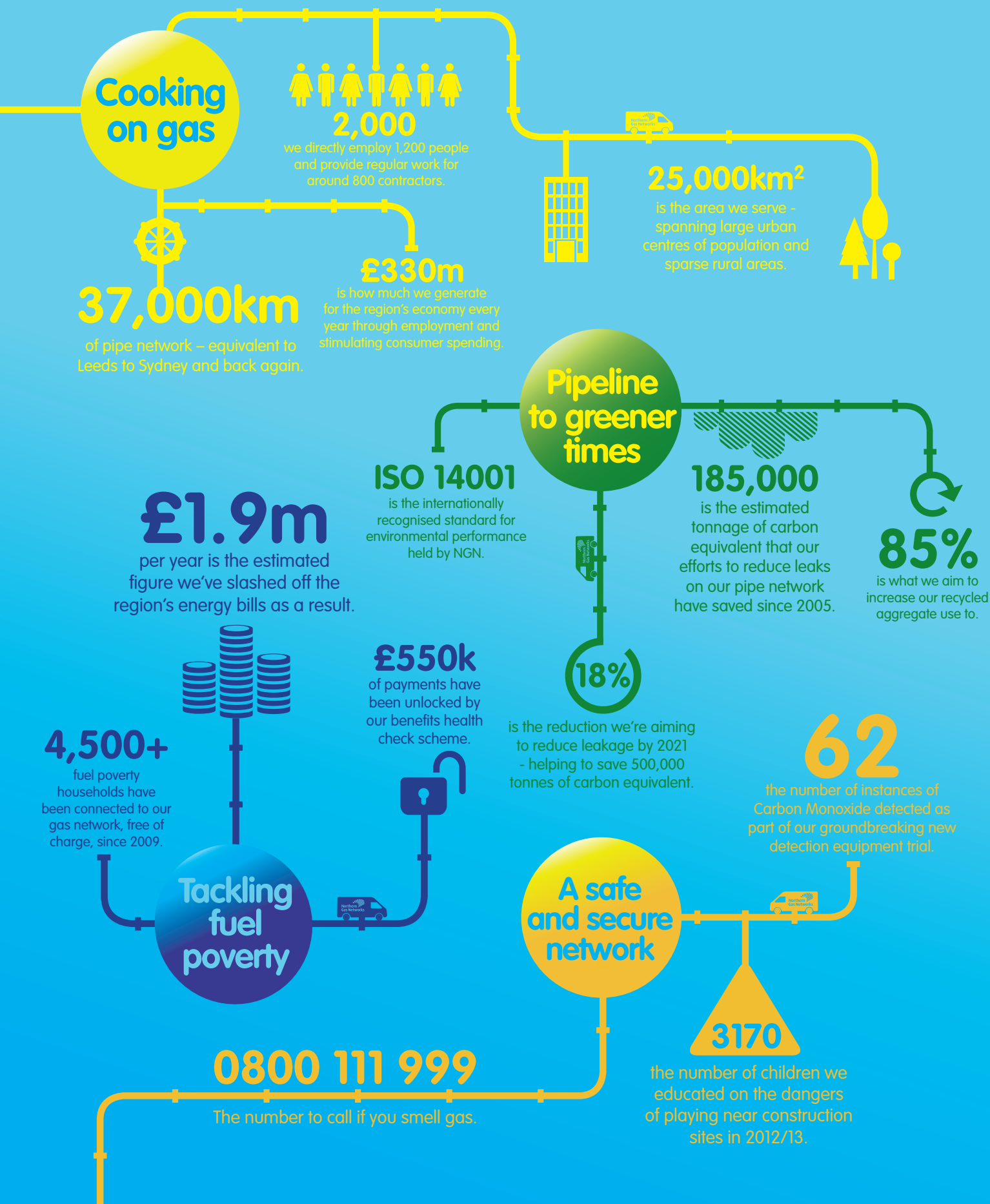




Northern Gas Networks

Discretionary Reward Scheme 2012/13



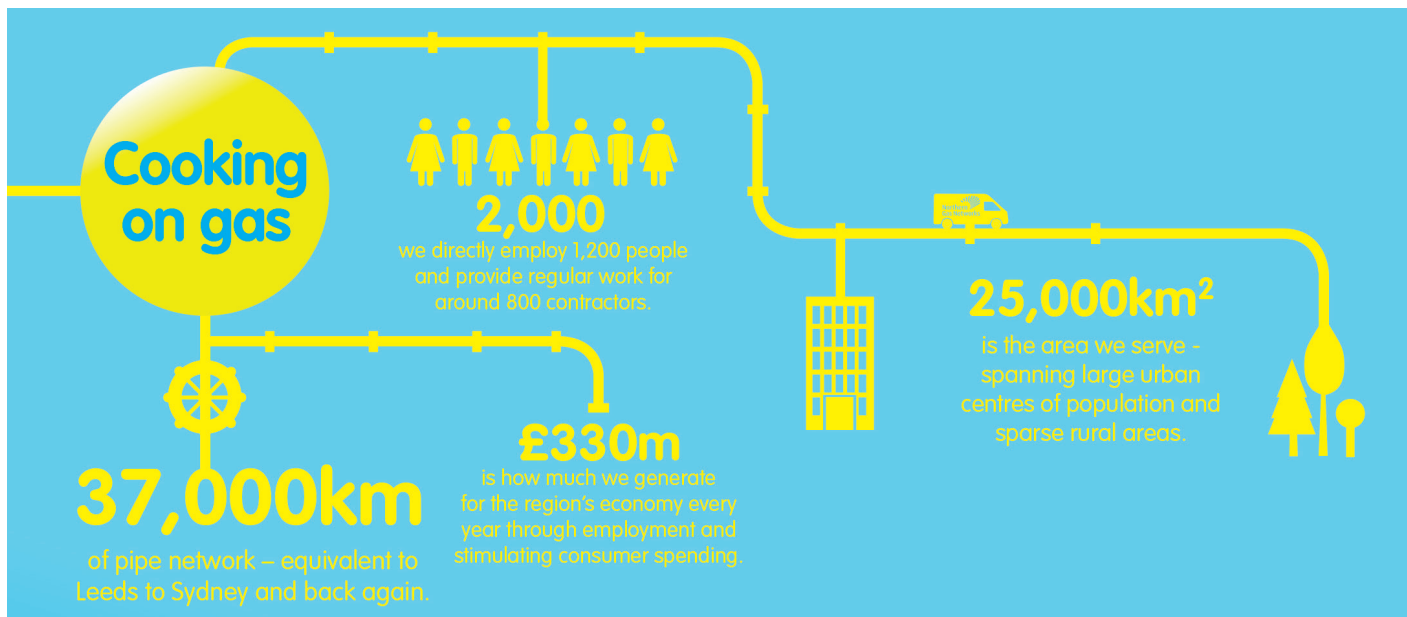
Contents

SECTION	PAGE
1. About us	3
2. Environment	4-8
3. Fuel poverty	9-13
4. Gas safety	14-18



About us

Keeping the North of England cooking on gas



"We're incredibly privileged to be the North of England's gas distributor. We serve 2.7 million homes and businesses across the North East, Northern Cumbria and much of Yorkshire.

Our business is as much about people as it is about pipes. We are focused on providing the safest, most reliable service possible for our customers, and going the extra mile to educate the region about the important role of gas in our communities, but also about the dangers of Carbon Monoxide.

"We are committed to protecting our most vulnerable households, by helping to lift them out of fuel poverty, and by making their homes warmer and cheaper to run. As the UK continues to move towards a low-carbon economy, we are focused on driving down our own environmental footprint, and paving

the way for new, sustainable forms of energy to flow through our region.

"The following pages contain many inspiring examples of these principles in action. They have all been informed by feedback from a diverse range of stakeholders – local authorities, environmental groups, charities, education institutions and of course, our customers.

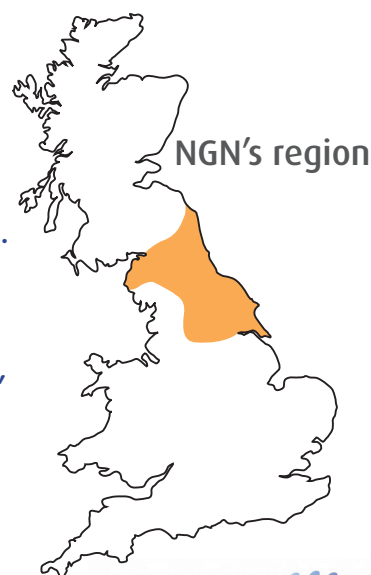
"Crucially, many of the examples we have focused on have long lifespans. These projects are embedded into our business, delivering measurable results, year after year."

Mark Horsley, Chief Executive Officer

How we do things

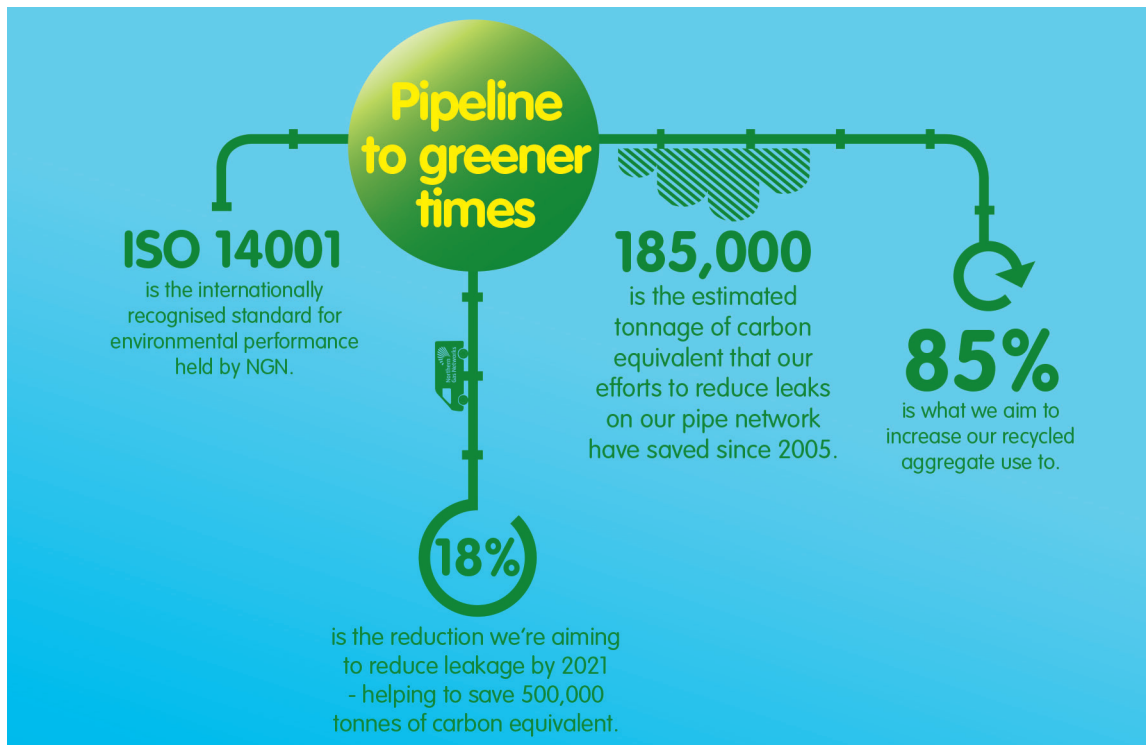
The principles that guide our business are:

- **Making safety personal:** by placing the wellbeing of the public and our engineers at the core of everything we do.
- **Putting our customers first:** by seeking to resolve customer issues quickly and professionally – 60% of issues with a resolution agreed within 60 minutes.
- **Making every penny count:** by taking a 'total network' approach to investment, which maximises benefits to customers.
- **Working in partnership:** by developing joint initiatives with our stakeholders, sharing our projects with the industry, and measuring everything we do.
- **Being sustainable:** by focusing on protecting the environment, raising awareness of Carbon Monoxide and reducing fuel poverty.
- **Nurturing our staff:** by providing continuous training and development opportunities.
- **Setting the pace:** by trailblazing new approaches to service delivery and customer engagement to raise industry standards.



Environment

We never lose sight of our environmental responsibilities



We are committed to transporting gas from our network to our customers' homes with minimal environmental impact, and to supporting a low carbon economy by harnessing new forms of green energy.

Network leakage accounts for about 98% of our carbon emissions, and by 2021 we aim to have reduced this by 18% – saving around 500,000 tonnes of carbon dioxide equivalent. Our carbon reduction strategy aims to reduce our carbon footprint and will take into consideration fuel use, fleet alternatives and energy use. Our carbon data will be considered for external verification.

We are also aiming to increase our recycled aggregate

use to 80%, and to reduce the amount of spoil that we send to landfill to less than 8%. We're committed to improving awareness about sustainability across the whole business and our supply chain by benchmarking against other industries and ensuring environmental considerations are part of every new contract award. We are working with Business in the Community to further enhance our approach.

Our environmental priorities are defined in our HS&E Policy and shaped by findings from audits, inspections, environmental risks, RIIO and our ISO 14001 certification – all showing our commitment to continued environmental improvement.

Achievements: at a glance

In 2012/13 we:

- Removed barriers to biomethane adoption and generated much interest through groundbreaking pilot schemes
- Set up a stakeholder working group to collaborate on environmental improvements to our fleet
- Launched a major new eco-themed schools programme educating pupils on their carbon footprints
- Introduced new ways to combat pipe leakage with potential to save 500,000 tonnes of CO₂ equivalent

Collaborating over a low carbon economy

In 2012/13 we worked with a range of partners including Defra, the Environment Agency, CNG Services, the Sweett Group and other Gas Distribution Networks, on adapting our network to our green-minded future.

Significant progress with biomethane innovation

The use of biomethane as a sustainable fuel to power homes and businesses is still in its infancy.

Our work this year has focused on identifying viable sources of biomethane, overcoming technical hurdles to grid injection and forging new partnerships with producers.

We have also made further progress with our first anticipated live grid injection project.

Sharing best practice:

Video
available for
download



Earlier this year we completed a pilot with National Grid and specialist consultancy CNG Services to create more space on the network for biomethane – and the outcome is extremely positive.

During periods of low customer demand, such as summer evenings when there is a lot of gas in the network and pressure is at its highest, biomethane producers risk facing restrictions on the amount of product that can enter the system.

Our pilot scheme, in Skipton, examined 'within-grid' compressor technology to remove this barrier. The trial demonstrated it is practical to compress gas in a highly controlled manner, without affecting the smooth running of the network, so that biogas producers can inject their product. It also highlighted the potential cost benefits of this approach.

Results of the trial and details of the methodology were presented to stakeholders at two special demonstration

events. Delegates, including the Health and Safety Executive, Ofgem and Gaz de France, were treated to site visits, and a series of presentations from partners in the scheme.

We are now looking forward to working with other GDNs, Ofgem and the Health and Safety Executive to apply the principle to future commercial biomethane projects. We have already had enquiries from a number of biomethane producers.

"The pilot has gone extremely well. Lots of biomethane projects end up being shelved due to lack of capacity, but widespread adoption of this compression method could mean many more succeed."

Ray Levy, Planning Manager (now retired), NGN

Getting buy-in to biomethane

To make prospective biomethane producers more aware of the advantages of partnering with us on grid injection projects, and to fully scope the technical and financial issues involved, we have launched an important new study.

The study will identify potential sources of biomethane in the region (including arable, industrial, commercial and waste water), the potential production volume, and the opportunities to work with producers to get the product to the grid.

We will be working with a wide range of stakeholders including farmers, local authorities, water companies and commercial and industrial waste companies.

The findings of the study will be published in a report in September 2013, and we will be holding an event to share the findings with prospective commercial partners and key stakeholders in the supply chain, such as financiers, suppliers and project management organisations.

We hope to advance the region's enthusiasm for biomethane grid injection projects, and initiate new partnerships resulting in successful projects in the years to come.



73 The number of enquiries received to date from **biomethane producers** keen to learn more about grid injection

Lobbying with stakeholders on a European scale

NGN is collaborating with other gas network operators and the HSE to resolve, gas quality issues, often a barrier to connecting to the network. Significant progress has been made, lobbying the HSE to harmonise the UK's specifications with less stringent ones in Europe and to open up the network to many more biomethane producers.

"We are very close to making a historical agreement in what represents a massive step change for increasing biomethane into the network."

Martin Alderson, Asset Risk Management and Safety Director, NGN

Northumbrian Water partnership: update



The past 12 months have seen us move even closer towards our first live grid injection project with Northumbrian Water.

The project to harness biomethane produced at the Howdon sewage treatment plant is expected to go live in 2014.

The past year's work has focused on finalising designs, drawing up the highly detailed network entry agreement document, and working closely with the Health and Safety Executive.

We are excited to be moving even closer to the launch of this flagship project, which we hope will pave the way for many more in the region.

12,000 The number of homes due to be powered by our biomethane partnership with Northumbrian Water

Pre-heating: saving energy by design

1,798 tonnes the anticipated annual reduction in CO2 emissions

once we have replaced inefficient water bath heaters

from 16 sites with modern, efficient technology

The gas distribution industry relies on a process of pre-heating to prevent gas from freezing when it moves from the high pressure network to our lower pressure network.

We recognised the need to explore more sustainable and economical sources of pre-heating – a market traditionally dominated by suppliers of boiler packages and water bath heaters.

NGN have undertaken a feasibility study into sources of new and innovative solutions to pre-heating from stakeholders not traditionally involved in this market – including heating equipment suppliers and professional engineering consultancies.

The results have been compiled into a report, and the recommendations are guiding our investment strategy. In 2013/14, six upgrades to our existing pre-heating infrastructure are scheduled, and all will be in line with our new approach.

A greener way of disposing of gas holders

Our region has 47 gas holders, and the need to clear these sites cost-effectively and with a minimal environmental impact (e.g. land contamination and waste to landfill) is becoming a pressing issue.

NGN commissioned EC Harris to complete a disposal feasibility study into the holder sites which included a consultation with local councils, businesses, communities and developers.

Following this study, which has now directly influenced our demolition strategy, NGN have progressed an additional study with Arcadis into 'sludge solidification'. This will develop the technique whereby the sludge at the bottom of the holder tank is solidified and retained in situ. This would remove the requirement for tankering the waste off-site, and decrease the amount of imported backfill.

We plan to share the results of the trial with the rest of the industry.

200+ The approximate number of disused gas holders across the UK, all of which could potentially benefit from the 'sludge solidification' method of disposal



Educating future generations

Earlier in 2013, we launched a flagship, curriculum-based education programme to help inspire the next generation of environmentally aware citizens.

Developed with the Trust in Youth student advisory board, the programme is tailored for Key Stage 3 pupils (11-14-year-olds) and complements the national curriculum subjects of geography and science.

The programme uses engaging, interactive workshops and supporting material which is taken home to deliver messages about gas safety, sustainability and the environment. A key element of the workshops sees pupils

assess their own carbon footprint and identify steps to reduce it, as well as learning about the importance of recycling.

We have completed a programme of work in which nine workshops were rolled out to 210 pupils across five schools. Feedback forms at the end of the sessions were used to gauge students' understanding.

We are now fine-tuning the programme in light of teacher and student feedback and planning. Our intention is then to extend it across the region, reaching 900 pupils in the 2013/14 academic year.

Teacher feedback

"Excellent resources – visually fantastic and worked well for each task. Pupils enjoyed each activity, and agreed they had learned about sustainability and Carbon Monoxide poisoning."

Mike Shovlin, Year 7 Support Teacher, Egglecliffe School

Year 7 pupil comments

"It was good to learn more about recycling."

"To improve, I will get my family to recycle more."

"I will get my family to read through the booklet."

Major improvements

- 88% of pupils had a good understanding of their carbon footprint following the workshop compared to 28% before.
- 89% of pupils said they would do more to recycle around the house following the workshop, and only 67% took an interest in recycling before.
- 97% of pupils recognised that basic things such as saving water and switching off electrical gadgets could help the environment – a 13% increase on before.

Our suite of specially tailored supporting material: ambassadors guide, teachers guide, learning guide and certificate!



Motoring ahead with our green fleet

With our employees clocking up more than nine million miles a year on work journeys, we decided to reduce the environmental impact of our fleet.

Last year we set up a New Vehicle Working Group (NVWG) to collaborate over the safest and most environmentally efficient vehicles on the market to meet NGN's requirements.

The group, which included UK Power Networks, Tevo Ltd suppliers, NGN drivers, trade union safety representatives, NGN supply chain and procurement, test-drove a range of vehicles with high energy-efficient credentials.

They agreed on Ford, and after going out to tender secured excellent discounts on the range: 68 vehicles are to be replaced this year, and the plan is to replace the whole fleet of 500 vehicles during the eight years under RII0. Features of these new vehicles include:



- **Speed limiter:** All vehicles will be set at 62mph, reduced from either 68mph or 70mph. This will increase driver safety, and save approximately 17,000 litres of fuel per annum with reductions in CO2 emissions of approximately 55,000 kg.
- **Stop-start technology:** We will be introducing new stop-start technology to approximately 200 vehicles. This will increase typical miles per gallon from 30.7 to 33.2 per vehicle (8% improvement) and deliver a reduction in CO2 emissions of approximately 190,000 kg.
- **On-board for CO2 savings:** The on-board power unit will be reduced by 25kg in approximately 178 of our vehicles, resulting in reductions in CO2 emissions of approximately 3,000 kg.

1.74 tonnes
The amount of **CO2**
we expect to save by
2021,
thanks to innovations
to our vehicle fleet

Aiming to
replace
whole
fleet
by end of
RIIO

Greener, smarter meetings

We hold a large number of staff and contractor meetings every week. To reduce costs and carbon emissions, we have introduced web-based video conferencing across several sites.

The technology is only just bedding in, but has already helped to reduce time spent on the road. We hope to save thousands of pounds and hundreds of staff hours each year, and achieve significant reductions in carbon emissions.

More green gems

- **New smartphones** across the business providing access to emails and live maps
- **New Data Centres** which provide a 60% reduction in carbon footprint
- **Toughpads** replacing Toughbooks, which are lighter and easier to use

Smart leakage reduction steps up a gear

Natural gas contains large quantities of methane which, if it escapes into the atmosphere, can lead to a harmful build up of greenhouse gases.

In last year's DRS submission, we gave details of our £400,000 centralised data system called NAP (Network Area Polygons) that allows us to gather pressure levels from the field in real time, enabling our engineers to respond more quickly to potential pipe leaks.

Earlier this year, we began a tranche of work to deliver further advances by installing state-of-the-art pressure monitoring and control equipment in 29 governor stations across Spen Valley, West Yorkshire.

The equipment fine-tunes gas pressure levels in our pipes according to weather conditions and time of day. It can operate according to pre-defined programmes (e.g. automatically reducing pressure at night), and be tweaked in real time for unexpected weather conditions.

By continually and remotely adapting gas pressure, we can dramatically reduce shrinkage (leakage). The communications aspect of the equipment, used to remotely transmit data, is solar powered, reducing carbon emissions still further and preventing the need to connect to the electricity network.

The results of this work will be available in around 12 months, but we are already rolling out a second tranche in Tyneside and making provision for long-term investment in this technology.

29 The number
of governor
stations
installed with
state-of-the-art
pressure monitoring
equipment this year

10%
The average reduction in
gas pressure
we expect to achieve in
Spen Valley

Fuel poverty

We're working hard to cut fuel poverty in the region

Our region has one of the highest levels of fuel poverty in England, with around 24% of households spending more than 10% of their income on heating. Rising energy costs and the tough financial backdrop is placing increasing pressure on our customers' finances.

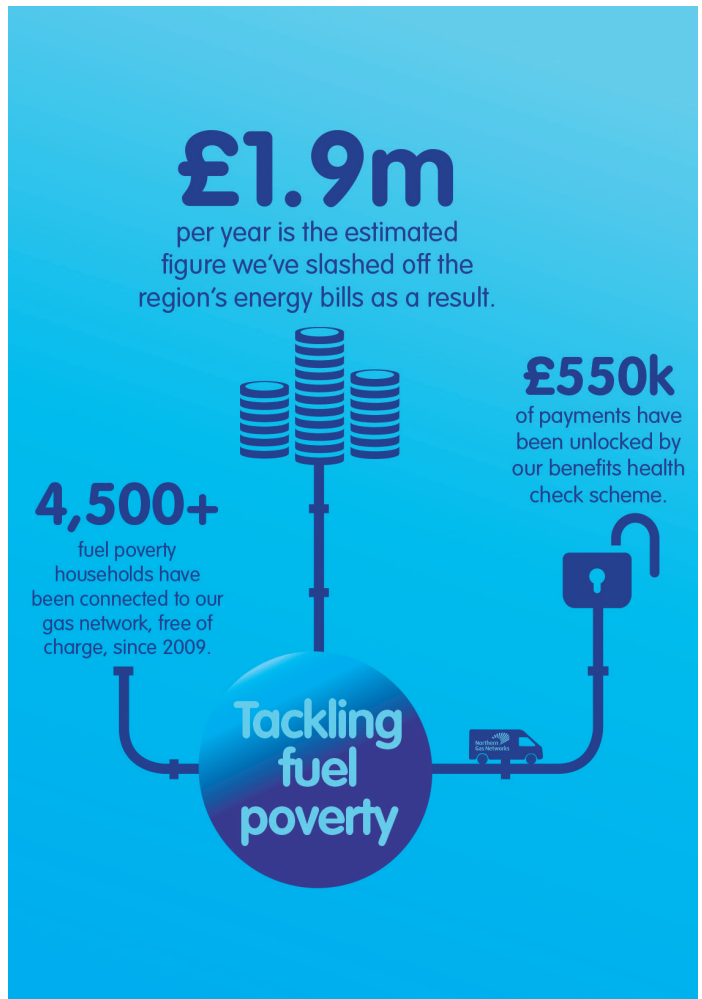
We are committed to lifting as many households as possible out of fuel poverty by providing free gas connections to 12,000 homes in R10-GD1 (more than 10% of the target population), working with our partners to improve home energy efficiency and helping families take greater control of their finances.

To achieve this we are enlisting a network of organisations to work with us on a project-by-project basis, creating a scalable community engagement 'in a box' model, and following a delivery schedule and annual programme of events.

We are also aware of the negativity surrounding the term "fuel poverty", and will be re-branding this work to emphasise our moral duties towards these vulnerable and proud customers.

We have also established that with an annual target of 1,500 connections, and a ratio of leads to confirmed projects of 5:1, we need to generate leads for 7,500 connections per year.

Stakeholder engagement is very much a leading part of our fuel poverty work, and in 2012/13 we held a major event with representatives from across the UK in local government, social housing, charities and the environmental sector to collaborate over best practice and future projects. At the event more than 80% of delegates highlighted our tackling fuel poverty as an essential part of our remit, and we have shared some very exciting ideas for working together this year.



Achievements: at a glance

In 2012/13 we:

- Achieved a return of 11:1 against a target of 10:1 on our initial investment to benefits raised for customers
- Helped families claim almost £550,000 of benefits
- Provided around 1,700 affordable heating solutions for customers' homes
- Saved 440,000 tonnes of CO2 by making homes more energy efficient

"There are lots of people living in the wider community who are living in fuel poverty that we can't reach, and that's where NGN comes in."

**Housing Association
delegate at a recent NGN
stakeholder workshop**

A sales pipeline ratio of 5:1 leads to confirmed projects means an

annual target of
7,500
leads **for** **1,500**
connections

Our five phase approach

Freeing customers from fuel poverty requires a holistic approach – and a free gas connection is often only one part of the process.

We are partners with Community Energy Solutions (CES), a community interest company which specialises in low-cost, low-carbon heating solutions to deliver comprehensive support for struggling families.

Over the past year we have provided around 1,700 affordable heating solutions for customers' homes using the following process:

1. Identify: using our own data, information obtained by door-knocking from CES and economic data from stakeholders to identify fuel poor neighbourhoods. Detailed scoping exercises then take place; a project plan is agreed with stakeholders, and a public consultation and information campaign is launched.

2. Connect: all eligible households in a target area are offered a free gas connection from NGN.

3. Improve: once connected, homes are offered assistance to upgrade their heating systems, and to improve their insulation. CES leverages money from a variety of sources (government

grants, the utility obligation, funding from social and private landlords) to deliver the work through a framework of local contractors at a free or discounted rate.

4. Health check: customers are given a free benefits advice check to ensure they are not missing out on financial support. Advice on saving energy and reducing utility bills is also provided.

5. Analysis: the impact of a completed project is assessed by measuring the Standard Assessment Procedure (SAP) score of targeted homes, forecast fuel cost savings, and the reduction in carbon emissions.

Our approach in action

Increasing whole-life energy savings for our customers

We have estimated that since the scheme began in 2009, through the energy efficiency measures we have installed in all homes, the total ongoing savings have reached over £2 million. These savings we have achieved for customers will continue to accumulate as we continue to help more residents to maintain affordable warmth.

Year	Number of Gas Connections	Estimated Running Total Fuel Savings
2009-10	719	£212,105
2010-11	781	£639,605
2011-12	1,567	£1,346,233
2012-13	1,100	£2,185,182

Over
£2 million
 energy efficiency
 savings in homes by
2012/13

Bringing warmth to Featherstone



Left to right: Ben Stone, Sustainability Manager for WDH, Chris Sowerbutts, Project Manager for CES and Mal Riley, Operations Manager for Northern Gas Networks.

Families in Featherstone, West Yorkshire, are among the latest to receive a helping hand from our fuel poverty programme.

Working with Wakefield Council and social landlord Wakefield and District Housing, we connected 62 social housing and private properties to our network for the first time, allowing families to finally say goodbye to their existing coal or electric storage heaters.

"The funding and assistance from Northern Gas Networks and CES for this project will bring substantial financial savings to our tenants."

Area Manager Janet Smith,
 Wakefield and District Housing

Helping a former mining village

The ex-mining village of Sunnyside in County Durham is soon to see 200 fuel poor households connected to our gas network for the first time. Work is now underway.

In preparation for this life-changing programme, we organised a community event earlier this year to explain the process to residents, and encourage them to sign up for assistance with gas connections, boiler installations and improved insulation.

Employees also delivered a safety awareness session at the local primary school in response to concerns from parents about their children playing near to work sites.

"Since NGN got involved – from the first public consultation to the work starting on site – they've been helpful and responsive. They are also connecting the community centre – our central meeting place, to the gas mains free of charge, so we can say goodbye to bottled gas."

**Caroline Robinson,
Treasurer of Sunnyside
Community Association**



Over 100 residents attended our Sunnyside event.

Unlocking benefits for households

In 2012/13, we continued to fund two CES benefits advisors who provided financial advice to customers.

Assessing customers' finances in this way helps them to take control of their household budgets long after NGN and CES have finished their work.

Almost £550,000 of benefits were unlocked for more than 450 customers in 2012/13. The average gain per claimant was £3,700 per year. These life-changing amounts would not have been possible without the professional help of our advisors.

£50,000

The amount NGN spent on benefits advisors in 2012/13

£550,000

Total value of benefits unlocked for our customers, thanks to these advisors

Initial investment to total value realised for the customer

Ratio of 11:1 against a target of 10:1

Our approach in action Alan comes in from the cold

When the heating broke in his Stockton home, pensioner Alan Argyle couldn't afford to have it replaced. Concerned for his welfare as temperatures continued to drop, daughter Geraldine called the CES benefits advice team.

An assessment revealed that Mr Argyle, who suffers from mobility problems and breathlessness, was entitled to Pension Credits and Council Tax Benefit. The 79-year-old, who lives alone, hadn't been claiming his entitlement because he felt very confused by the paperwork and red tape.

Mr Argyle enjoyed a vital boost to his annual income, and was awarded a lump sum in backdated payments. He also qualified to have an A-rated energy efficient gas boiler installed free of charge.



A much happier Mr Argyle with his vital new heating system, and boost to his income.

- Mr Hutchinson from Durham was awarded additional benefits to the value of £9,952.80, thanks to NGN-funded advisors. He was also eligible for a new heating system under the ECO affordable warmth scheme.

- Stockton pensioner Jean Olivier's home was fitted with £10,000 worth of measures including external wall insulation, a new central heating system, loft insulation and draft proofing.

Ms Olivier said: "As Vice-Chair of the Parkfield and Mill Lane Neighbourhood Management Board, I was aware of the scheme and extremely supportive. I hadn't known that my own home was going to benefit, but my family and I are overjoyed with the results."



Collaborating to alleviate fuel poverty in high-rises

"We've successfully shared and combined our collective expertise and data to make some important recommendations about how all parties can bring affordable, safe warmth to people living in high-rise buildings. Now that the engagement and scoping is in place, I am looking forward to seeing the results."

**Siobhan Barton, Head of Communications,
Northern Power Grid**

Last year we reported on a 'network first' to identify multi-storey buildings in Leeds where residents are in fuel poverty and would benefit from alternative heating sources.

This year, with Northern Power Grid and Leeds City Council, we led a conversation with several Arms Length Management Organisations (ALMOs) to initiate, drive and complete a scoping project to identify high-rise buildings where fuel poverty is most acute.

The results will inform council strategies by helping to prioritise and ensure future heating solutions are tailored to residents' needs. For example, where there are multiple blocks in one location, the aspiration is to develop technologically advanced renewable heating solutions to cut bills, and even generate surplus energy which can be sold back to the grid.

We are working on a similar project with Newcastle City Council which we have been able to fast-track by taking on board the lessons from Leeds.

Fast-tracking fuel poor customers



We've improved our processes over the past 12 months to identify and advise fuel poor customers more speedily.

When customers phone for a gas connection who aren't aware of the Fuel Poor Voucher scheme, we now map their address against known fuel poor areas in the region, and our team carries out an immediate phone assessment to see if they are eligible for a free connection.

If we believe they are eligible, the information is passed to CES, who carry out a full assessment and benefits health check, plus offer help with the installation of gas heating and other energy efficiency measures.

This triage service is a new development for us, and is ensuring

customers who are entitled to support can access it much more quickly. It also ensures customers don't end up paying needlessly for a connection or heating system.

48 The number of customers who have been
fast-tracked
so far under our new process

Hardship fund helps locals wrap up warm

Our hardship fund is allocated on a discretionary basis to help struggling families when all other avenues of funding have been exhausted.

Jointly administered by ourselves and CES, NGN's investment is combined through CES' relationships with the big six energy providers, to assist families hardest hit by fuel poverty.

The money is used to deliver vital energy efficiency improvements in customers' homes, which will reduce household bills and improve quality of life.

In 2012/13, we provided £38,000 of upfront funding, which combined with other forms of financial help created a pot worth £87,000 to deliver the following benefits:

- Existing insulation improved for 332 homes in fuel poor areas
- 855 energy efficiency measures were newly installed including loft, cavity wall and hot water insulation
- An average of £700 was invested per property





Adapting swiftly to a new era of fuel poor funding

Working with CES, we have moved rapidly to update our processes to reflect significant government changes to funding this year which has seen the Carbon Emissions Reduction Target (CERT) and the Community Energy Saving Programme (CESP) replaced with The Energy Company Obligation (ECO).

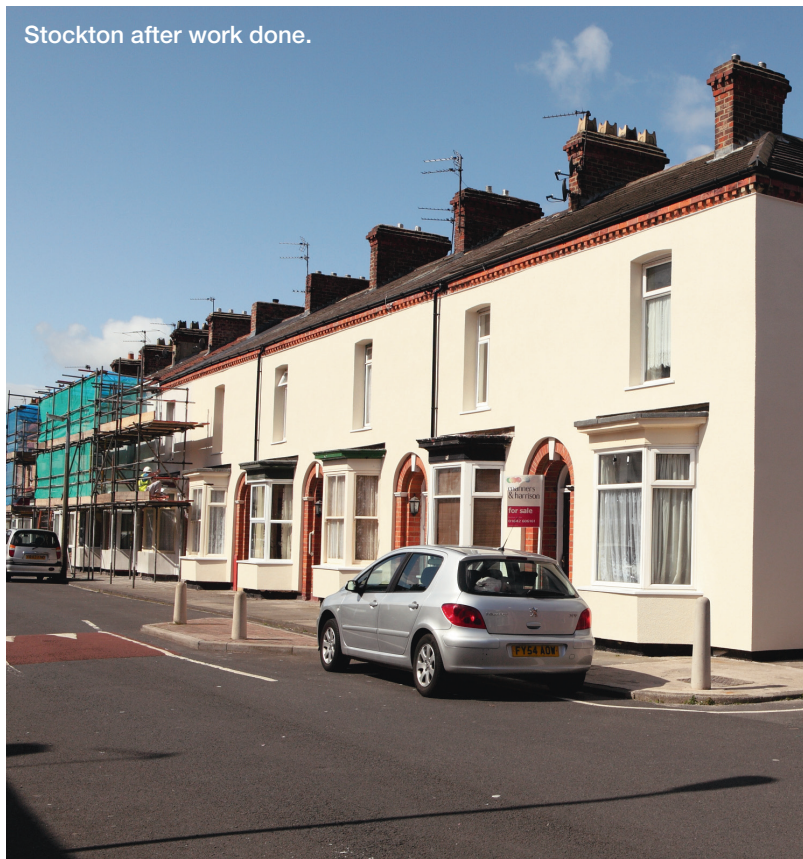
This has brought us major new challenges, as many fuel poor projects involve social housing schemes which can no longer receive funding for heating through utility companies.

We have, however, moved fast to find an alternative, and are now working with a major new ECO funder and have already created and rolled out a new process across our entire geographical patch. Our customers are already able to take advantage of the new ECO funding. Fast work.

Unique relationship provides benefits above and beyond

The unique working relationship that NGN has with CES has facilitated a holistic approach which goes above and beyond the traditional remit to help to make an incredible difference to fuel poor customers. For example, in Stockton and Middlesbrough, we have reached over 2,500 homes in some of the UK's most deprived areas. We have improved the energy efficiency of whole neighbourhoods by improving property thermal values and heating system efficiency, meaning lower bills and greater comfort levels for customers. Proactive assistance to help residents connect to gas through the Fuel Poor Voucher scheme has also been provided as well as funding to install new heating systems for free.

Stockton after work done.



Stockton before work done.

Gas safety

We don't take any chances with our customers' safety

We are committed to providing a safe, secure gas service to our millions of customers with minimal interruptions to supply.

Work-site related injuries to the public and our own employees have fallen by 75% to record lows since our formation in 2005. We work to Occupational Health and Safety Standard OHSAS 18001, and have an integrated health, safety and environment management system to maintain standards.

We have a weekly safety meeting, attended by our Chief Executive and senior leaders, which is used to continually

monitor our performance. Our year-round programme of safety analysis and review includes a monthly publication, digital signage and regular refresher training sessions – to name just a few.

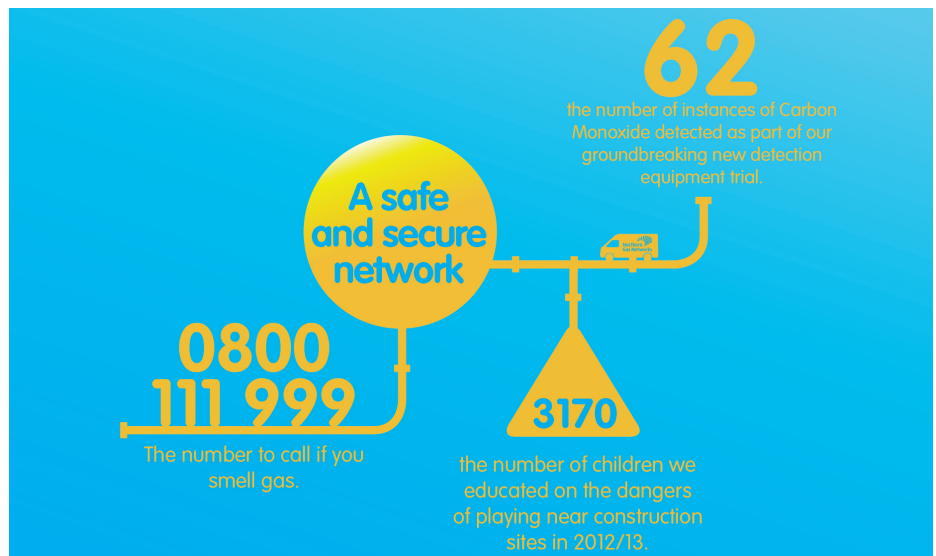
In the past 12 months, we have gone further than ever before in our efforts to protect customers from the risks of Carbon Monoxide (CO).

We have also continued to make improvements to the way we deliver our operational programmes to minimise the risk of injury to the public and employees.

Achievements: at a glance

In 2012/13 we:

- Completed a vital new CO detection pilot – with a commitment to making the technology standard issue for all our engineers
- Launched a new CO home assessment initiative for 'at risk' customers
- Introduced new, safer equipment for our engineers
- Immersed new local engineering contractors in our safety culture
- Launched a new education initiative



Fleet safety

As we update our fleet following the recommendations from our New Vehicle Working Group, we are incorporating a range of new safety features. These include reverse parking alarms, sensors and cameras, passenger airbags, winter tyres and several four-wheel drive vehicles. All non-emergency services vehicles will be equipped with rear wheel drive capability which improves vehicle towing dynamics.

Keeping our employees and the public safe

The safety of our colleagues and the public is an overriding priority, whether we are laying new gas mains or carrying out emergency repairs.

In 2012/13, we continued to make safety our watchword, through established initiatives, and also by introducing new technology and ways of working.

It's your call

Our 'It's Your Call' initiative incentivises employees to report any work-site issues that they believe pose a safety risk – from an overturned barrier to unsafe contractor behaviour. Issues are cascaded to managers, and swift remedial action taken.

Every month, one employee who made a call is selected at random and rewarded with high street vouchers.

Our HS&E performance

In 2012/13

- Two injuries to members of the public – an industry leading performance
- 27 non lost time injuries compared to 34 in 2011/12 – a 21% reduction
- 79 cable strikes compared to 104 in 2011/12 – a 24% reduction
- 48 road traffic collisions compared to 71 in 2011/12 – a 32% reduction

AN INDUSTRY
LEADING
PERFORMANCE

500

The number of calls made to our

'It's Your Call'
reporting line in 2012/13 – each one preventing a potential accident

**Northern
Gas Networks**

Going further against CO

We have over 350 front line engineers, who are first on the scene when a member of the public reports a smell of gas.

These colleagues are equipped with handheld devices to detect concentrations of gas (methane) in the air. These industry standard units, largely unchanged since the 1980s, are not designed to detect CO. Instead, engineers look for visual clues in a property, such as discolouration to a boiler flame, or soot around an appliance.

We wanted to go further in our fight against CO, by working with brand new technology capable of measuring CO levels in the atmosphere, as well as methane levels.

The new units, called Gascoseekers, were used by more than 40 colleagues over 12 months in Bradford and the Pennines area – where we have more than 450,000 customers and where historically there had been a higher than average number of CO incidents.

The technology was deployed every

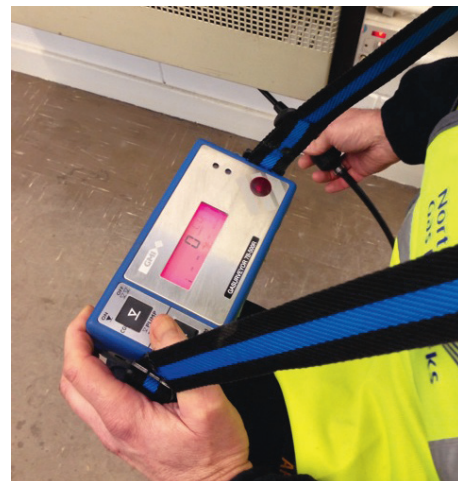
time an engineer was called to a property, even if a customer had not reported a suspicion of CO being present or a CO alarm had not been triggered.

More than 62 instances of CO were detected, with 22 of these instances significantly occurring in properties where customers had no idea they were being exposed to potentially life-threatening levels of CO.

By providing instant accurate readings, the new units allowed engineers to identify the presence of CO, its level of concentration and take swift and appropriate action to protect the customer.

At the end of 2012, we presented the findings at an All-Party Parliamentary Carbon Monoxide conference at the House of Commons, and produced a full report of the trial and its outcomes.

We are making the new Gascoseekers standard issue, rolling them out over the next two years and requiring a £2million investment required. Best practice is being shared with GDNs.



"@BSheermanMP is in APPG CarbonMonoxideGroup extolling virtue of innovation & collaboration plus new app iCOP."

Barry Sheerman MP,
 **@BSheermanMP**

In a recent NGN-led social responsibility workshop, 80% of stakeholders present felt that organisations such as ours had a responsibility to promote CO awareness, and to protect customers from the risks.

62 The number of instances of CO detected during our survey

Survey results

The number of Public Reported Escapes during the trial period	16,216
The number of properties we were called to on suspicion of CO being present	546
The number of additional properties checked for CO	445
The number of properties where CO was detected	62
The number of households who didn't realise they were being exposed to CO	22 lives saved



Helping save lives

The new Gascoseekers proved their life-saving potential on many occasions during the trial. For example:

- A CO alarm going off in a block of flats in Bradford. Using the Gascoseeker, our engineer traced the source to a petrol generator, being used by workmen next door to power their tools. The generator was producing high levels of CO – threatening the lives of everyone in the block. Our engineer made the situation safe.
- An engineer was called to a smell of gas at a home in Halifax. Using the Gascoseeker, he traced the source to a neighbouring property's faulty gas fire. CO was being given off and passing through the chimney breast to other parts of the property. The home was made safe.
- A customer reported that their CO alarm was sounding intermittently. Our engineer was unable to detect any CO in the property using the Gascoseeker, and concluded that the CO alarm's battery had failed. As a precaution, the engineer issued a 'concern for safety' notice, instructing the customer not to use their appliances until they had been inspected by a 'Gas Safe' engineer.

What our engineers said

Our engineers welcomed the new technology, with not a single negative comment.

The new units were judged intuitive to use, and had the advantage of a rechargeable battery – a more reliable, economical and environmentally sound alternative to the previous disposable batteries.

The total time spent on each job rose by around 5-7 minutes, but engineers judged this to be time very well spent – given what was at stake.

"I don't have to worry about battery life. I know it won't run out on me."

"It's reassuring to know the machine is constantly carrying out background checks to keep me and my customers safe."

CO awareness briefings

All available studies indicate that providing free detectors in customers' homes is an overly simplistic response to the CO issue. Customers must also be educated about the risks of CO, so that they have a lifelong awareness, and can keep themselves and their families safe.

In response, our First Call Operatives (FCOs) have recently begun delivering CO awareness home briefings to at-risk customers, including those aged over 60 and those with disabilities.

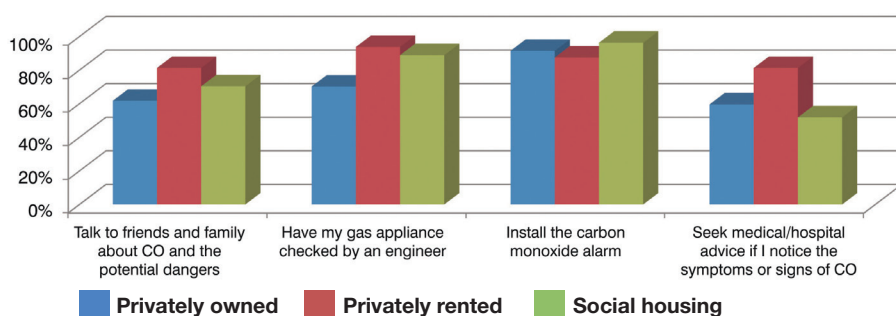
The briefings comprise informal yet structured chats, and are designed to give the customer essential safety

advice, and to find out current levels of CO awareness in the region. Following each briefing, the customer is asked to rate their knowledge of CO and is offered a free CO alarm if they don't already have one.

The approach was trialled in Leeds in March 2013, with more than 90 briefings delivered. A second phase of the pilot, building on the first, began at the end of April for three weeks. The plan is then to roll the scheme out across the whole network. We see the role of our FCOs as one that cares, informs and build awareness among our customers – building essential links with our community.

Outcomes of the survey

Respondents declaring what they will do following the visit



Feedback from our engineers

"Customer was quite elderly, but understood the basics of the briefing and was pleased to receive the CO alarm."

"Customer already aware of CO symptoms but said leaflet helped clarify importance of appliance servicing."



Year 7 pupils with Ian Parkin delivering safety messages.

Taking the CO message into schools

Our new schools education programme (described in the Environment section of this submission) contains a strong CO awareness element.

Through classroom-based workshops, Year 7 pupils find out what CO is, how to recognise the signs of CO poisoning and what to do if they suspect CO is present in their home.

Support materials, taken home by the students, feature the National Gas Emergency number and information on the symptoms of CO poisoning.

Following the trial period, the education programme is now set to be rolled out extensively in 2013/14, developing lifelong awareness about CO among hundreds of young people in the region.

Pupils' understanding of CO was measured on a scale of

1 (low) to 10 (high).

Prior to the workshops,

59%

of students scored **3** or below when asked **"how well do you understand how Carbon Monoxide is created?"**

After the workshop,

83%

of pupils scored **6** or above to the same question.



Artist-in-residence

We have in place an artist-in-residence who will be working with communities on gas industry related artwork to establish good relations well in advance of planned REPEX work.

Year 7 pupil

"I learnt a lot about Carbon Monoxide that I didn't know."

Update: Engaging students with a smartphone game

In last year's DRS submission, we previewed iCOP, an imaginative new smartphone app aimed at 18-24-year-olds living in rented accommodation.

Statistically, this group is among the most at risk of CO poisoning, according to The Carbon Monoxide Report 2010.

The app takes the form of an interactive, film-noir style detective game, highlighting the dangers of CO, allowing players to add the National Gas Emergency number directly to their phones address books and to apply for a free CO alarm.

The app launched successfully in September 2012, receiving more than 1,350 downloads in its first two weeks alone. The response from students and education institutions has been extremely encouraging, and we are now planning a second wave of iCOP activity during university Freshers' Weeks in 2013.

iCOP
NGN GAMES

1,350

The number of downloads of iCOP in first two weeks of availability



Reducing excavations through innovation

Our supply chain has told us we are too slow to adopt new technologies, so in response we have begun working more closely with them to pioneer the use of new technology to improve our overall performance. This includes working on single stop bag technology.

This technology by ACH Systems reduces the amount of bulky equipment required to shut off the flow of gas during repair and replacement works. Latest test results show that the new air bags will reduce the size of excavations and the associated reinstatement costs.

Primary school safety briefings

Our school safety programmes, Play Safe and Crucial Crew (delivered in partnership with the emergency services), continued to warn primary school children about the perils of playing near construction sites. One teacher at a Crucial Crew event held in Leeds in September 2012, remarked: **"Children learn very important safety messages that can save their lives. When seminars are practical like these, children are more likely to understand and remember."**

3,170

The number of children reached by our Play Safe and Crucial Crew activities in 2012/13



Safer working, by design

2012/13 saw us make two innovative new pieces of equipment standard issue for our site engineers:

The safety spade: developed in partnership with our supply chain, this features a smaller blunter head to reduce the risk of injury to the engineer if they encounter an underground cable. It provides an extra safety net to keep our employees safe.

Magnetometer: this piece of equipment casts a magnetic field around a steel pipe, making detection of pipe joints extremely accurate. This allows our engineers to dig more precisely, leading to smaller excavations and reduced time for each job. As a consequence, the safety risk to the public, and to our colleagues, is reduced.

10% **Estimated cost saving,**
per job, when using the magnetometer on emergency repairs

Northern Gas Networks

Rolling out our safety culture

NGN operates an innovative contractor model, in which small local engineering firms are trained to deliver our gas mains replacement programme – providing them with valuable employment opportunities.

Handing contracts to small businesses is an innovative approach, as the gas industry's default position is usually to award mains replacement contracts to a few key national or international players.

The scheme has been running

as a pilot since the start of 2012, and we have big plans to expand it. This will include our safety training programme to ensure local companies are fully conversant with the site safety standards we expect.

The process includes a day-long induction followed by continual on-the-job assessment and review. Overall, this scheme helps ensure that not only will we meet our exacting standards, but also that our investment stays in the area and businesses are given vital, transferable skills.



Reinforcing the basics

To prevent our colleagues from going home injured, we have a year-round programme of safety analysis and review. This includes:

- A weekly health and safety briefing, chaired by our CEO at which incidents are reviewed and messages cascaded throughout the business.
- Regular refresher training sessions for operational colleagues.
- A monthly internal publication called 24/7, focused exclusively on HS&E issues.
- A strong focus on behavioural safety and taking personal responsibility for correct site practices.
- Digital Signage, available at 13 of our sites and depots, is updated daily to reinforce key safety messages.
- A minimum standard for equipment, reviewed at the start of 2013, to ensure everyone on site always has the right tools and protection for the job.
- Weekly customer and safety posters.

**Northern
Gas Networks**

**CUSTOMER EXPERIENCE AND
HEALTH, SAFETY AND ENVIRONMENT
PERFORMANCE WEEK ENDING XX 2012/2013**

■ ■ HOT OFF THE PRESS FROM THIS WEEK'S CEO MEETING ■ ■

It is important that we put clear 'out of office' messages on both email and voicemail, stating who is deputising in our absence and providing their contact details. As a side note Site Managers must update the team on the process of obtaining dust sheets and over shoes so we can work as cleanly as possible at all times.
—Andy Irwin

Fire extinguishers and apparatus are there for our protection - ensure that there is a clear path to access them at all times and remember not to position them behind piles of excavated soil. Please remember that site address is applicable to indoor sites too - look around your office area and ensure it is tidy and clear of hazards.
—Andy Irwin

CUSTOMER COMPLAINTS



REMEMBER...
We always strive for zero complaints but as a minimum must ensure:

- Less than 15 per week
- No more than 900 per year

THE WEEK IN NUMBERS...



Road traffic collisions (RTC)
1



Lost time injury (LTI)
0



Member of the public injury (MOP)
0



Cable strikes
2



Non lost time injury (NLT)
0

**Don't walk past any unsafe act...
STOP and correct it!**

Weekly customer experience and health, safety and environment performance poster.

We are well on our way with RIIO!

RIIO

RIIO 2013 - 2021: Revenue = Incentives + Innovation + Outputs

The RIIO model is designed to encourage energy distribution companies to:

- Play a full role in delivery of a sustainable energy sector
- Deliver value for money network services for all customers

We will not be able to meet these challenges without adopting innovative ways of managing and operating our network. RIIO will introduce new ways of funding the research, development of these initiatives.

RIIO contains a set of outputs defined by Ofgem that we must deliver in return for revenue allowances. RIIO requires us to improve:

- Productivity and efficiency
- The reliability of our network
- The safety of our network and operations
- Customer service
- Connection to our network
- Our environmental performance and the facilitation of new low carbon technologies
- Our delivery of wider social obligations

RIIO brings with it significant challenges. If we underperform we will be penalised, but there will be opportunities for large rewards if we can be the BEST in our field.



The next eight years promises to be a period of great change and innovation as we strive to deliver an even more effective and commercially driven service – maintaining reliable networks, meeting customer expectations, cutting carbon emissions and contributing to the communities that we serve.

Since 2005, Ofgem has named us the most cost-effective of all the eight gas distribution networks, so we know it's going to be tough, but we're looking forward to the challenge.

**Northern
Gas Networks**