



WALES & WEST UTILITIES

Discretionary Reward Scheme 2013-15

Local Action – National Impact

As a responsible business covering a sixth of the UK, we look not only to connect people to gas, but also to go beyond our core business by delivering additional benefits to the communities our infrastructure serves. We are committed to working collaboratively and individually to ensure we deliver outcomes that are important to our stakeholders. These social commitments are built into our business priorities and KPIs against which we monitor their impact weekly and review as an executive team monthly. We are committed to:

- **Safeguarding the needs of our vulnerable customers and communities and supporting the eradication of fuel poverty;**

- ✓ An additional 4,610 gas connections – 30% of our overall domestic customer connections supported with funding – saving these customers over £2m on their annual fuel bill.

- **Reducing our impact on the environment to provide a sustainable greener future for gas;**

- ✓ Carbon savings of 18 tonnes through conversion of these fuel poor customers from more carbon intensive alternatives and almost 3,800 tonnes through reducing the impact of our daily operations.

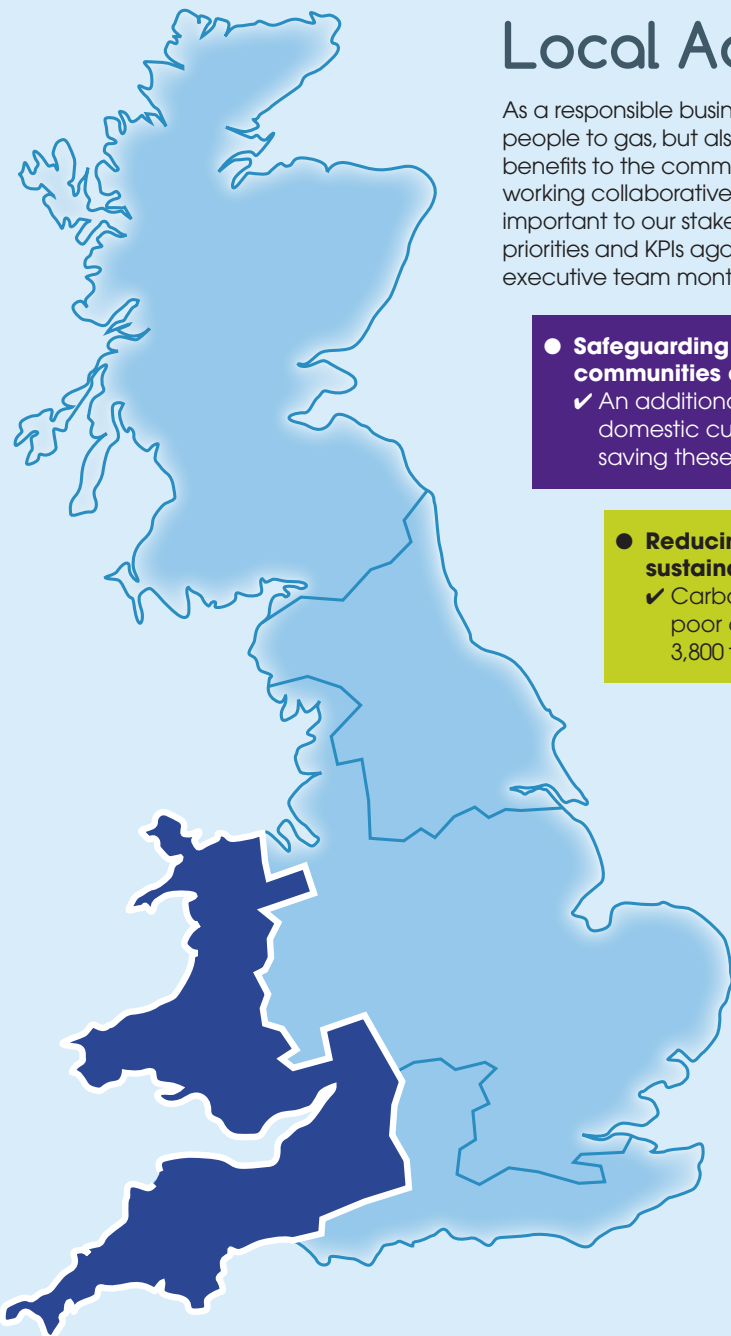
- **Working to ensure no person's life is harmed through accidental carbon monoxide (CO) poisoning;**

- ✓ An increase in CO awareness of 40% through our activities, and
- ✓ More than 14,000 additional complimentary carbon monoxide alarms for vulnerable customers – more than all the other networks combined.

We're the best performing network in terms of fuel poor connections, CO alarms distributed and carbon saved on a per head of consumer basis. For further details of outcomes and benefits, please see reverse cover.

We share our success with other networks and wider partners, and are proud that a number of our programmes have been replicated nationally. The following pages summarise just some of the great work we are doing.

Graham Edwards, Chief Executive



We have an important role to play in eradicating fuel poverty, not only through our Fuel Poor Network Extension Scheme, but also through our work with partners to deliver the best whole house solutions for each property and community. We have developed a strategy in consultation with our stakeholders, which **looks to exceed regulatory targets, delivering as many funded fuel poor connections as we are able over the period.**

Our strategy is based upon the following approach:

- Use of data to identify the proximity of off gas properties in our network
- Proactive partnerships to assess Social Housing stocks and to identify where gas offers a cost effective solution for households
- Canvassing of private households via community events
- Knowledge sharing with customers and organisations to understand the various sources of funding available.

In 2014, we celebrated our 10,000th funded fuel poor connection.

Supporting our vulnerable communities does not end with the provision of a gas connection. Our strategy also:

- Offers customers direction for obtaining independent advice on the options available to them where gas may not be the best option
- Raises awareness of the additional support available after connection, including access to priority services, inclusion on the register of vulnerable customers, and advice about keeping safe and warm including energy saving tips and CO awareness.

► Communicating efficiently and effectively

An additional 4,610 families are no longer living in fuel poverty because of our work to install a gas supply. This has saved them over £2m¹ and over 18 tonnes of carbon each year.

We continue to build a network of contacts who can help us to identify individuals and communities in need of help, and appropriate partners to provide complete solutions tailored to each individual. This approach supported the delivery of 4,200 funded connections in 13/14 and 14/15 including 140 community schemes. This is in excess of the 1,500 connections per year in our RIIO GD1 business plan. **We are well on the way towards our target of 10,800 for the eight-year RIIO period and ahead of the national target, which in 13/14 was under achieved by some of the other networks.**

We have also completed three ARBED Phase 2 schemes for the Welsh Government. An additional 410 households are no longer in fuel poverty as a result of these projects. As these schemes were partly funded by the European Regional Development Fund (ERDF), we do not need to support them with our Fuel Poor voucher.

We have achieved this workload through a proactive engagement programme. Working with our fuel poor partners, we have met a large number of local authorities and housing associations across our region. This has resulted in significant schemes of up to 110 properties being undertaken. We have been pleased to see more of these schemes in the south west working with Yarlington Homes, Selwood Housing, North Devon Housing and Stroud Councils in particular.

We have continued to promote our scheme through conferences aimed at social and private landlords, and care



Tonypandy customer engagement with Owen Smith MP (Shadow Secretary of State for Wales)

agencies. We have also committed resources to the Royal Cornwall, Bath & West, Royal Welsh and National Eisteddfod of Wales shows to raise awareness of our Warm Home Assistance scheme and the priority services register. We are part of the Cardiff Fuel Poor strategy group and have supported the NEA Wales Conference in January running a workshop on options for rural customers.

We also continue to support connection to 'Park Homes'; we have around 200 sites in our area. Of these, 30% already have gas and another 30% are too far from our network for a gas connection to be viable. Of the remaining 40%, we are working to get buy in from the site owners in order to combat challenges faced by these vulnerable customers.

We also visited a number of our MPs and AMs in their constituencies and undertook specific pieces of work for them to look at the off gas properties in their areas, providing a report for use in future engagement. We have taken this opportunity to highlight the number of homes very close to the gas network, often owned by private landlords, which are not connected to mains gas. We have asked for their assistance in raising the profile of our scheme with these landlords. We have also undertaken community events jointly with the MP's or AM's office to explain schemes to residents. A scheme to connect up to 40 homes is progressing in Tonypandy this summer because of this partnership, with funding from a gas



Supporting homeowners with more than just a new gas connection

¹ Average savings per property: £464 and 3.9 tonnes of carbon

supplier secured towards the heating systems.

We have identified further opportunities for gas connections to new mains being laid to connect Distributed Gas (biomethane) plants to our network. Working with British Gas, we wrote to properties along the route of the new mains and offered them a joined up solution for installing not only the gas service but also the internal heating system. This is now part of our Business as Usual process.

We have undertaken a number of follow up visits to customers to thank them for their drive in making community schemes happen and we have taken this opportunity to better understand the impact of gas availability. This has demonstrated additional benefits besides a reduced energy bill, such as pride in the home from external wall installation, and removal of the worry and stress of organising delivery of fuel to the home, along with improved health.

Making every contact count

As part of our vulnerable customer strategy, we have updated guidance and emotional intelligence training for all our customer facing staff. This has not only raised awareness of the scheme, but has also improved the skills of our staff when talking to customers. Our staff are now better informed to make every contact count. They listen and ask the right questions to establish, in a sensitive way, if there is vulnerability at the property and to apply our funding for the fuel poor scheme and referrals to additional services where appropriate. This initiative is part of our **work plan to achieve BS18477 (Inclusive Service Provision) by 2016**.

Our sponsorship strategy supports our aim to make every contact count and is aligned to our social priorities, ensuring our investments are linked to the delivery of our social outputs. One example of how this works in practice is our partnership with Age Cymru to deliver a handy van service. Tailored for the over-50s who are vulnerable, the service provides help with small household repairs, minor adaptations and odd jobs that improve quality of life, giving peace of mind by making homes safer and more secure. **Over 700 vulnerable people benefit from this service each year.**



Phyllis and Winnie sign up for some help from our handy van

▶ Leading and sharing best practice

We identified that information about the estimated 750,000 off gas grid properties in our area was badly co-ordinated, making vulnerable customers eligible for assistance difficult to find for both networks and suppliers. We worked with Welsh Government to undertake a mapping exercise that addressed this. Having demonstrated the effectiveness of our work in supporting decisions around the most appropriate heating system for each property to the Department of Energy and Climate Change (DECC), **we are proud that our approach has been adopted nationally by DECC and the other gas networks.**

Building on our whole house approach to fuel poverty, we have worked with a local energy and renewables SME, Egnida, to deliver a solution for a vulnerable community in Bridgend,

South Wales. The initiative comprised **whole house retrofitting of over 150 circa 1900s poorly insulated stone built properties**. All were within the bottom 10% most deprived Lower Super Output Areas (LSOA), in the income domain of the Indices of Multiple Deprivation – and therefore in one of the most deprived areas in our region.

The customers comprised private homeowners (62%) and private landlords with fuel poor residents (38%). **The whole house approach included a range of options including external wall insulation, loft insulation, new efficient gas boilers, boiler and heating controls and energy efficiency surveys and advice.** Significant cost and carbon savings have been achieved for the residents together with more comfortable, better looking homes. Following the trial, Welsh Government has confirmed its interest in supporting similar future schemes, and other local authorities in Wales have also shown interest and are now investigating how they might replicate the project in their areas.

In 2014, we were the first gas network to introduce an online quotations system. The system highlights our scheme to those who may be eligible during the quotation process prior to any payment. We have shared this approach with the other networks at the national innovation forum.

Acting on a discussion in the Customer Safeguarding Working Group (CSWG), we joined forces with WPD and British Gas to undertake research around vulnerable customers.

The research, carried out by the University of Leicester, will improve the data available to inform decision making prior to our arrival on site. A number of recommendations around training, data capture, partnerships and processes have been identified that will help all members of the CSWG improve their performance.

Supporting our vulnerable customers is never more important than in a crisis. We have led industry engagement to share best practice to ensure we, and the industry and its partners are better placed to maintain supply to critical infrastructure and support our vulnerable customers in the event of a large scale incident. Through consultation with our Critical Friends' Panel, we redrafted incident communications. Having gained a Crystal Mark from the Plain English campaign we were pleased that these communications were adopted as standard by the other Gas Distribution Networks.

▶ Bringing about change nationally

We represent the Gas Distribution Networks on the Fuel Poverty Advisory Group, lead the Off Gas Grid Industry Working Group on behalf of the networks, **and led the data mapping exercise – completed first for Wales in 2011 – has been enhanced and is now being rolled out to map all four million off gas properties nationally by DECC with our support.**

Building on this we have funded our fuel poor partner to purchase energy performance certificate (EPC) data for a number of councils. Working with the Cardiff School of Buildings, we have developed a tool that produces data on energy costs and emissions, and targets measures by LSOA area. This work was required because existing information was 10 years out of date and did not reflect the high number of measures installed in the interim period and the change in behaviours of households.

Engagement with DECC has confirmed that this data will complement that exercise, adding a further layer of information to the national decision making process.

We were pleased to have helped influence the updated Fuel Poverty Strategy for England. Following this and Ofgem's consultation findings, we are currently consulting our stakeholders on an updated strategy aligned to the key objectives of these documents.

Protecting the environment is a key focus for us and we are constantly looking for ways to minimise the environmental impact of our past, present and future activities. We have carried out extensive stakeholder consultation to help shape strategy in all areas of our business. As a large infrastructure provider, we know that delivering a reduction in environmental impact is expected. We are committed to continual improvement, embedding environmental considerations into our day-to-day management, going above and beyond stakeholder expectations to reduce the impact of our operations and associated emissions.

Our unique safety and environmental leadership framework was recently rated as “exemplary” by the Health & Safety Executive. It supports ISO14001 which sets out best practice



for an environmental management system and puts carbon reduction at the centre of what we do. **Its success has resulted in no adverse findings for the three year cycle (2013-15 inclusive) – a utility first.** By introducing and developing industry-wide best practices, we have significantly reduced our environmental impact year on year. Our work in completing the world’s first climate change driven remediation project is testament to our ongoing commitment in this

crucial area of work, externally recognised by Business in the Community Wales who awarded us Environmental Company of the Year in the first year of RIIO- GD1.

► Developing innovative solutions to reduce our carbon footprint as part of our daily operations

We are on target to exceed our commitment to reduce carbon dioxide emissions by 16% over the current price control period. In order to achieve this, we continue to seek less carbon intensive, innovative alternatives to our work.

Delivering low carbon solutions for the sector

Use of vacuum excavation trucks has contributed to a reduction in waste to landfill and associated import of virgin aggregates equivalent to over 600 tCO₂e a year in our network. We anticipate that the implementation of innovation funded projects from other GDNs, such as cisbot and TORS, will compound this saving. However, much of our network is situated in the footpath where core and vac isn’t viable. To compensate for this **we self-funded the development of the UKs first pipe coil trailer capable of dispensing 500m coils of pipe; a major contributing factor to our 95% insertion rate, the highest of all the networks.** The trailers continue to save us over 1,000 tCO₂e each year and have now been adopted by all networks.

We are also pleased that our work with ABRIOX to develop remotely operated loggers has been adopted by SGN. They exhibit a double carbon saving – with no need to drive to them and providing better pressure control of the network (reducing carbon emissions). We did not take the development of ABRIOX loggers further than the scoping and feasibility stage as our existing products (Technology) are still working effectively.

Gasholder sludge – every time a gasholder is demolished, hazardous sludge from the base of the tank has to be collected and sent off-site for disposal or to an incineration

facility, due to the significant concentration of contaminants. This traditional approach is disproportionately expensive and carbon intensive.

Our approach re-uses treated sludge as backfill avoiding disposal/incineration and reducing the required volume of imported aggregate backfill. We use Contaminated Land: Applications in Real Environments (CL:AIRE)’s “Definition of Waste: Development Industry Code of Practice” to verify the treated sludge is not waste. **This delivers a c55% carbon reduction along with a 28% reduction in cost compared to that of the other networks.** We shared our approach with other networks to compound the benefits to both the consumer and the environment and to help deliver a more sustainable energy sector.



Using brown to go green – Britain’s first “poo bus”

Powering the ‘poo bus’

Our 800-strong commercial fleet and a number of heavy goods vehicles have been replaced with Euro V compliant alternatives resulting in a reduction of around 400 tCO₂e a year. We are now actively looking at renewable energy to power our fleet.

Outside our own fleet, we have worked with Wessex Water to provide the first raw sewage treatment works with an **unsubsidised biomethane connection. The connection paved the way for Britain’s first “poo bus,”** powered by human waste as well as food waste, to shuttle passengers between the city of Bath and Bristol Airport.

One tank is sufficient for a 300-kilometre (186-mile) journey, which is about five people’s annual waste, a carbon saving of 390kg per tank against conventional buses and 31 tonnes each year on this route.

Managing shrinkage, leakage and own gas use

Although leakage has reduced in recent years, through mains replacement and careful pressure management, methane – present in natural gas – is 21 times more potent than carbon dioxide as a greenhouse gas. In order to mitigate this risk we have adapted our working practices and optimised our investment modelling to limit our emissions:

- We prioritise live insertion; purging the annulus as opposed to the whole length of pipe ensures less gas is released to the environment. 58,000m³ CO₂e emissions saved over the first two years of RIIO².
- Our recently developed investment model includes environmental criticality modelling in all our financial assessments. Oystermouth Road, Swansea, and Whiteladies Road, Bristol, are both replacement projects that were prioritised as a direct result of their environmental impact. The model gained approval for £1.6m of investment and has resulted in carbon abated at approximately £3/tonne.
- Similarly, our risk-based repair model prioritises those escapes with the highest carbon impact. We operate to a higher standard than the other networks, we resolve in two days as opposed to seven and have increased our performance to 90% in 2014/15.
- In order to verify and measure carbon benefits realised, we have introduced smart technology in the form of a pressure-testing app for our employees post replacement or repair.

² Assumes that purge gas avoided via live insertion is the volume of the inserted pipe. Carbon intensity of natural gas is 21 times that of carbon dioxide. Assumes that annual decommissioning length of 350km of 4” and 100km of 6”.

Looking for continual improvement, we have commissioned a project to explore proactive and cost effective techniques that exist internationally in other utility networks. This search will include water industry practices and will assess their suitability for leakage identification and repair. There may be strategies and technologies that are new to the gas industry that offer the opportunity to revise existing methods, further reduce leakage and improve environmental performance.

► Standards, practices and reporting

World first projects which benefit the brownfield sector

We voluntarily report to DEFRA around the risk linked to future climate change forecast variables like the other networks. However, we have built on this reporting to develop a globally innovative approach that incorporates UK Government Climate Projections (UKCP09) into contaminated land assessment, remediation and regeneration activities.

“ *It's inspiring to see a company grasping the challenge of climate adaptation so firmly, leading the sector in applying new techniques.* **”**

Maggie Charnley, DEFRA

In 2013, we delivered the world's first climate change driven remediation project through qualitative assessment at Wem, Shropshire. **We have since delivered another world first – a quantitative assessment to demonstrate the impact of future climate change** on contaminated land. We use output from this assessment as a tool to support remedial intervention, whether climate change is an exclusive driver or one of a combination of drivers. We successfully applied this emerging area of environmental impact assessment to the remediation of a disused former gas works site in Briton Ferry, South Wales by modelling the effects of increased precipitation on key contaminant pathways.

We have shared our approach with the other networks and are supporting them to incorporate this into their remediation programmes.

We have worked with Landmark, a major data-mapping provider, to develop a range of local-scale climate impact maps, based upon the UKCP09 forecasts. We have



Sharing and supporting best practice to allow the other networks to implement our approach

incorporated the successful application of climate impacts into a modelling and mapping tool that supports the management of assets across the UK. This new product will be marketed to all reporting authorities who wish to fully understand their climate change risks and justify investment in appropriate adaptation.

Developing new frameworks

We developed a report with CL:AIRE to detail the standards and best practice for the management of contaminated land sites. Originally aimed at gas distribution for management of contaminated land sites, the report looks to the future for the development of new technologies to deliver low-risk sustainable outcomes for the treatment of difficult and hazardous substances. We also worked with CL:AIRE to publish a supplementary report, applicable to our supply chain, universities, local authorities, land asset managers and private residential or commercial property owners who own 75% of the UK's gas works and other former coal carbonising sites. **We are helping the wider industry understand the problem, the risk and what can be done about it.**

► The future of heat – achieving carbon reduction targets

We have led the way, and will continue to do so, in the research, development and implementation of low-carbon reliable solutions for the industry.

Chris Clarke, Director of Asset Management, is current President of the Institution of Gas Engineers and Managers (IGEM) and has chosen “The future of gas and innovation” as the theme for his Presidency. As chair of the Gas Network Collaboration Forum, Chris follows this through into our work with the other networks to ensure we continue to focus collaboratively on delivering a low carbon future.

We have developed a “bottom up” carbon model which determines both the cost and the carbon benefits of different heating systems, now, in 2030 and 2050. This model has been designed to assess heat pumps, heat networks, gas appliances and various insulation options. The model can be applied to different property types and can provide a street by street analysis to determine the best option for each consumer.

The model has already been used to assist Bridgend Local Authority in their Government supported heat network pilot. The model assists with determining which areas may benefit from a heat network and what other technology may be feasible.

We commissioned a study on behalf of all networks into internal corrosion of metal mains. **The study resulted in an HSE class exemption to the oxygen content of gas. An 83% increase in connected biomethane sites was seen nationally as a result.** Our investment in this project enabled full scale Biomethane onto the National Gas Distribution Network and has a massive payback in carbon terms; 10% Biomethane represents a reduction of 3million tCO₂e a year nationally, with an abatement value of £162m a year.

In order to address the uncertainty around acceptable hydrogen mix from both technical and safety perspectives, we have completed a literature search that builds on a report by SGN, and have undertaken a feasibility risk and impact assessment to support the use of this technology. We have demonstrated that the network could operate with a 20% hydrogen mix and have documented risk and impact assessments for use by the other networks.

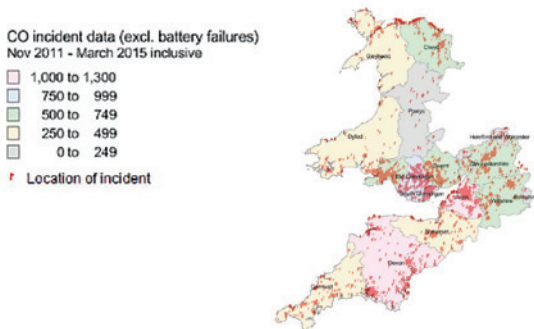
We have an important role to play in the future of these technologies and we're committed to working collectively and individually to enable a low-carbon greener future.



Our “Say NO to CO” campaign which looks to eradicate accidental carbon monoxide (CO) poisoning has won a number of accolades including 2014 Business in the Community Wales Responsible Business Building Stronger Communities Award. This was reaccredited in 2015 for its continued impact.



Following feedback from our stakeholders, we have taken a leading role in delivering the CO campaign nationally. By using the quality data our emergency engineers collect onsite to map incidents geographically, we produce a “hotspot” analysis. **In 2011, two years before we worked with the Gas Safe Register and other networks to produce the Gas Map Tool, we were the first Gas Distribution Network using our data proactively to target our initiatives to those people in areas most at risk.**



Standard key performance indicators measure the success, quality and reach of our campaigns. We are proud to be the leading network against a number of these indicators, having provided more CO alarms to vulnerable customers than the other GDNs combined.



Making every contact count – we use emergency visits to raise awareness of CO risks

- 40%** increase in awareness as a result of our activities
- 88%** commit to taking at least one form of further action
- 14,030** additional CO alarms within households and vulnerable communities

► Making a difference through education and awareness

Our approach varies depending on the stakeholders with whom we are engaging. We leverage value from existing partnerships and sponsorship packages to ensure we achieve most value from every pound spent.

Our partnerships with safety centres DangerPoint and Lifeskills in Bristol and North Wales now incorporate CO awareness. The 15,000 pupils who attend these centres each year now receive CO safety messages in addition to smell gas awareness.

We continue to target major shows with our interactive CO learning environment developed with science centre Techniquest. With a population of ~3 million and a footfall of over 241,000 we are able to engage with 8% of the Welsh population at the Royal Welsh Show alone. We don't ignore the smaller rural communities and take our stand to the Royal Cornish Show – a county where 19% of the permanent population lives in fuel poverty and 22% are elderly. Given our semi-rural population and the 3-point increase in awareness we have seen year on year, this approach continues to be a success. Recognising that CO is not only a danger in buildings, we have gone above and beyond our core business using these events as opportunities to raise awareness with caravanners and campers through safety advertisements on admission tickets and camping and parking passes.

Internal staff engagement in events has resulted in a “pull” culture where staff outside the project team seek to support the business in ensuring the social benefits of projects are realised. This is a significant shift in behaviour from the “push” culture required initially. This helps us go beyond core business objectives without having to fund additional resources.

In another example of employee engagement, we collaborated with the Vale Council, Fire and Rescue Services and South Wales Police to target a vulnerable community in South Wales. **Our dedicated employee volunteers gained access to 500 properties over four days, providing each with home safety advice and installing a CO alarm.** For this project, the alarms were kindly donated by Council for Gas Detection and Environmental Monitoring (CoGDDEM) members



Partnering to raise awareness in a vulnerable community

and are in addition to those reported above. Environmental health graduates are surveying the properties pre and post intervention to track the impact.

Besides our efforts at the shows, we remind older people how to look out for signs of CO through a partnership with Age Cymru. We are using our sponsorship of the handy van service (detailed on p2) to raise awareness of CO with the 700 vulnerable people a year who benefit from this service, providing important safety advice and audible CO alarms to customers who don't already have one.

We are inspired by the passion and commitment of the charities who campaign in this area. Their knowledge is invaluable in supporting our campaigns. In return, we have supported them with more than funding: we volunteer our time to support the running of CO-Gas Safety's School Poster Competition annual national prize giving on behalf of all the networks. To recognise our support, **two of our team members were awarded friends of the charity status in 2015. Receiving two of only six awards presented, we were very honoured.**

► Driving improvement through innovation

The way we collaborate with the arts is recognised as unique among the gas industry and as best practice within business.

Our partnership with Theatr Na nÓg involved WWU emergency engineers and local schoolchildren to shape, produce and take part in "A Breath of Fresh Air." The play focuses on the dangers of CO poisoning, toured primary schools across our area in 2013 and 2014 and raised awareness among pupils, their grandparents and carers.

We have also worked in partnership with the Royal Welsh College of Music and Drama to develop an outreach programme to deliver gas and CO safety messaging to 13,000 participants a year, including 10,000 children from the most disadvantaged communities. In 2014, our partnership evolved to raise awareness of the dangers of CO among teenagers in CO "hotspot" areas. Through this project, Theatre Design graduates created and toured a giant puppet, designed to

represent the warning signs of this deadly gas, to secondary schools and colleges, engaging with 1,200 young people.

The range, scale and demonstrable impact of this unique approach has resulted in our winning two coveted Arts & Business Cymru awards: Arts Business & Young People, and Business of the Year 2013 and in 2015, a Wales Quality & Innovation Award.

The puppet has also appeared at national CO conferences in London and the LCNi conference in Aberdeen, at which we were the keynote speaker for "CO – Customer Impacts" on behalf of the gas distribution networks, as an example of best practice receiving praise from the industry and beyond.

Commercially, we support product innovation and are working to bring to market an intelligent CO alarm linked to smartphones. We are looking to build on this work by using our links to Environmental Health to incorporate a study of the impacts of any low-level CO exposure throughout the trial. We will share these findings and hope this will shape future campaigns in relation to raising awareness of low-level exposure over time.

► Lobbying for change – taking an industry lead in a broader response



We sit on the All Fuels Action Forum on behalf of all gas distribution networks and our work has enabled us to support new legislation and influence national policy formation. Mark Oliver, Director of Business Services, won 2014 Leader of the Year for his work in this area.

In 2013, we held a national conference on CO safety in partnership with IGEM. The conference, Ignorance Can be Fatal, included shippers, suppliers and representatives from other fuel groups. It was the first event of its kind opening the door to the formation of new partnerships for all groups and was cited by Barry Sheerman, MP and Co-Chair of the All-Party Parliamentary Carbon Monoxide group, as an "invaluable resource."

@wwutilities Excellent partnership between Gas Industry Parliamentarians and campaigners #carbonmonoxide

Barry Sheerman, MP, Co-Chair of APPCO

Of the 212 delegates in attendance, **97% said the conference met or exceeded expectations.** In response, the other gas networks worked with us on the subsequent conference, Knowledge is Power, which received similar praise in 2014.

Following the event, we led the work with independent facilitator CauseAction to bring together a smaller working group and agree an outline for a consistent campaign approach. The work was scoped with the All Fuels Forum, attended by all gas distribution, supply and other fuels, and funded solely by us. The pre work for this session, which highlighted landlords as a priority target group, fed into our successful collaborative effort in lobbying for alarms to become compulsory in the private rented sector, announced as an amendment to the Energy Act effective as of October 2015.

The outputs were fed into the All Fuels Action Forum and a new sub group has been established to develop this approach for the UK and deliver a consistent campaign message nationally across all fuel sources. We are providing project management and admin support and continue to engage proactively with gas suppliers to support their efforts to raise awareness of CO poisoning – a shared social responsibility.



“The terrifying carbon monoxide character gave a unique impact – moving around the conference exhibition and refreshment area was an inspired way of conveying a chilling message. It gave a real feel for how effective it would be when taken in to schools to warn of CO and was a hit with the Shadow Energy Minister Jonathan Reynolds MP.”

ENA's Director of Corporate Services, Alison Heath

Outcomes and benefits – measured and monitored company wide

	Issue	Solution/Action	Benefit
Social outputs	Affordability of connecting to gas network	Assisted funding vouchers issued to 4,200 properties 410 connected under ARBED	<ul style="list-style-type: none"> ✓ 4,610 families helped out of fuel poverty ✓ Over £2m saving on energy bills each year
	More demand than forecast for assisted funding	Shareholder commitment to fund vouchers beyond allowed means	✓ An additional 1,200 fuel poor connections funded above our business plan target with a value of £3.3m
	Need to make every contact count to identify and support customer vulnerability	Built awareness into existing partnership strategy and presence at county shows	<ul style="list-style-type: none"> ✓ Cornish residents where 19% are fuel poor and 22% are elderly received priority service messaging through presence at shows ✓ 700 elderly people benefit from Handy Van service
	Information around off gas grid properties poorly co-ordinated	Deliver successful mapping initiative for 750,000 properties in our area – prove success and extend across UK	✓ UK's four million off gas grid properties are now mapped – better targeting of support nationally on a best solution per property basis
Environmental outputs	Need to reduce and offset our business carbon footprint	Invest in innovative solutions: pipe coil trailer, treatment and re-use of gasholder sludge, and new vehicle technologies	<ul style="list-style-type: none"> ✓ 1,000tCO₂e saved in our network each year by use of pipe trailer. All networks now using or trialling this with 56 tonnes saved annually for each additional trailer used. Cost of £180k to develop – not through innovation funding ✓ 55% carbon reduction in gasholder sludge treatment ✓ Britain's first poo bus – carbon saving of 31 tonnes each year over conventional bus
	Methane is 21 times more potent than CO ₂	Manage own use gas and reduce leakage	<ul style="list-style-type: none"> ✓ 95% insertion rate – highest of all networks ✓ £1.6m invested in projects with highest carbon benefit
	Assess and address risk posed by climate change	Scope and deliver world first projects – climate change driven remediation of contaminated land through qualitative and then quantitative assessment	✓ Tested and proved emerging area of environment impact assessment – helping the gas industry, brownfield sector and environmental regulators to embrace an even more sustainable future
	Achieve a sustainable low carbon future for heat	Convert properties to gas from more carbon intensive fuels (4,610 over this period) Developed 'bottom up' carbon model to assess use of different heating systems Research into acceptable oxygen content of biomethane and hydrogen mix in the network	<ul style="list-style-type: none"> ✓ Over 18 tonnes of carbon saved each year through conversion of properties from more carbon intensive solutions to gas ✓ Street by street analysis identifying best option for each customer ✓ WWU led HSE class exemption for all networks resulting in an 83% increase in biomethane connections ✓ Demonstrated 20% hydrogen mix is acceptable allowing more hydrogen entry into network
Carbon monoxide safety outputs	Only 12% of properties equipped with a CO alarm	Provide alarms to vulnerable customers where possible	<ul style="list-style-type: none"> ✓ 14,030 alarms distributed at cost of over £185k ✓ Distributed 500 alarms donated by CoGDDEM in partnership with fire and rescue and police ✓ Each alarm represents a one on one interaction discussing CO safety
	Lack of insight into areas most at risk of CO	'Hotspots' mapped for WWU geography Worked with Gas Safe Register to produce gas map tool	✓ Proactive targeting of interventions to areas at most risk since 2011 for WWU and 2013 for other networks
	Need to make every contact count to raise awareness of CO	Built CO awareness into existing partnership strategy and presence at county shows	<ul style="list-style-type: none"> ✓ 15,000 pupils attended DangerPoint and Lifeskills centres ✓ 700 elderly people who benefit from Handy Van service are now also versed in CO awareness ✓ CO message incorporated into Bath & West, Royal Cornwall and Royal Welsh shows. 19% of Cornish population and 8% of Welsh population received this important safety message
	Lack of awareness around dangers of CO – apathy to make necessary changes	Lead solutions to raise awareness and inspire behaviour change; represent all networks on All Fuels Forum to influence policy and legislation. Deliver first national CO conference 2013, follow up conference in 2014, use inventive arts based messaging	<ul style="list-style-type: none"> ✓ 40% increase in CO awareness, with 88% committed to take action ✓ Led the national collaboration – sharing learning between all first responders, harnessing the 'power of ten' (network and supply) to deliver a consistent national campaign approach ✓ 1,200 secondary school pupils and over 8,000 primary school pupils engaged through mediums of puppetry and theatre ✓ Significant presence on All Fuels Forum influencing policy decisions and involving energy suppliers