energy flowing safely and reliably to all of our customers.

UN SDGs



Delivering our safety commitment

Safety is the foundation of our business

We are committed to ensuring the safety of our people, our customers, and the general public.

Responding to challenges

We are committed to responding to a changing world and the new challenges and trends that may affect our ability to meet our business objectives, and our commitment to doing business responsibly, including:

- climate change
- resource scarcity
- social inequality in the communities in which we operate
- health and safety challenges.

Supporting the United Nations Sustainable Development Goals ('UN SDGs')

The 17 UN SDGs show us what a sustainable future looks like. They provide a framework for businesses to work together with governments and other partners to tackle climate change and fight inequality on a global scale.

These goals will not be achieved without genuine collaboration. We have reviewed the Global Goals to understand how they relate to what we do, and identify where we can make the biggest contribution. We believe that seven goals are particularly relevant to our activities, and will work towards them by achieving our own internal targets.



Our priorities

Shaping a more sustainable future

Contributing to the energy transition

Providing leadership to the provision of networks ready to transport low carbon fuels; such as hydrogen and biomethane, whilst committed to improving the environment by implementing our decarbonisation policy.

UN SDGs



Making a positive contribution

Creating a place where employees can thrive

We believe that by creating an inclusive, motivated and committed workforce, where talent and attitude shine through, we will drive performance and deliver excellence.

Putting customers and communities at the heart of everything we do

Our vision is to set standards that all of our customers love and others aspire to.

UN SDGs



- 7 Affordable and clean energy
- 8 Decent work and economic growth
- 9 Industry, innovation and infrastructure
- 11 Sustainable cities and communities
- 12 Responsible consumption and production
- 13 Climate action
- 17 Partnership for the goals

Reporting against our ambition

Continued improvement and greater transparency

This year, we have demonstrated improved performance against our priorities. We made the improvements we had targeted for our employees and contractors, and we reduced injuries to members of the public very significantly. Our priorities show that we are ambitious to improve further, to play our part in the transition to a net zero energy system and to deliver this in a manner that is sustainable for the wider communities in which we work.

Commitment from the top and at every level

Executive remuneration

Maintaining a focused and driven senior management team is a critical element to delivering our safety and sustainability performance. We have structured our reward mechanisms to ensure remuneration is based on performance and is linked to clear and measurable outputs.

Sustainability outcomes accounted for 25% of the maximum potential reward from the Short Term Incentive Plan set for 2019/20. The Long Term Incentive Plan set in that year and which runs until 2022 included elements for environmental outcomes, targets linked to fuel poverty and long-term asset management, including mains replacement. Together these elements account for over 20% of the maximum potential return. The actual return calculations are weighted to ensure remuneration is based on achieving stretched targets. The measures reflect our ability to reduce our business carbon footprint; to reduce our impact on the environment by further reducing our avoidable waste to landfill (with a goal of eliminating it completely); and keeping our people and the public safe with a measure of the safety of our operations. It is our expectation that the Short Term Incentive Plan measures for 2020/21 will include a larger weighting towards safety, sustainability and network replacement and will be further stretched to build on areas of strong performance.

These targets are set each year by the Remuneration Committee of the Board, following recommendations made by the Safety & Sustainability Committee. The outcomes are measured at the end of the year and reported in the Annual Report and Accounts. These same measures are used to underpin bonus awards to managers to support alignment throughout the business.

New measures for a new decade

Against the measures we used in the previous regulatory framework, we have reduced our estimated greenhouse gas emissions by 70% from 1990 levels as compared to the 2020 target of a 45% reduction. Similarly, we have reduced our business carbon footprint or by both reducing the amount of energy we use in our depots and offices, and procuring lower carbon energy to meet the remaining demand.

As we revise our business model in preparation for RII0-2 price control, we will change which activities and what proportion are delivered internally or by our contractors.

Goal for 2019/20

Occupational Safety

Our ambition is to prevent all injuries associated with our activities. Our goal for 2019/20 was to achieve a Lost Time Injury Frequency Rate per million hours worked - below 0.9 for employees and contractors.

Public Safety

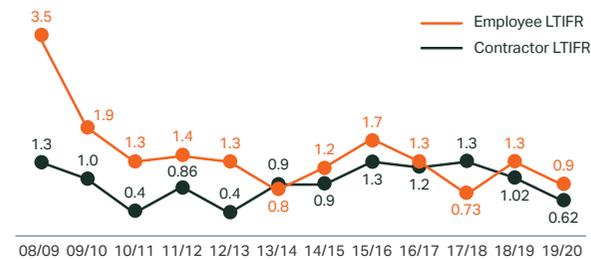
Our ambition is to ensure that no one is injured as a result of our activities. Our goal for 2019/20 was for no increase in the number of serious injuries. Most of the injuries suffered by members of the public are from falling over near our streetworks.

Environment

We are committed to ensuring that there are no serious environmental incidents as a result of our operations, and we will ensure that we manage risks and put in place plans to prevent all serious incidents.

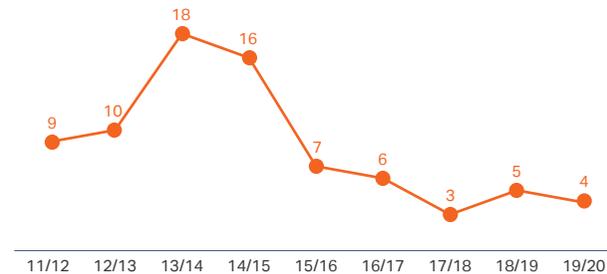
Progress in 2019/20

Employee and contractor LTIFR



Our measure of Lost Time Injury Frequency Rate includes all work related injuries which result in an individual not attending work on a scheduled work day. It excludes injuries from pre-existing conditions, injuries not related to work, and those associated with ordinary commuting. It is measured as a rate per million hours and does include assumptions on average hours worked where an individual does not submit timesheets.

Serious injuries to members of the public



Our measure of Serious Injury to Members of the Public includes all injuries arising from our network or our work activities which require medical treatment. This includes injuries from contact with our streetworks as well as any injuries received through gas escape or explosion arising from a fault on our network. A small number of reported injuries are removed from this measure where it is established that an injury was not related to our activities or assets.

Serious environmental incidents

Year	Number of incidents
2012/13	1
2013/14	0
2014/15	2
2015/16	1
2016/17	2
2017/18	0
2018/19	0
2019/20	0

In 2019/20, for the third year in succession, there were no serious incidents associated with our activities.

Serious Environmental Incident – a significant environmental damage, pollution, breach of permits or legislation that leads to enforcement action by the Regulator.

Goal for 2020/21

Our target for 2020/21 is for no more than 0.70 lost time injuries per million hours worked. Both these metrics improved in 2019/20 and we aspire to improve further.

Priorities for 2020/21:

- Our Safety Improvement Groups will focus on reducing driver safety risk, promoting site safety to prevent injuries to members of the public and avoiding underground cable strikes.
- We will continue to implement our simplified management systems and reinvigorate our zero harm culture.
- We will focus on more visible safety leadership for managers and front-line staff and including our office locations. Our aim is to build on our good performance in making improvements after an accident or near miss, to become better at identifying, removing and learning from the hazards before they lead to near-misses. We will measure progress on this through safety culture surveys and our safety performance.

To achieve this we will:

- Focus on the safety on our employees, contractors and members of the public around excavations and during the reinstatement process.
- Work to reduce the time that excavations are open in public areas.

- Continual improvement across all sites in their environmental baseline score, a 50+ environmental survey for all depots.
- Deliver environmental awareness training for employees.

Reporting against our ambition

Goal for 2019/20

Resource Management

We believe that no avoidable waste should be sent to landfill. Our goal is for zero avoidable waste to landfill by 2021/22.

Energy and emissions

As a responsible, regulated business we aim to reduce our business carbon footprint ('BCF'). Our goal for 2019/20 was to reduce our business carbon footprint, as defined by Ofgem, by 5%.

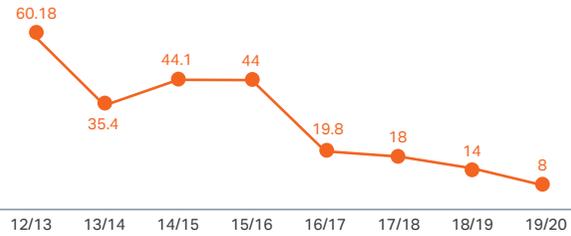
Greenhouse Gas ('GHG') Emissions

Our overarching goal is to reduce our greenhouse gas emissions to net zero by 2050.

Our most important reduction activity is the mains replacement programme.

Progress in 2019/20

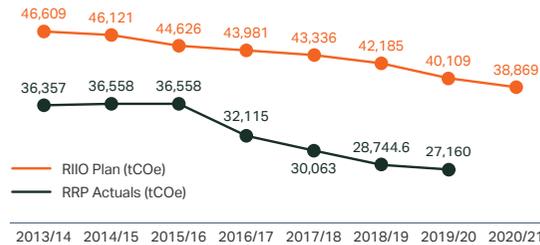
Percentage of waste to landfill – (Depots / Office waste only)



In 2019/20 we sent 8% of our waste to landfill, making great progress against our target of zero waste to landfill for 2021/22.

Does not include GDSP spoil waste from PE pipe replacement programme.

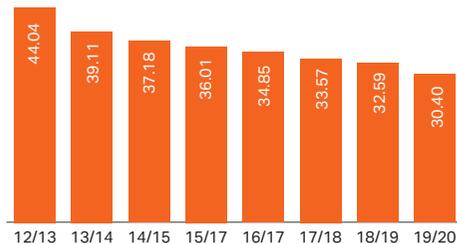
Business carbon footprint vs target (tCO₂e)



In 2019/20 we reduced our BCF by 5.5%. This follows relatively strong performance in prior years and as a result we are ahead of our long-term carbon emissions reduction trajectory.

To ensure consistency with our regulatory reporting obligations this measure excludes non-fuel related emissions from mains replacement contract partners, and may therefore be subject to change going forward if the scope or scale of work undertaken by partners changes.

Emissions – percentage of baseline



We have committed to medium and long-term targets to reduce our greenhouse gas emissions.

We have already successfully reached our 2020 target ahead of schedule (70% 2019/20 vs 2020 target of 45%) and refocusing on our target to achieve net zero by 2050.

Goal for 2020/21

- Further improve facilities for waste segregation at depots and increase employee awareness.
- Embed new recycling activities including barriers, signage and cones from street works.
- Engage with suppliers to minimise packaging and other waste at source.

Our priorities for 2020/21 are to:

- Procure 100% certified renewable electricity.
- Further reduce business travel and increase technology use for meetings.
- Support greater use of low emissions and hybrid vehicles.
- Work with contract partners to reduce their emissions.

Our 2021/22 target is to reduce BCF by 17% from 2013/14 levels.

- Ensure continued delivery of our mains replacement programme.
- Engage with all stakeholders and regulators to highlight the environmental benefits of continued and accelerated mains replacement.

Goal for 2019/20

Social Performance

We are committed to delivering improved levels of customer service. We are particularly focused on three things that matter most:

Safety Satisfaction Engagement

Progress in 2019/20

- Improved our customer satisfaction scores in all three primary customer facing areas, but improvement is still needed.
- Improved our same-day closure rates for complaints to over 70%.
- Issued carbon monoxide safety advice to 294,990 customers and ran 151 carbon monoxide awareness classes for school children.
- Supplied over 20,609 carbon monoxide alarms to customers at elevated risk.
- Supported over 4,600 households in fuel poverty.
- Engaged over 20,000 customers on a wide range of issues relating to our customer service.
- Exceeded our three year target for the Alzheimer's Society with over £200,000 raised.
- Leading the way to establish a single Priority Services Register across all utilities.

Goal for 2020/21

- Improve our understanding of vulnerability to target our support in the right way.
- Establish partnerships and work with third parties to meet the needs of customers in vulnerable situations where we do not have the expertise to help directly.
- Actively target subsidised connections to the gas grid for eligible households to help tackle fuel poverty.
- Continue to support our customers following the COVID-19 pandemic.



Protecting our customers – Whaley Bridge

We don't usually get involved with incidents which aren't gas related, however in August 2019 that was about to change. We were made aware that the Toddbrook Reservoir in Whaley Bridge, Derbyshire could burst its banks at any moment and the police had declared a major incident and were evacuating 6,500 residents. We were part of the multi-agency response to the ongoing emergency situation in Whaley Bridge and the surrounding area, as we protected the gas network.



Rapid response to emergencies

Over the past year, the North West network has blazed the expansion trail with a successful trial of the bikes where engineers reached potentially life threatening incidents 50% faster, than by van. The motorbikes enable our engineers to get to incidents faster but with enough onboard storage capacity to still carry the tools and equipment they need to safeguard life and property.



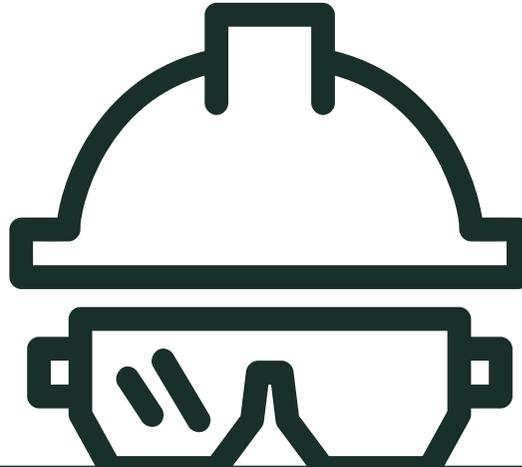
Decarbonising our fleet

We are decarbonising our own HGV distribution fleet, by converting to compressed natural gas (CNG), which will reduce our greenhouse gas emissions by more than 500 tonnes per year. In addition, we are running three CNG vans in our North West and West Midland networks to understand how these will work with the demands of roadside working. In addition to CNG, we're also running operational trials of electric vans and hydrogen cars in our fleet in North London.

Delivering our safety commitment

Keeping our people and partners safe

Safety remains the key value at the heart of our business and foremost in the minds of our employees; it is who we are and the foundation on which the business is built. We are trusted to keep the nation's households safe and warm every day of the year and we take that trust very seriously indeed. We aim to ensure that every aspect of our work is as safe as it can be, whether that's as part of our gas operations or in our non-operational activities. We also understand that only by being transparent about our performance can we continue to deserve that trust.





Above: Manchester's gas emergency service is reaching potentially life-threatening incidents up to 50% faster by deploying a motorbike in peak traffic hours.

Delivering our safety commitment

Safety Improvement Programme

Our main measure for safety is known as the Lost Time Injury Frequency Rate (LTIFR). Over the last year, we reduced this rate from 1.13 injuries per million hours worked at the end of 2018/19 to 0.70 as at the end of March 2020, ahead of the target of 0.90. In addition to this, we have also seen improvements against all our key metrics this year.

Our goal is to achieve a further improvement in our safety performance and deliver on our safety commitments. We recognise that we need to do more to ensure all employees understand what is required of them and to do the right thing every time. To achieve this, they will be involved in a range of improvement and engagement activities underpinned by a clear Safety, Health, Environment and Security (SHES) framework.

An important part of building a strong foundation for safety is to redesign our SHES management system with our front line staff in mind. This will be achieved by simplifying and clarifying the system to make it easy for every employee, regardless of their role, to understand what they are required to do. We are simplifying our management procedures into fewer shorter documents which will be supported by a single manual which brings the whole system together.

Alongside the new SHES system, we have launched a safety improvement programme, which includes safety leadership training for our front line leaders, with the objective of driving further improvements in our culture and behaviours. These workshops and the subsequent reinforcement activities promote four key aspects:

- Don't walk by any unsafe act or condition;
- If things change, stop and reassess; before continuing;
- Follow or challenge procedures, don't ignore them;
- Always follow our Golden Rules.

We will not only be measuring our safety outcomes but also the underlying safety culture which underpins that safety performance. We are using the Parker Hudson Safety Maturity Model to understand our current culture. We have just completed our first survey and will be using this to design our engagement and measure the effectiveness of our programme going forward. We intend to repeat this periodically to measure progress as we improve.

Furthermore, to drive immediate improvements in key risk areas, we have established Safety Improvement Groups who will take responsibility for addressing our performance. These include:

- Ensuring the public are kept safe from our works;
- Avoidance of damage to underground electricity cables;
- Safe driving;
- Safety of our staff working in offices;
- Process safety.

Cable strikes

The accidental striking of an electrical cable, known as a cable strike, is a significant risk that our people and contractors are exposed to when working on our buried pipes and equipment. We are focused on reducing these cable strikes as a priority both to reduce the potential injuries to our people and to reduce damage to other's assets.

Responding to emergencies

We operate the National Gas Emergency Service contact centre, taking calls and giving safety advice on behalf of the industry. In 2019/20, we answered 1.4 million gas emergency calls.

Responding to gas emergencies	Total	%
Calls to emergency number (for the whole of the UK gas sector)	1.6m	
Answered within 30 seconds	1.4m	91.72%
Reported gas escapes	356,879	
Escapes related to Cadent's network	75,297	20%
Escapes related to other matters (CO, boilers etc. – including from other gas distribution networks)	281,582	80%



Lost Time Injury Frequency Rate has improved from 1.13 at end 2018/19 to 0.70 as at end March 2020, ahead of the target of 0.90.

The reasons people report a gas escape or leak include problems with their own pipework or appliances, meter problems, issues with a third-party network or suspected carbon monoxide.

We provided assistance for all gas emergencies, irrespective of cause, to ensure public safety.

Process Safety KPIs

Process Safety Risk Management is controlled by adoption of 12 Risk Control Standards, each addressing a part of a process safety management system that covers a specific risk or activity. For each Risk Control Standard, we have developed separate measures designed to provide a comprehensive measure of the health of these controls.

Following the review of existing process safety KPIs and learning from IChemE training, we are in the final stages of developing revised, simplified process safety KPIs to provide greater visibility and focus. This has resulted in an increased number of leading indicators.

Office Safety Campaign

Although the key safety risks are perceived to be in the operational part of the business and the focus is in this area, there has also been emphasis on office safety with installation of safety signage in our offices. There was also the seasonal Hugo the Elf campaign, which saw Hugo the Elf take a tumble on the stairs. This generated much social media interaction and combined with the safety signage led to increased awareness of stair safety.



Shaping a more sustainable future

Leading the way to greener energy

We are leading the way in ensuring that the UK's gas network plays its role in securing zero carbon energy which is reliable, flexible and convenient for customers to use. The gas network can be transitioned to bring biomethane and hydrogen to our homes and our industries, massively reducing the carbon footprint of heat in the process. It can work alongside renewably generated electricity to help meet all the needs of UK customers while reaching the UK's target of being net zero by 2050.

It is now widely recognised that zero carbon gases, including hydrogen, will have to be an element of any future plans. This supports the UK in decarbonising freight and heavy transport by using fuel cells. We are playing a key part in several significant hydrogen projects to make this happen.

We promise to bring our customers with us on this journey, to ensure that they continue to have access to heat energy in the future.





Above: HyDeploy at Keele University is a UK first.

Shaping a more sustainable future

The gas network is at the centre of the energy system and will play an important role in the transition to net zero carbon emissions

The UK's ambition to become net zero by 2050 has fundamentally changed the way we are all thinking about energy. Across the country, local authorities, large energy users, homes and businesses are considering what this means for them in outlining their own transition plans. We are doing the same in two main ways: how we operate our own business in a low carbon way and support the transport of low and zero carbon gases such as hydrogen and biomethane.

Excitingly, there has been a significant increase in pace and interest in the future role of hydrogen over the last year and we are pleased with the progress that is being made.

Providing leadership through the energy transition

Delivering net zero can't be achieved solely through the work of the gas distribution companies and so we are leading the development of industry-wide transition plans for the benefit of consumers. We continue to work with both national organisations such as the Energy Networks Association ('ENA'), the Energy Utilities Appliance ('EUA'), and the Confederation of British Industry ('CBI') to provide a common perspective to Government and regulators and also with regional and Local Authorities to help plan their energy transition.

We understand that the move to net zero requires a combined energy system that makes best use of both electricity and gas infrastructure to achieve its aims. We are extremely supportive of this approach and have recently submitted our plans in our RIIO-2 submission to show how we will work with the electricity Distribution Network Operators to deliver joined-up low carbon solutions.

Pathway to industrial decarbonisation

Decarbonisation of industrial clusters makes sense as it starts where emissions are the greatest. The gas to fuel industrial processes and the potential for carbon capture and storage are present in the same location. We have been focusing on developing our industrial cluster concept in the North West known as HyNet and this has made huge progress in 2019/20.

A clear route to decarbonising transport

We have been able to drive forward the decarbonisation of heavy transport, which is a large emitter of CO₂, through our expertise in biomethane connections and our leadership in hydrogen. We are focusing on supporting bio-CNG refuelling and the development of hydrogen for larger fuel cell vehicles.

We have progressed our national bio-CNG refuelling infrastructure, with nine public access stations connected to our network, a further three under development. Our National Distribution Centre fleet now benefits from operating nine bio-CNG trucks, avoiding emissions of up to 500 tCO₂e/year with a new bio-CNG refuelling station opened in June 2020.

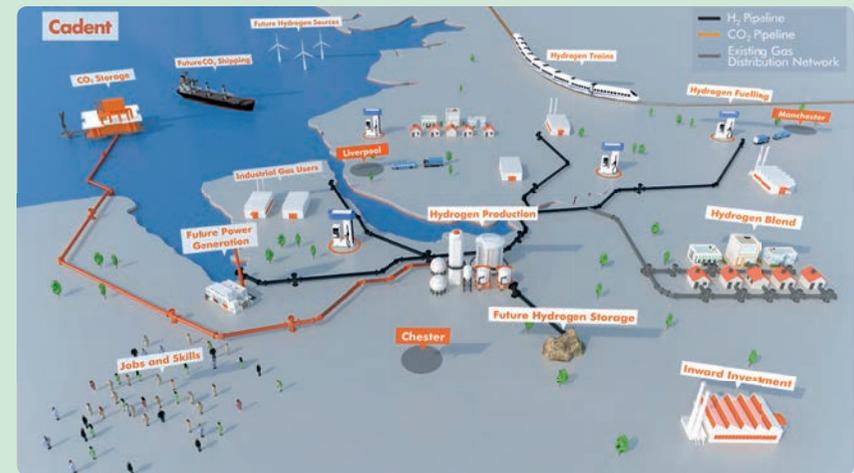
Our research and innovation portfolio explores key aspects associated with the future use of hydrogen in transport. Our HyMotion project and report (2019) shows the way for hydrogen refuelling infrastructure costs; the impact of hydrogen blends on conventional engines; and the impact of gas impurities in hydrogen distributed in new and/or repurposed gas networks on hydrogen Fuel Cell Electric Vehicles.

Finally, we are also working to decarbonise our own First Call Operative fleet of circa 1,100 vehicles. This initiative is expected to deliver a reduction in emissions of 4,000 tCO₂e/year by 2026.



The overall HyNet project has seen investment of £14.5m from Government.

H
Hydrogen
1.008



HyNet – A concept becoming reality

HyNet North West is an integrated Hydrogen/Carbon Capture Utilisation and Storage project which will decarbonise heavy industry in the Cheshire, Liverpool and Manchester regions and provide hydrogen to decarbonise domestic heat, heavy transport and flexible power generation. It was originally conceived by Cadent and Progressive Energy Ltd and funded by Ofgem's Network Innovation Allowance (NIA). As the project has moved from feasibility into engineering design, several industrial consortia have been formed to progress the different elements of the HyNet project chain which this year has seen investment to date of £14.5m from Government.

2020 saw most of the key elements of HyNet becoming a reality: industrial scale hydrogen production takes the form of the UK's first low carbon hydrogen plant at Essar Oil UK's Stanlow refinery in Ellesmere Port.

The £7.5m project will produce 3TWh of low-carbon and low-cost hydrogen, and capture over 95% of the carbon used in the process.

HyNet has also received £5.2m to fund live trials of hydrogen fuelling at Unilever's Port Sunlight manufacturing site, and at Pilkington's Greengate Works glassmaking plant in St Helens which will be a world first. The projects will demonstrate that hydrogen can be used as a substitute fuel for natural gas in manufacturing processes, helping industry transition to a low-carbon future and leading the way for others to follow.

The next milestone in the delivery of HyNet is to start the detailed design work this year for each element of the infrastructure which includes Cadent's new 80 km hydrogen pipeline.

Shaping a more sustainable future

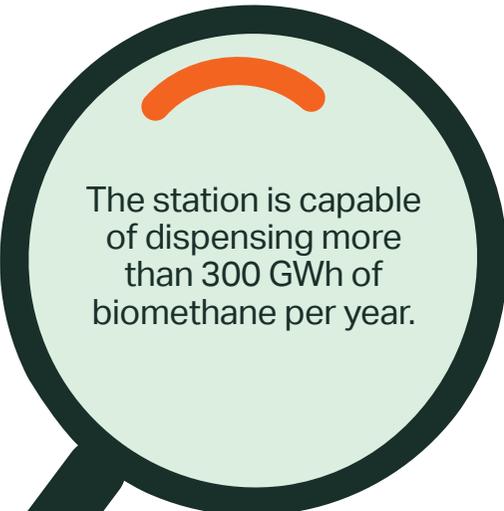
Biomethane connections

We support the growth of the UK biomethane sector by turning food, farm and other wastes, otherwise destined for landfill, into a gas to fuel homes and transport. We now have 35 biomethane producing plants on our networks, with the potential volumes entering our network equivalent to the heating demands of as many as 218,690 homes. (Source: utilitiessavings.co.uk)

The growth of distributed gas generation, principally in the form of biomethane production, brings with it many challenges so we are adapting to these and the need to balance entry and exit requirements through the introduction of smarter network management. With this we will be able to accept more biomethane connections, adding more green gas capacity into our network. This project is the first of its kind and we aim to demonstrate the benefits of an optimised network solution for the first time in the UK.

Decarbonisation and safety

Safety is central to everything we do. We are maintaining this focus throughout the development of our green initiatives. A major part of the HyDeploy project has been to assure safety before we deliver the blended gas. Working with our partners Progressive Energy and the Health and Safety Executive, we have safety tested every single gas appliance in 100 homes. In addition to the gas safety checks, we have also tested all 130 appliances with bottled hydrogen. All appliances passed this hydrogen test which is strong initial evidence that customers will not need to replace their gas appliances should a hydrogen blend be made available more widely. Further work is also being carried out across the industry to establish the safety aspects that would need to be considered and established as safe for 100% hydrogen trials.



The station is capable of dispensing more than 300 GWh of biomethane per year.



Cadent supports development of the largest bio-CNG refuelling station in Europe

The Warrington bio-CNG refuelling station located adjacent to the M62, which is owned and operated by CNG Fuels, can refuel 12 trucks simultaneously from 10 dispensers. The station is capable of dispensing more than 300 GWh of biomethane per year, which equates to a reduction in greenhouse gas emissions from HGVs of 80 – 100,000 tonnes each year. Development costs were in the region of £5 million, the station taking approximately two years to consent and build, and six months to construct. The station opened in November 2019 and is expected to serve a minimum of 200 trucks by the end of 2020. Most of these trucks will be using this facility as their primary source of fuel. Major customers include Hermes with a total of 83 trucks, and Home Bargains who also use the facility for their 10 trucks. ASDA and Argos also use the facility.



If we implemented HyDeploy across the UK tomorrow, it would save an estimated 6 million tonnes of CO₂ – the equivalent of taking 2.5 million cars off the road.”



HyDeploy at Keele University is a UK first

HyDeploy is the UK's first live pilot to blend zero carbon hydrogen into a gas network to heat homes and businesses. The HyDeploy demonstration is blending up to 20% (by volume) of hydrogen into Keele University's existing natural gas network, supplying 100 homes and 30 faculty buildings. We chose Keele for the trial because it has its own private gas network and the buildings on the campus closely mirror what you would expect to find in a small UK town.

Backed by Ofgem's Network Innovation Competition, the £7 million project is led by Cadent in partnership with Northern Gas Networks (NGN), Keele University, the Health and Safety Executive (HSE) Science Division, integrated hydrogen energy systems manufacturer ITM-Power, and independent clean energy company Progressive Energy.

The purpose of the HyDeploy pilot is to show that hydrogen can be blended with natural gas and used in the same way that consumers currently use natural gas. The 20% volume blend means that customers can use their gas supply as normal, without any changes being needed to gas appliances or pipework, while still cutting carbon emissions. If a 20% hydrogen blend were rolled out across the country it could save around 6 million tonnes of carbon dioxide emissions every year, the equivalent of taking 2.5 million cars off the road.

HyDeploy is the UK's first live pilot to blend up to 20% hydrogen into a gas network to heat 100 homes and 30 businesses.



www.hydeploy.co.uk

HyDeploy @ Keele

Our hydrogen is split from water. Our electrolyser uses 100% green electricity.

Shaping a more sustainable future

Improving the environment

We are committed to delivering high standards of environmental performance, protecting the environment and seeking new, innovative and sustainable ways to do business. Managing the environment is about more than just reducing risk and minimising our impact; it's about implementing best practice environmental solutions to drive efficiency, save money and preserve natural resources.

We are now in our 22nd year of having our environmental management system certified to the international standard ISO14001. Over the past 22 years, we have dramatically reduced our impact on the environment, by managing our waste and reducing greenhouse gas emissions.

However, with the next regulatory framework period will come several changes to the way in which key areas of environmental performance are measured. In addition to these regulatory changes to, for example, the measurement of waste to landfill, we believe that the time is right to reassess our approach to measuring other areas such as our carbon footprint and emissions.

We believe that consistency and transparency is important, particularly regarding these important measures. We will, wherever possible, use generally accepted methodologies for recording and reporting these measures, and seek to use appropriate and consistent benchmarks to aid comparison and understanding. Measures such as these will necessarily change from time to time and where they do, we will seek to provide year-on-year comparisons on a consistent basis for clarity.



Greenhouse gas ('GHG') emissions reductions since 1990

70%

Our target was 45% by 2020

Reducing leakage from our network

The majority of our GHG emissions are from leakage. Across our networks, this leakage is estimated to be less than 0.5% of the total we transport and we are working hard to reduce this further.

Our estimate of leakage is based on measurements of various pipe materials and sizes in various conditions when operated at different pressures, which is then modelled according to the average pressures at which the network is operated each year. This is a common and accepted approach across the industry. The most important actions we can take to reduce this leakage are to replace metallic pipes with plastic, to make sure that the joints between metallic pipes remain in good condition through gas conditioning and to keep the average system pressures as low as possible.



Our mains replacement programme delivers our greatest reduction in greenhouse gas emissions. Since 2013/14 we have replaced over 11,000 km of metallic pipe with polyethylene. This has been the main contributor to our delivery of a reduction of over 295,000 tonnes CO₂ per year, the equivalent of taking more than 150,000 vehicles off the road.

Clearly, COVID-19 has disrupted our schedule for mains replacement work and may well affect our performance results at the end of the next period. We will endeavour to make up the lost production while maintaining the highest standards of safety and the lowest levels of disruption for our customers.

We are actively engaging with Government departments and Ofgem to explore how to carry out our mains replacement work faster over the remaining years of the programme to deliver even greater reductions in emissions.

Minimising waste from our worksites

Our mains replacement programme – digging up and replacing thousands of kilometres of old gas pipes – has the potential to create significant amounts of waste.

Across our entire supply chain, we have regulatory targets to ensure that we send no more than 10% of excavated spoil wastes to landfill and import no more than 30% virgin aggregate for backfill. We regularly beat these targets by:

- using low-dig and no-dig techniques;
- inserting new plastic pipe into old metallic services;
- using vacuum excavation;
- working with partners in the recycled aggregates sectors.

Left: Presenting our new green fleet – biomethane HGV, CNG and electric vans and hydrogen cars.

We have reduced waste volumes significantly over the past five years for our mains replacement programme and routinely divert more than 95% of our waste from landfill.

Limiting our carbon footprint

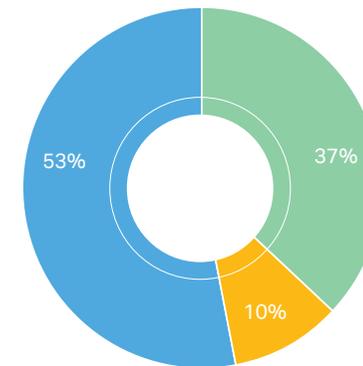
We recognise our responsibility to help the UK meet its greenhouse gas target. GHG emissions include our business carbon footprint together with our energy use in offices, vans and company cars.

In 2019/20 we reduced energy consumption in our offices and depots by 9% and over 90% of the electricity we use to light and power our offices and depots is from certified renewable sources, contributing to further reductions in our business carbon footprint.

We have reduced our average emissions from our company car fleet from 106 g/km to 94 g/km, and 39% is now electric/hybrid. Over the course of 2019/20 we have supported:

- procuring efficient vehicles for our fleet;
- a cap on company car emissions;
- offering 'green' incentives to company car users, which are taken up by 90% of drivers;
- operating a no-idling policy for our vans at worksites.

Business carbon footprint



- Scope 1 – All Direct Emissions from owned or controlled sources (energy, consumption and transport)
- Scope 2 – Indirect Emissions from the generation of purchased electricity, steam, heating and cooling
- Scope 3 – All Other Indirect Emissions that occur in Cadent's value chain

29%

Reduction in our business carbon footprint since 2013

Making a positive contribution





Caring for customers, supporting our people

The quality of customer service we provide is critical to our customers' experience and our reputation. We are working hard to respond to our customers in a rapidly changing world and, wherever possible, to exceed those expectations through innovation and better, more engaging approaches to service. Our approach, while being far from complete, has this year achieved improvements in all of the three primary customer facing areas of our business: emergency response and repair, planned works and connections. We will continue this positive trajectory by being open and transparent with our customers, whatever their needs and circumstances.



Making a positive contribution

Our vision is to set standards that all of our customers love and others aspire to

We serve customers from all sectors and walks of life, from young families to Chelsea pensioners, fish and chip shops to major manufacturers. We aim to deliver great service, availability and responsiveness to all of our customers.

Our goal is also to ensure our service is affordable to current and future customers by driving the efficiency of our operations. We recognise that we must deliver these outcomes in a way that builds trust in how we operate, making a real and sustainable difference to the communities we support.

We never forget this and keep our customers constantly in mind. Even when we are developing innovative solutions to tackle climate change, we always remember that these will need to be affordable and accessible for all of our customers when they are implemented.

At the other end of the spectrum, this year, the COVID-19 pandemic disrupted all of our lives across the UK. Our focus on customers meant that we were able to redirect our energies to provide support with food banks, delivering medicines and reaching out to isolated customers as well as keeping the energy flowing.



Customer satisfaction

We have achieved a considerable improvement in many of our customer service measures. In particular, we have focused on minimising the volume and average duration of gas supply interruptions for our customers.

Based on feedback received directly from our customers, and insights gained from a range of data sources (for example customer satisfaction surveys, SMS feedback, complaints and social media), we have noted significant improvement in customer service levels as a result.

For each of our four networks we measure customer satisfaction across the three primary customer facing areas of our business: emergency response and repair, planned works and connections.

During 2019/20, we have improved across all three areas, which is a considerable annual improvement when compared to any GDN during RIIO-1.

Customer satisfaction

Performance by Network	Emergency Response & Repair (out of 10)	Planned Works (out of 10)	Connections (out of 10)
East of England	9.49	8.47	8.46
North London	9.08	7.97	8.73
North West	9.49	8.41	8.34
West Midlands	9.47	8.11	8.05



Making a positive contribution

Improving the customer experience



Our customer strategy

Our strategy is now around 18 months old and it enables a customer-centric approach based on six pillars, each supporting our employees to put our customers at the heart of their decision-making. The figure on the right describes these and the progress we've made against each over the year:

Customer-Centric Operating Model – Local engagement and accountability have enabled us to dramatically improve the customer experience and we have moved from the lower end of Ofgem's comparative data to the top end in under a year. We have also successfully developed approaches to reduce the length of time customers are without gas after a leak or an incident in a multiple occupancy building.

Engagement and Real Time Customer Insights – 2019/20 saw us deliver our most extensive engagement plan ever, with over 35,000 direct conversations with customers and expert stakeholders and over 1,000,000 customer data points analysed.

Customer Strategy

Our aim: To provide outstanding service levels to all of our customers, no matter what their personal circumstances.



A joined-up approach across Cadent, linking people, processes, systems and data

Big data and analytics – We are developing an expert capability to draw together the insights that we receive from customers, stakeholders, colleagues and other external sources to better understand preferences and areas for improvement.

Multi-channel communication – We aim to ensure that our services are accessible to all and tailored to suit different needs. We have extended our social media reach over the year and invested heavily in our website to ensure that it is more accessible. We have commissioned an application which will support our customers when applying for a new gas connection, to understand when we will be working nearby and provide an interactive way to engage with us.

Alignment of supply chain – Last year we increased the proportion of our employee remuneration associated with the delivery of customer outcomes and this year we are doing the same. We have also built additional customer service-focused incentives into our strategic supply chain arrangements to drive additional focus and individual ownership right through the organisation.



Customer Engagement Group

Our independent Customer Engagement Group (CEG) has provided robust challenge for our RIIO-2 business plan, but also our ongoing customer and stakeholder engagement processes and our strategic approach to delivering consistently great outcomes for our customers. We meet with our CEG and have established a number of smaller working groups to allow more regular and detailed challenge to be applied to areas such as how we engage with customers, our investment strategy and our approach to support customers in vulnerable situations. The CEG has interaction with our Board providing direct feedback, challenge and assurances.

Continuing development: Three simple innovations reduce disruption

Our stakeholders told us we needed to do more to reduce the disruption caused by unnecessary gas interruptions and reduce the number of hand-offs between engineers and teams to create a smoother customer experience.

As a result, we successfully trialed three new approaches:

- Staggered shift patterns enable us to work up to 10pm to help us complete the job before the end of the day.
- Improved efficiencies to send equipment and resources such as signage, lighting and barriers to support our network repair teams during excavation work.
- Upskilling our engineers so that they are multi-skilled expands the range of work that each can complete, reducing the time needed to finish a job and the number of handovers.

Making a positive contribution



Tailored engagement for incidents

In line with our strategy to become more network-aligned, this year we have improved our ability to tailor our response to gas network incidents. A water main burst in the town of Wirksworth in Derbyshire in October 2019, damaging a gas main which resulted in over 10,000 litres of water flooding the local gas network. 900 homes and businesses – including 215 priority service customers – lost their gas supply, which we immediately responded to by mobilising over 150 staff for several days to restore supplies as safely and quickly as possible.

We reviewed previous stakeholder feedback and our own internal learnings from previous incidents and created a plan to tailor our engagement to the situation. For the first time during an incident, we used online videos to create a real-time, personalised experience for stakeholders, giving them an insight into the extensive planning and dedication required to get them back on gas.

This was complemented by letter drops, proactive social media updates, a dedicated web page and Facebook page, and a temporary incident centre in the local church hall. Our team on-site actively monitored social media to understand trends in feedback and concerns, feeding this back to make ongoing updates to the social media plan. During the course of the incident, our social reach extended to over 26,000 people, with an average online response time of under 15 minutes.

As part of our commitment to continuous improvement, we have taken the opportunity during other incidents this year to reach out to local authorities and understand what social channels they use in their area. This has enabled us to extend our reach and ensure our communication is tailored to local channels and communication preferences.





"The response from the community of Wirksworth was nothing short of amazing. Residents were incredibly patient and appreciative of our efforts to get them back on gas. One lady described us as 'angels in orange'."

Darren Elsom
Director of East Network

Engaging, listening and learning from our stakeholders

Why we engage

We have engaged with our customers and stakeholders to understand their needs, priorities and expectations of us. We've spoken to over 35,000 customers and combined these insights with over one million customer interactions. This has provided us with detailed evidence for our RIIO-2 Business Plan proposals (April 2021 to March 2026), especially when determining the customer commitments that we intend to make.

Our customers, communities and other stakeholders have helped us to identify four core customer outcomes that our Business Plan needs to address:

- Keeping the energy flowing safely and reliably;
- Providing a quality experience for all of our customers and stakeholders;
- Tackling climate change and improving the environment;
- Being trusted to act for our communities.

Left: Derbyshire Councillor Barry Lewis meeting the Cadent team in Wirksworth.

Making a positive contribution

Safeguarding our customers

In addition to the measures we took in response to the COVID-19 pandemic, our business as usual care for customers continued.

While undertaking our works we may come across circumstances where our customers are in vulnerable situations. In these situations, we take the time to provide additional services to keep our customers safe and warm in their homes. Our customer vulnerability strategy focuses on three distinct but parallel areas:

- Raising awareness of, and preventing, carbon monoxide poisoning;
- Providing tailored services to address and tackle customer vulnerability;
- Providing subsidised connections to the gas grid for eligible households to help tackle fuel poverty.

Working with partners to deliver better outcomes

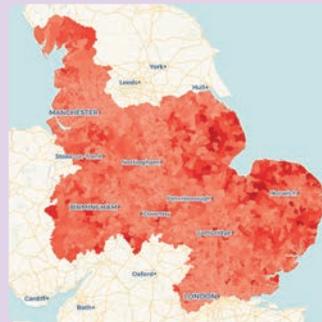
Working with 23 of the 24 Fire and Rescue Services in our regions we have developed gas safety training for over 1,000 children on how to stay safe in an emergency and raise awareness of the signs of carbon monoxide.

We have formed new partnerships with Groundwork Manchester (GM) and Marches Energy Action (MEA) in Shropshire, who have access to the homes of people living in extreme vulnerability across both rural and urban areas in our North West and West Midlands networks. As part of their home safety visits, GM provides advice about gas safety and distributes carbon monoxide alarms and heated seat covers on our behalf. Our partnership with MEA has enabled us to engage with, and provide funding for, customers who are unable to afford appliance servicing, which consequently reduces the risk of carbon monoxide poisoning. We also provide carbon monoxide alarms, literature and heated seat covers.

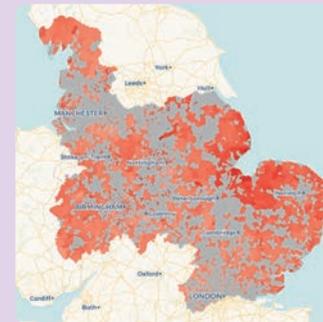
Outcomes

- Delivering gas safety training to 1,000 children to help them to stay calm in an emergency situation and distributing 30,360 safety leaflets;
- 647 heated covers given to customers in vulnerable situations; and
- 20,609 carbon monoxide alarms distributed to customers in fuel poverty or with chronic illnesses.





Map 1 – Priority Services Register



Map 2 – Low income and poor EPC

Big data helps us focus on those who need our support the most

Our Social Indicator Mapping Tool highlights areas within our networks where multiple vulnerabilities are prevalent, depicted by the deep red colours on the maps above. This enables us to estimate where the largest Priority Services Register (PSR) enrolment gaps exist as well as areas that are high risk carbon monoxide hotspots and have high levels of deprivation and fuel poverty.

We have used this data to run a series of engagement activities. Using the PSR gap filter (see map 1) we ran a social media campaign focusing on carers and family members, promoting registration with the PSR.

We also identified areas where there was a high index (40% and above) of people in a low-income bracket and with poor Energy Performance Certificate ratings (see map 2), indicating that there is a greater likelihood that they would benefit from support relating to fuel poverty.

We then ran a series of initiatives targeting these areas, including promoting our Connected for Warmth Scheme in partnership with Affordable Warmth Solutions. We have shared the tool with many of our partners including Leicestershire Police and UK Men's Sheds Association and will continue to use these insights to focus our activities.

Making a positive contribution

Supporting the health and wellbeing of our people

Employee health and wellbeing is integral to the success of our business. We continue to drive improvements in all areas of employee health and wellbeing which is supported with commitments from our Executive Team, Steering Groups and Working Groups, where all employees are represented. Our culture is evolving, and we have witnessed a positive pull from employees for information to support their health and wellbeing. We have delivered webinars, presentations, activity challenges and training to meet this demand.

We have dedicated Project Charters for our three main areas of risk to health.

Management of vibration exposure at work

Our Vibration Management Project is sponsored by our Chief Operating Officer and supported by our Network Directors. The charter provides a plan of work that will span the next five years and has the following key measurable milestones:

- No new or progressive cases of vibration related conditions inc. HAVS by 2025;
- Vibration exposure reduced to <100 points per day by 2023;
- All injured employees will be digitally monitored by 2020;
- Top five magnitude tools removed/reprocessed by 2022;
- Revised employee and supervisor training launched 2020.

Our Innovation team is currently engaged in identifying new technologies that would help us in reaching these goals. We have already undertaken new vibration risk assessment and purchased watch technology that records a user's exposure to vibration.

Management of musculoskeletal injuries

Musculoskeletal injuries continue to be a key reason for our employees to be absent from work and to seek advice and support from our health and wellbeing providers. These injuries affect the day-to-day activities of our employees and adversely impact their ability to work and quality of life.

Our controls include training and awareness of manual handling tasks and workstation set ups. All programmes are bespoke and delivered by physiotherapists. To help drive a reduction in injuries and successful rehabilitation, we are working with our health and wellbeing providers to embed early interventions and support via direct access to physiotherapy. This service has recently added virtual assessments and exercise videos alongside telephone triage and face-to-face consultations.

Management of mental health and wellbeing

We are developing a positive workplace culture that encourages discussion of mental health and wellbeing freely and without fear of prejudice. Our aim is to retain, develop and attract the best employees in our sector. Our commitment to support our employees and to value their wellbeing, particularly mental health, is a key component in this aim. Our "Time to Change" programme reflects this and is supported by a steering group chaired by our Chief Safety and Strategy Officer.

There are three pillars to our strategy:

Recognise – encouraging recognition of symptoms and behaviours in ourselves and others.

Manage – developing our managers' skills and confidence to support employees with mental health issues with the same parity as they do for physical health conditions.

Thrive – providing advice, ideas and guidance on developing positive life skills and ways of working that are enduring and support good mental health and wellbeing.

In February 2020, Steve Fraser and Martin Rimmer, our Chief People Officer, signed the 'Time to Change' pledge. This includes a 12-month action plan, supported by MIND to deliver the following:

- A specific Time to Change communications plan which includes regular features, challenges, lived experience leadership case studies and support for national awareness days;
- Development of a network of Time to Change Champions who will embed the messages and support deliverables. Our target is to have one from every part of our business;
- Equip our managers with skills to manage mental health and wellbeing with a bespoke training course. Our target is to have a minimum of 30% of this delivered in 2020;
- Increase our provision of Mental Health First Aid trained employees. Our target is to have 1 in 10 of our employees trained.





Creating a place where our people can thrive

With a dedicated workforce of over 4,000, we are focused on recruiting the right people, supporting them to share our values and helping them develop. We know that we will drive performance by creating an inclusive and motivated workforce, where everyone's contribution is valued.

Delivering our commitments

Our people are essential to delivering our services and improvements. We need the right balance of skills to ensure our operational performance is sustainable into the future. We continue to invest and improve strategies to engage, develop and grow our people, including:

- The Maintenance of Competence Board;
- The Leadership and Capabilities Strategy
- Our Employee Opinion Surveys;
- Our New Talent Strategy;
- The Education and Skills Strategy (our schools outreach programme); and
- Our Diversity and Inclusion Strategy.

Our aspiration is to be recognised as a great place to grow, for our people and those who want to join us.

Building for the future

Identifying, recruiting and retaining the skilled workforce we need to deliver our vision is crucial. This means we need to continue to develop a pipeline of talent by supporting science, technology, engineering and mathematics (STEM) skills in schools. We can also ensure our values resonate across communities whilst supporting our people with training and development opportunities.

Our Education and Skills Strategy focuses on STEM enrichment, careers inspiration, and work experience. We've built relationships with several schools to provide opportunities for our people to volunteer as mentors across a range of subjects and age groups. We focus on high quality interactions with pupils and have engaged with over 7,000 of them, including at the British Science Festival. We have developed classroom materials including a lesson plan on decarbonisation – 'Energies of the Future'.

In summer 2019 we held our first work experience week; one technical experience and one commercial, with 12 students each week. We are helping to promote engineering as an interesting, exciting and valuable career proposition. As a member of the Energy & Utility Skills Partnership, we have led the sector's Apprentice and Technical Education Advisory Group and we support the 'Talent Source Network' programme.



Enhancing our communities through volunteering

Investing in our people through the power of volunteering makes a real difference to the volunteer, the community beneficiaries and society as a whole. Our employees have been volunteering their efforts across our communities for various charities and local organisations, working collaboratively with a volunteering partner whose shared vision is to have everyone participate in their local community through volunteering and social action.

Our teams have donated their time, skills and most importantly their enthusiasm to delivering local projects that support local need. They have completed projects for homeless accommodation units, school outdoor play areas, local and national foodbanks and special educational needs colleges to name a few.

Teams can nominate their own projects which are typically linked to them personally or they can select a project which has been researched and will help address local needs. The collective efforts of our people since 2017 have seen over 216 colleagues give over 1,300 hours which have directly benefitted over 128,000 people across our footprint.

Our charitable partnership also continues to grow with the Alzheimer's Society and the amount raised over the partnership duration has reached over £209,000. Over 3,300 of our colleagues are now part of the three million Dementia Friends across the UK.



“We are taking clear, positive and inclusive actions to address our gender pay gap, including supporting and attracting talented women, equipping and empowering our leaders, and maintaining an inclusive culture.”

Tina Sands

Chief Information Officer
Executive Sponsor for Diversity and Inclusion

Attracting new talent

The transition to a low-carbon energy future means that we must build the capability to deal with a changing climate, to innovate and to embed new technologies. Our apprenticeships, graduate schemes and Engineering Training Programme help to do this. We recruit around 50 apprentices each year. This year our Graduate Development Programme was launched. With a comprehensive one-month induction before the two-year programme starts, the programme encourages engineers to learn across the organisation and build their engineering competencies towards chartership. We have engineering and business graduate schemes running this year. We have also embarked on some new development programmes in alternative apprenticeships including Project Management where six people have joined our organisation. We rank 21st for Top Employer for Apprentices and 29th for Graduates in the Job Crowd Awards.

Recognising our employees

In March 2020, we published our third gender pay report outlining our continued work to close the gender pay gap. Our mean pay gap* is 8.7% and although this is an improvement from last year, we recognise that there is still much to do to change perceptions in what is traditionally a male dominated sector.

When looking at our pay gap, it is mainly driven by a lower proportion of women in senior roles and Field Force roles compared to the wider workforce. Due to the nature of work undertaken by our Field Force, providing a 24/7 gas emergency service, their total package includes other elements in addition to base pay such as, stand-by and flexibility payments. Whilst the methodology is regulated for the reporting of the gender pay gap, if we use a salary only calculation then we have a positive gender pay gap for women, highlighting the impact to the gender pay gap of the various elements within the total package across our different employee populations.

Our bonus pay gap** is 45.8%, mainly driven by the difference in our Field Force staff package which raises the proportion in the calculation. As most Field Force staff are male and this is the largest section of our workforce, this has a significant impact on our bonus gap. The remainder of the gap in bonus relates to the fact that we have fewer women than men in senior management roles. We continue to address this and in 2019 we welcomed Dr Angela Needle to our senior team.



* Mean gender pay gap: The difference between the average (mean) hourly pay of female employees and the average (mean) hourly pay of male employees, as a percentage.

** Mean gender bonus gap: The difference between the average bonus pay of female employees and the average bonus pay of male employees, as a percentage.

Making a positive contribution

Addressing diversity and inclusion

We are committed to equality, diversity and inclusion. We have made progress towards realising our vision to be a diverse and inclusive organisation representative of the communities we serve, where everyone has an equal chance to succeed and be themselves. In December 2019, we appointed our Diversity and Inclusion Manager and Executive Sponsor.

We are positively addressing the workforce imbalance. As the chart to the right shows, while we have made progress in some areas – 40% of our Directors and 37% of the Executive Team are female – we still have a challenge in other areas such as Field Force where 1% is female and 7% identify as Black, Asian and Minority Ethnic (BAME). This partly reflects the wider utilities sector, where 3% of the Field Force workforce is female and 8% identify as BAME (according to our surveys). To drive change we are continuing with the Energy and Utility Skills Sector Inclusion Commitment, along with 32 other leading employers and have partnered with the Women’s Engineering Society.

It is our policy that people with disabilities are treated fairly in relation to job applications and opportunities for training, career development and promotion. When employees are unable to continue working in their current role due to disability, every effort is taken to make reasonable adjustments, provide suitable training and identify alternative roles, if required. Our EmployAbility scheme continues to have great success in attracting people with disabilities to undertake internships with us. See page 37 to read more.

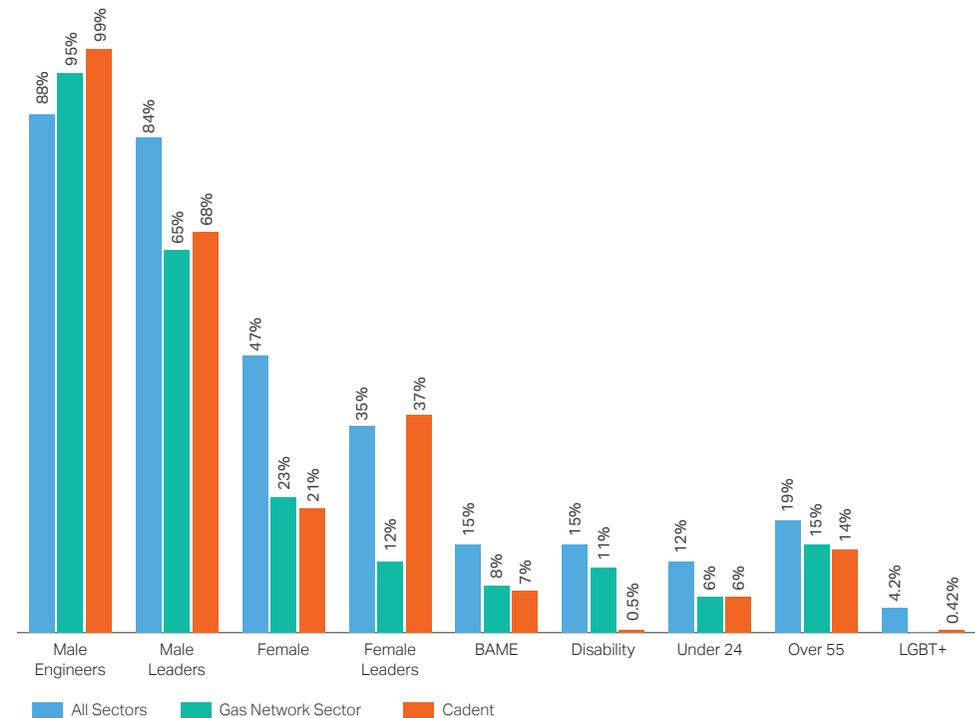
We are a Disability Confident Employer and we are working on improving this status to become a Leader. We are helping candidates to understand why we ask for data during the recruitment process, and we’re promoting it more widely. We are also working to create a culture where people feel safe to disclose their disability.

It is our ongoing intention to represent the diversity of our customers through fair and equitable recruitment processes to build a workforce that truly represents the communities in which we serve.

We have launched four Employee Communities: Embrace, Women in Cadent, Pride at Work, and Cadent Military Community. Not only will they support our diversity challenges but they will demonstrate how included our employees feel when working for us, helping to retain our talent and educate our employees. Furthermore, we are part of Energy and Utility Jobs and offer the Springboard development programme for female employees.



Demographic data: Cadent vs. All Sectors and Gas Network Sector



Driving performance

We believe in supporting our people with training and development, to ensure their safety and help them to thrive within their chosen career. Our training team comprises 30 employees with a mix of existing, experienced technical trainers and new professionals in leadership, new talent and planning. During 2019/20 we delivered 24,400 training days. We maintain our delivery on-site at depots at 30% to make it easier to attend. We have modified training approaches to assure the competence of our staff and programmes have been built for specific technical roles and this makes the management of course requirements more efficient.

In November 2019, we also aligned the Demand team to the Planning team to create a better customer experience for our Operational teams. We continue to invest in our training centres and are nearing completion of our Electrical and Instrumentation facility in Peterborough which will allow us to be self-sufficient in this area.

We have continued to embark on increasing our progress towards digital e-learning solutions, providing many more options for our people to shape their personal learning journeys; when, where and how they need them. We have launched our digital learning platform Percipio with 30,000 learning items that can be read, watched, or listened to in bitesized sections. This has supported an additional 200 hours of self-led learning.

In November 2019, we also launched a new internal apprenticeship to support employee development. 17 individuals have started the 12-month Team Leader Apprenticeship which is delivered through an external training provider and supports our Apprenticeship Levy.

All of these interventions have been collated into our new People Development Policy that has recently been refreshed to help employees and managers understand how they can develop themselves and their teams.



Changing lives for the better: EmployAbility

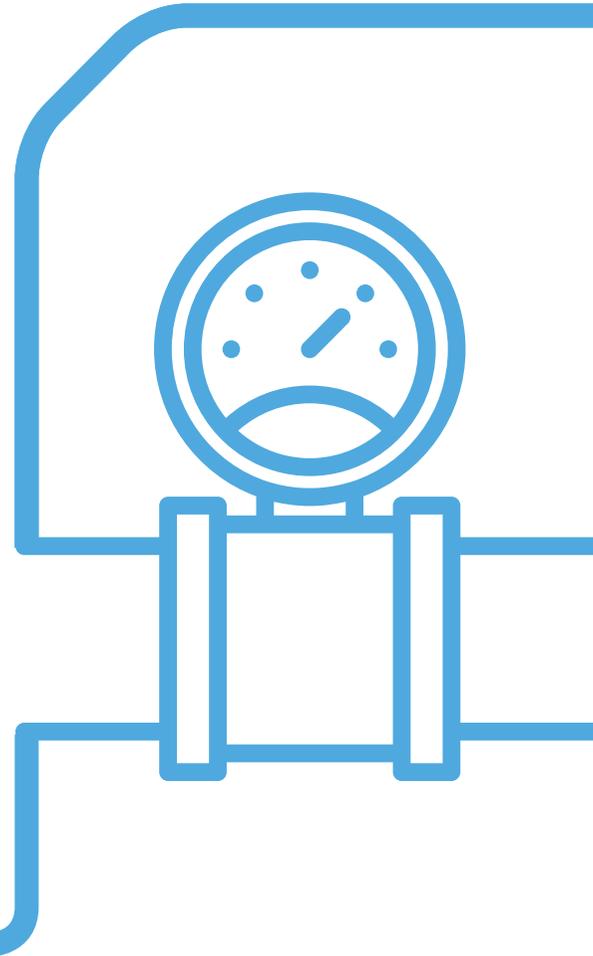
We sponsor the 'EmployAbility – Let's Work Together' supported internship scheme to build confidence, develop skills, raise aspirations and provide a step on the career ladder for students with special educational needs and disabilities (SEND). Students from our partner SEND schools join us for a year to complete three work placements, while studying for a BTEC in work skills. During that time, they are supported by job coaches employed by our partner schools and funded by the Department for Work and Pensions. The programme has enjoyed long-term success rates, with 73% of interns achieving paid employment, against the national average for this group of just 6%. Other interns have gone on to further education in mainstream colleges to pursue particular careers. **We were recently awarded 'Most Supportive Employer' by the National Autistic Society.** Our experience shows that supported internships can be lifechanging for interns and provide a valuable talent pool for our business.

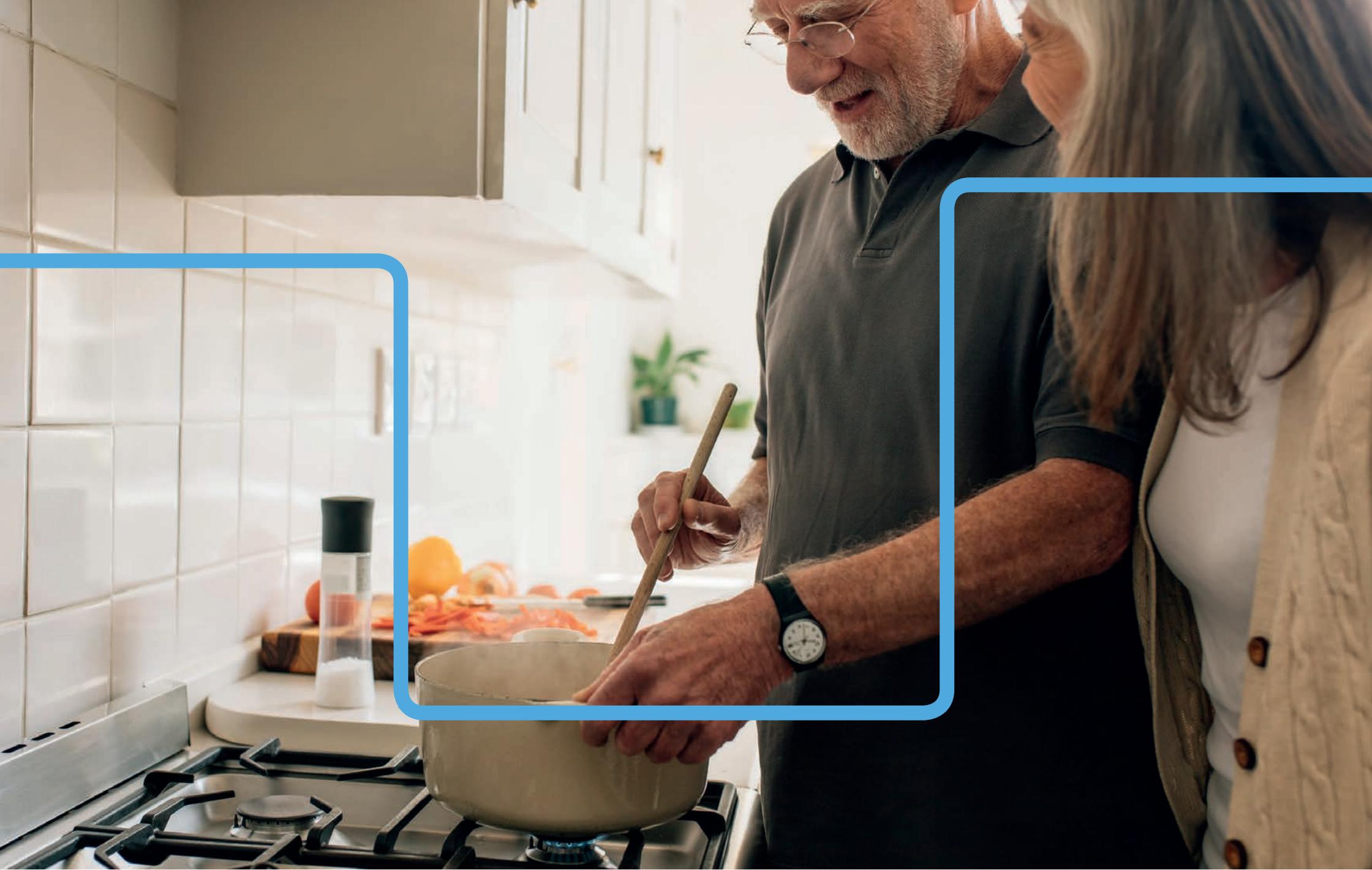
Ensuring a resilient network

Keeping the energy flowing every day

We are committed to ensuring uninterrupted service through a network that is safe and resilient. 11 million homes and businesses rely on us and the 131,000 km of pipeline we manage and maintain so this is no mean achievement. Our overall network reliability figure of 99.998% is a testament to the focus of our people and our commitment as a company.

The very fact that we manage to maintain such low levels of interruption is also one of the reasons that we know that network delivered gas must play a part in the green energy vision of the Government: customers simply rely on gas to be there when they need it.





Ensuring a resilient network

We own, operate and maintain the largest gas distribution network in Great Britain, providing our customers with the energy they need to stay safe, warm and connected

Our skilled engineers and specialist teams are committed to the communities we serve, working day and night to ensure gas reaches 11 million homes and businesses. Our networks comprise over 131,000 km of pipeline, with some parts of the networks originally built more than 100 year ago. This presents us with a range of challenges: from continually improving the safety of our networks; to ensuring exceptionally high levels of reliability, so that gas is there when people need it, and responding quickly when it isn't.

Responding to keep you safe

We are proud to say we consistently provided overall network reliability of 99.998% this year. A typical residential consumer on our gas network could expect to lose their gas supply just once in 40 years and, on average, they should expect to have their supply restored within ten hours. In 2019/20, we have focused on reducing the number of interruptions and responding rapidly to restore supplies when they do occur. As a result, we have seen a significant reduction in the number of unplanned interruptions in 2019/20 compared to the previous year.

We had to respond to a number of incidents where the gas supply was affected on a large scale in 2019/20, including Wirksworth, Derbyshire and Richmond, London, where our networks were flooded as a result of water mains bursting. In both incidents we brought in engineers from around the country who worked tirelessly to get the gas back on for the affected communities.





Renewing our network for the future

Since the late 1970s there have been coordinated programmes to replace aging gas network infrastructure. In 2002 the gas network operators; Health and Safety Executive (HSE) and Ofgem, agreed a 30 year programme to replace iron mains prone to fracture with new, polyethylene, lower-emission assets that are ready for transporting lower carbon fuels for the future. This programme was set in place by the HSE and funded by Ofgem, to improve safety for members of the public living close to gas transport assets. The programme will run until 2032 delivering improved safety and reducing greenhouse gas emissions.

In 2019/20 we replaced 1,809 km of iron mains under the HSE programme and over the RIIO period the replacement of iron mains and related services. Since 2012/13 we have replaced over 11,000 km of our networks and have developed plans to accelerate the programme to achieve our RIIO-1 target by the end of the price control period. This includes implementing additional contracts to provide more resource and using more of our direct labour repair teams in the Summer to work on mains replacement projects.

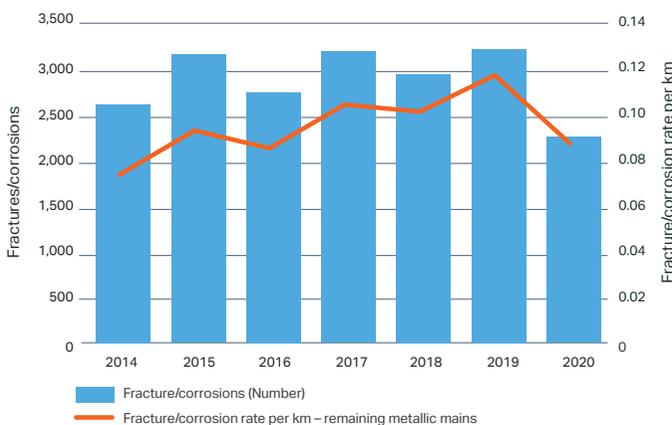
In the final month of 2019/20 we were increasingly impacted by societal restrictions as a result of COVID-19. This significantly reduced our ability to work in close proximity to members of the public.

This will impact on our ability to deliver the same amount of mains replacement and other investments as we planned. However, it is difficult to predict the scale of the impact as the evolution of the pandemic and social restrictions is not clear.

The figure below demonstrates that whilst we saw a reduction in the number of fractures and corrosions last year, the long term trend for the ageing gas mains still in place is that they are failing more frequently leading to possible uncontrolled gas escapes in our network. This key indicator strongly supports the need for continuation of our iron mains replacement programme. In addition, as the UK moves to meet its climate change objectives, we anticipate that further investment in the resilience of our networks will be required to provide the capability to efficiently and sustainably transport a range of low and zero carbon fuels.

In addition to mains replacement, we have expanded our programme of other asset improvements to ensure we provide a reliable network for the future, significantly increasing our expenditure compared to previous years. This includes upgrading and replacing assets – from high pressure, above-ground installations outside major urban areas, through to pressure reduction governors in towns and valves securing individual buildings. We use a structured and certified asset management system and detailed models to ensure we are making good risk based-decisions that provide value for money.

Iron Fractures/corrosion and rate



We expect to further increase investment over the remaining year of this price control period and have detailed plans that have been submitted to Ofgem for our next regulatory period. Our investment unit cost performance is strong relative to our peers, despite significant pressures on costs, due to the high demand for skilled labour in the construction industry. We will continue to manage these pressures alongside the step-up in workload over the coming years.



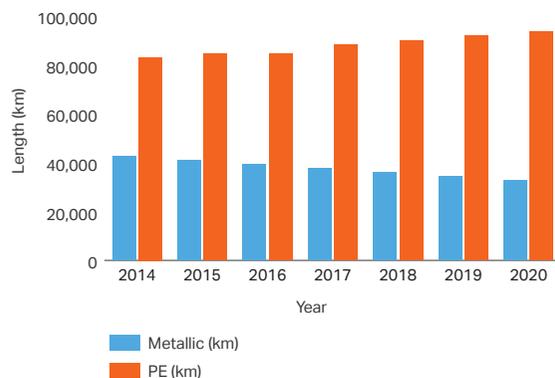
Reducing disruption for our customers with CISBOT

Throughout 2019/20 we've expanded our use of robotic technology to rehabilitate large diameter gas mains in the heart of our busy city centres, working efficiently beneath the public's feet and allowing them to continue their day-to-day lives.

There are far fewer excavations, no disruption to supply and the process is quiet and efficient compared to traditional approaches to replacing mains. Originally trialled in London in locations such as The Strand, Oxford Street and Regent Street, we're now using the same technique in our networks in Norwich and Manchester. Over the year, we've remediated 17 km of mains pipeline using CISBOT with our partners ULC.

Rehabilitation rather than repair is the secret to CISBOT's success. Once a single excavation is completed and shuttered, the CISBOT module is inserted into the gas main and can travel up to 450 m through the main to improve the gas seal of each joint in the pipeline. The robot is operated by a joystick and touchscreen from a vehicle, with the operators watching on screens. Rehabilitating each joint, CISBOT is set to transform the way we work and extend the lives of our pipes by decades. Although there are still many miles of iron pipes to maintain, CISBOT will be used wherever possible to reduce disruption for the general public.

Metal and Plastic Mains Population

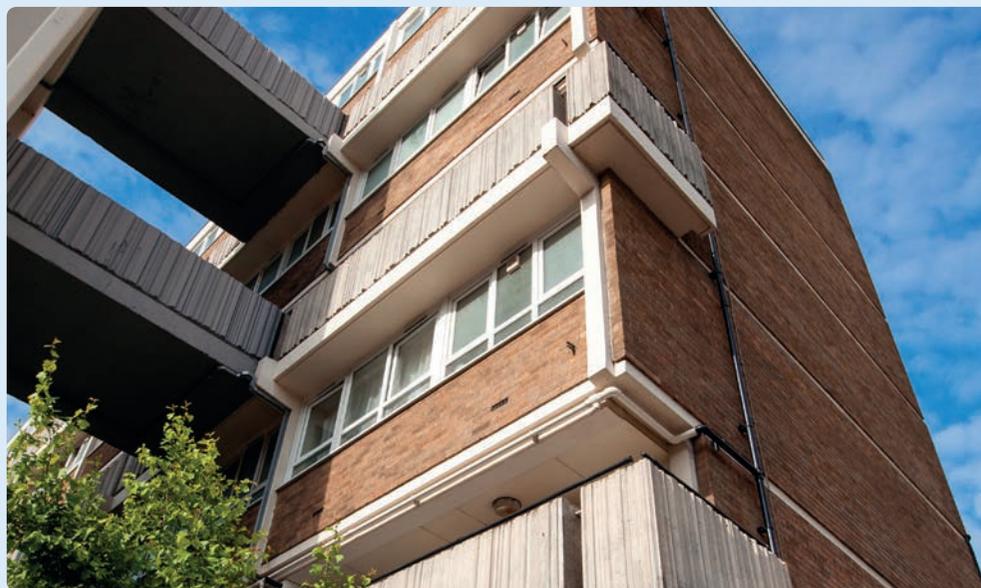


We have 125,000 km of distribution main in our networks. The remaining length of the network comprises local transmission system. The graph shows how the population is changing over time as older metallic mains are progressively replaced with modern plastic. Since 2012/13 we have replaced over 11,000 km of metallic mains and at the end of 2019/20 had reduced the length of live metallic main to 32,500 km.

Building resilient networks

We design, construct and maintain our networks to be able to supply enough gas on the coldest of winter days. To do this we forecast future gas use in which we are responding to challenges posed by population growth and the changing infrastructure and environments around our networks. The work we do today is helping deliver the networks of tomorrow with the capacity to deliver fuels for the future including hydrogen. This includes, for example:

- reinforcing our medium-pressure network in London;
- upgrading the security at a number of our critical above-ground assets;
- diversion programmes including HS2.

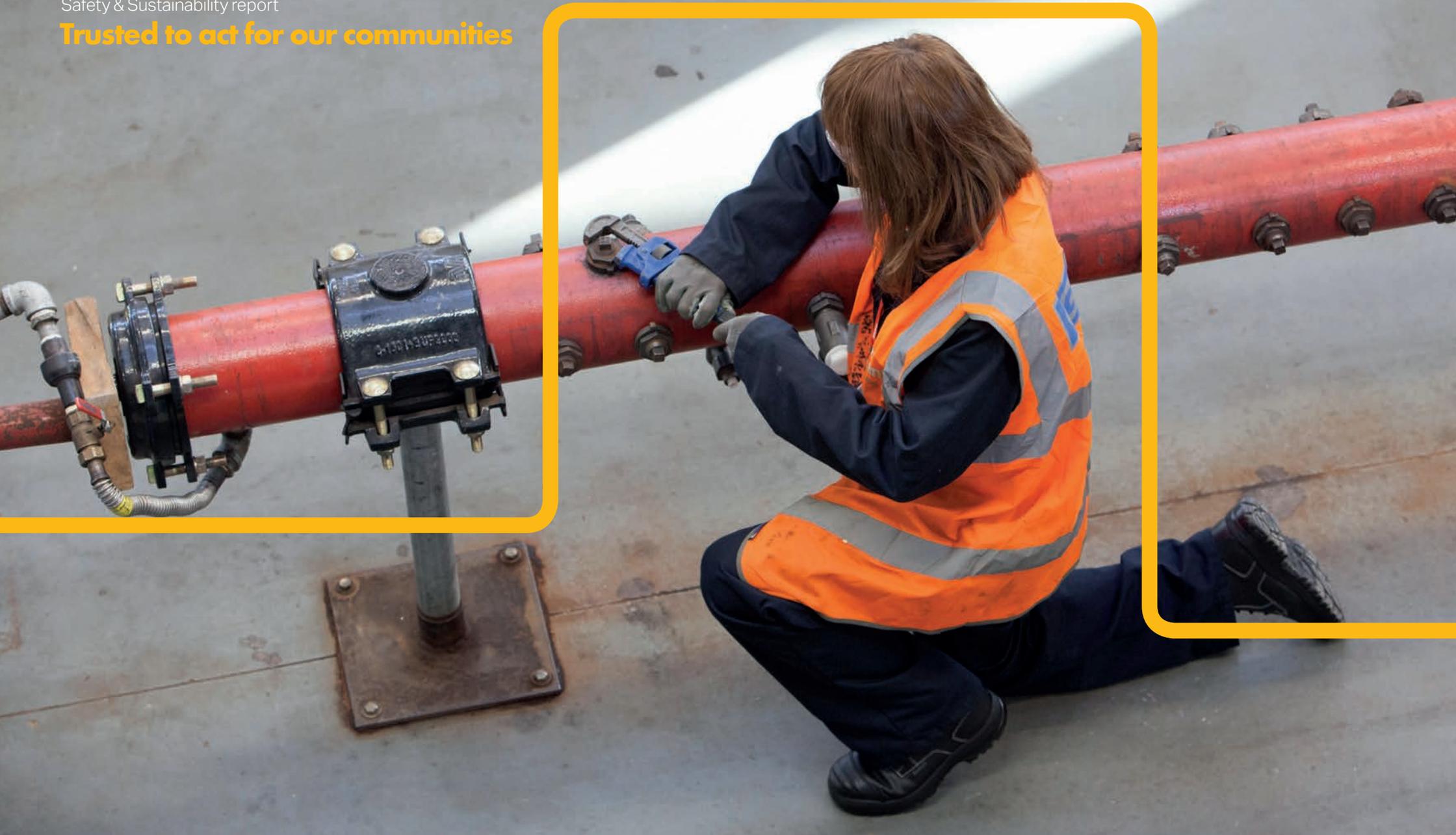


Improving service in multi-occupancy buildings

In 2019/20 we have carried out surveys on more than 3,553 gas risers in high-rise building across our networks and on 9,476 gas risers in medium rise buildings to ensure our pipelines are safe and maintained. As a result of these surveys we replaced and refurbished 954 gas risers in multi-occupancy buildings.

In order to improve service to customers we have created multi-occupancy managers and working hard to ensure we communicate well with our customers, and they understand our role in managing the assets in multi-occupancy buildings.

Not all multi-occupancy building customers require gas for heating and hot water; some are connected to communal boilers. We have established an energy exchange programme for people who only use gas for cooking, to replace their gas appliance with a new electric version. When customers agree to participate in the energy exchange programme, it minimises the disruption to all the building residents by avoiding the need to replace the gas pipes. Last year there were 127 buildings where this was the best option for our customers.





We never forget the position of trust in which we have been placed by our communities and our leaders

We understand that they expect us to act at all times with integrity, transparency and with the best interests of our customers always at heart. This is what we strive for, understanding that any of our actions – great or small – could undermine this position if they are viewed to be outside of our clear corporate ethos. We work hard to embed and broaden this trust, from the very largest project to our face-to-face dealings with a single customer.

Trusted to act for our communities

Our Trust Charter

We recognise that every interaction with our customers, stakeholder and communities is an opportunity to build trust. These opportunities come in both our direct contact with customers and through our delivery of the operational activities that our customers depend upon. Our corporate actions, which do not relate to our direct interactions with customers, can also improve our reputation as we believe that we are a force for good.

By recognising our wider social responsibility, and acting upon it, we can deliver customer outcomes that make a real and sustainable difference to the communities we support and build customer and stakeholder trust in how we operate.

We have undertaken extensive research with our customers (including future customers) and other stakeholders to understand what is important to them in building trust in us. They have helped us to prioritise the following five key commitments that underpin our new Trust Charter.

How we will recommit to building trust through every operational interaction with customers and stakeholders	1. Building trust through every action
The RIIO-2 activities that we will undertake to go the extra mile for customers and communities	2. Making a positive difference to our communities
How we will continue to engender trust by taking action on the insights we draw from customer engagement	3. Sustainable engagement to drive better outcomes
The actions we take to support our people and help them develop	4. Create an environment for our employees to thrive and be proud of the service we deliver
How we are socially responsible in our corporate activities and build trust through transparency	5. Transparency in how we operate

We are committed to strong corporate governance and high standards of ethical conduct. We know that we need to act in a way that builds trust in how we operate, making a real and sustainable difference to the communities we support.





Trusted to act for our communities

Acting in a responsible and ethical way

Our Board provides oversight and is committed to strong corporate governance and high standards of ethical conduct. As part of this, we're committed to 'Always Doing the Right Thing' in the choices and decisions we make every day, both as individuals and as a company.

The Board sets a strong emphasis on the importance of our high ethical standards, whilst employees are supported to act ethically by local Ethics Champions in each area of the business, as well as by a dedicated Ethics team. Our ethical guide, 'Always Doing the Right Thing', on which all employees are trained, underpins our values, guiding how we behave and work today, along with our aspirations for tomorrow.

Through our Supplier Code of Conduct we outline our expectations of how our suppliers, and their supply chain partners, act when providing us with goods or services, ensuring the way our suppliers do business aligns to our values and aspirations. We expect all our suppliers to act in accordance with the highest ethical standards, and to comply with all relevant laws, regulations and licences.

Our Modern Slavery Statement sets out the steps we have taken to prevent slavery and human trafficking in our business and supply chains and at the same time raises awareness of this important issue.

Our anti-corruption and bribery policy sets out our

guidance to conduct all of our business in an honest and ethical manner. With a zero-tolerance approach, we are committed to acting professionally, fairly and with integrity in all our business dealings and relationships wherever we operate and implementing and enforcing effective systems to counter bribery and corruption.

We continue to review our processes to prevent enforced labour, human trafficking and slavery, and provide regular guidance and training to our employees to embed our ethical code of conduct.

We are the only Gas Distribution Network to be part of Sustainability First's Fair for the Future project, which has involved active participation in establishing the four pillars of a sustainable licence to operate. This work has featured heavily in our Trust Charter and we continue to play an active role in the project.

Through our Global Supplier Code of Conduct, we expect our suppliers to comply with all laws relating to their business and adhere to the principles of the United Nations Global Compact, the Ethical Trading Initiative Base Code and the UK Modern Slavery Act 2015.

We have embedded four key values to drive the way we do business and ensure that even when decisions may be uncomfortable or challenging, we will always do the right thing.





Our values

Commitment

We are dedicated to delivering on our promises, keeping focused on safety and doing the right thing.

- Putting customers first always;
- Maintaining a relentless focus on safety;
- Doing the right thing;
- Decarbonising our future.

Community

We are one business, focused on the needs of the communities we serve.

- Building team solidarity;
- Taking a human approach;
- Serving the nation.

Curiosity

We explore and embrace new ways of thinking and working to meet the needs of our customers and stakeholders.

- Encouraging a start-up mentality;
- Taking a progressive outlook;
- Sharing ideas.

Courage

We have the courage to embrace change and respond to the fundamental shifts in our society.

- Being open to change;
- Moving forward;
- Acting with confidence.



Our work in the community

We operate a generous charity matched-giving process whereby we match the amount raised by employees for charities of their choice up to £400 per employee per year. This scheme is widely utilised by our colleagues and in 2019/20 over £194,352 of donations were received from employees.

We also offer an employee volunteering programme that all employees can sign up for. We work with Volunteering Matters to identify volunteering opportunities within our networks for employees to take part in. In 2019/20 125 staff gave 788 hours which directly benefitted 41,087 people.

Trusted to act for our communities



Knights in hi-vis armour

In March 2020, the COVID-19 pandemic affected all aspects of life in the UK. We are very proud to say that our staff responded outstandingly to this change in circumstances.

Our First Call Operatives adapted to the new approaches that were introduced in line with government guidance and continued their vital work of repairing and maintaining the network and responding to any emergency calls related to suspected leaks. In our administrative teams, the Customer Support Centre adapted through a combination of working from home and working in offices that had been reorientated to respect social distancing requirements.

In addition to this, our teams were given the flexibility to use their time to volunteer and their Cadent vehicles to help deliver medical supplies and support foodbanks. Their collective commitment to supporting their communities was so gratifying to see and we thank them for everything they have done during this difficult time.

For more information on our response to the COVID-19 pandemic, please see our Annual Report and Accounts.

Above: Birmingham gas engineer Carlton Hardy has been hailed a hero by city Lord Mayor Councillor Mohammed Azim for his work in helping those in need during the COVID-19 pandemic.



The Cadent Foundation

In 2019 the Cadent Foundation was established to make a positive and lasting difference to local communities and the wider society within Cadent's network



Julia Dwyer
Director,
Cadent Foundation

The Board have committed 1.25% of our annual post tax profits to the Foundation and over the coming years it will be awarding over £20 million in grants to charities and organisations for projects that will make a real difference.

Cadent Foundation's mission is to provide support to people living in vulnerable situations and energy poor communities, to work to protect and preserve our natural environment and create a sustainable energy future.

It is administered by Charities Trust (Charity Registration No: 327489) who manage the grant giving and ensuring all funds donated are used to further charitable purposes for the public benefit.

How the Cadent Foundation is supporting people and their communities through COVID-19

The COVID-19 pandemic has altered people's daily lives, causing an increased reliance on supporting services, and the need for charities is greater than ever.

The Cadent Foundation recognised the need to support the range of people living in vulnerable situations and committed an emergency grant to the Trussell Trust. The Trussell Trust support a nationwide network of food banks and provide emergency food and support to people in poverty. On March 20th of £240,000 and a further grant to the Royal Voluntary Service on April 22nd of £100,000.



This very generous donation from the Cadent Foundation will enable us to support more vulnerable people during this crisis now and in the months to come through companionship calls, helping people access food and essential medication, delivering welfare checks and providing virtual social activities to keep people connected. We are determined that isolation shouldn't mean coping alone."

Sam Ward
Deputy Chief Executive and Director of Services,
Royal Voluntary Service

Please see the website
for more details

www.cadentfoundation.com

Cadent

Your Gas Network

Keeping the conversation flowing

Our Safety & Sustainability Committee



Howard Higgins
Chair of the Safety & Sustainability Committee



Dr Catherine Bell CB
Member of the Safety & Sustainability Committee



Perry Noble
Member of the Safety & Sustainability Committee

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