**CO-Gas Safety’s response to the Draft Determinations RII0-3**

**About CO-Gas Safety**

CO-Gas Safety is an independent registered charity, launched at the House of Commons on the 25th January 1995. We marked our 30th anniversary on 25th January 2025.

The charity is committed to reducing deaths and injuries from unintentional carbon monoxide (CO) poisoning and other gas dangers. We also try to help survivors/victims and families.

We’ve collected, collated and published deaths from unintentional CO poisoning from all carbon-based fuels that we could find from 01.09.1995 and ongoing. Our data is far from exhaustive as we know we miss many deaths, but our research into the deaths we have finds common denominators to prevent future deaths and also injuries. Please see our data <https://www.co-gassafety.co.uk/data/> Some survivors tell us they wish they had died their injuries are so severe.

We made a submission dated 28.02.25 with regard to RIIO-3 and included our submission made with regard to RIIO-2, because we considered that still to be highly relevant. We are happy for this to be made public as also all our responses made so far with regard to RIIO-2 and RIIO-3.

**Ofgem**

**Specific statutory duties**

1. To protect the interests of consumers with regard to the use of gas conveyed through pipes which includes raising awareness of carbon monoxide.
2. Ofgem also has a specific duty with regard to vulnerable customers or customers in vulnerable situations.

Ofgem has agreed that all customers, however wealthy or adequate, are vulnerable to CO.

**Draft Determinations RIIO-3**

Despite Ofgem’s statutory duties, we found no mention at all of carbon monoxide or testing for it in the RIIO-3 Draft Determinations Overview Document except perhaps impliedly in a general way. Did we miss something? If so, please inform us. If not, could Ofgem please explain these omissions to us?

CO-Gas Safety also sent (by email 23.04.25 at 13.31 but not yet acknowledged by Ofgem) a letter dated 03.02.25 from Sir Stephen Timms MP, Minister for the HSE in which he stated that testing for CO is a safety issue. We apologise for not including this in our submission, but first, we needed to seek permission from the MP, Roz Savage MP, who kindly obtained this letter for us.

Some years ago, Rebecca Pickett, now Head of Policy at Ofgem, informed me, Stephanie Trotter, on the telephone that if HSE stated that an issue was that of safety, Ofgem then has a duty to take action. We ask for details of the action Ofgem is taking.

**General Points**

CO-Gas Safety found the overview document concentrated on financial matters and was difficult for us to fully understand. We have some queries.

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‘Supporting GDNs' in prioritising the most vulnerable consumers with funding

to support projects worth £165m, alongside additional vulnerability funding

included in companies' upfront allowances.’

1. We are very grateful to Ofgem for its allowance for RIIO 3 of £165 million but

could Ofgem please explain why the sum is reduced from £171 million in RIIO-2, especially considering inflation?

1. How much is allocated to raising awareness of CO?
2. How much is allocated to testing for carbon monoxide?

From our work of over 30 years, we think exposure to CO and other products of combustion are extremely serious health concerns for the population of the UK.

Furthermore, as Ofgem has provided funds to the GDNs which are now undertaking some testing for CO, we consider the details about how the GDNs are using those funds to be vital to the success of providing these funds.

We consider that Ofgem, as the regulator and provider of these public funds, should be setting out rules on how this must be done by the GDNs, which are part of the gas industry, so have an obvious conflict of interest.

**Summary of the vital issues that we could not find referred to in the draft determination overview document.**

1. **Testing for carbon monoxide (CO)**
2. We strongly suspect the GDNs use visual signs to make the decision about

whether or not to test for CO. This is surely illogical for a deadly gas that cannot be sensed using human senses and that, at less than 2% in the air, can kill in under three minutes?

1. In our over 30 years of experience of talking to survivors, taking the decision to test for CO or not, based on whether the person is taken to hospital or is unconscious etc. is also illogical. We have come across people taken to hospital who make a full recovery (but also many who are not), who deteriorate seriously weeks, months or even years after exposure. In other words, whether or not someone is taken to hospital is no reliable measure of how seriously affected and injured the person exposed to CO finally ends up.
2. Unless and until there is testing for CO, and identification of the source of the CO, nobody knows for certain whether or not there is continuing CO. A monitor for CO accurate at low levels well below the EN 50291 levels for alarms (e.g. the monitor for CO made by Lascar) left in the home, at least temporarily, would be helpful with regard to this danger.

Please note that even very low levels of CO have been found to cause brain damage in older adults. Please see <https://www.coresearchtrust.org/media-information/three-year-project-looking-at-risk-of-co-to-older-people-reveals-concerning-findings>

Please note the EN 50291 alarm levels and compare with WHO & AQ guidelines (see note under 5 below).

|  |  |
| --- | --- |
| **ppm CO** | **EN50291** |
| 30 | NO ALARM - tested for 120 mins |
| 45 | - |
| 50 | within 60-90 minutes |
| 70 | - |
| 100 | within 10-40 minutes |
| 150 | - |
| 300 | before 3 minutes |
| 350 | - |
| 400 | - |

1. One of the benefits of testing for CO is the provision of Parts Per Million of CO to the person exposed in writing/digitally for their medics makes diagnosis simpler. PPM of CO also saves the distress to the patient of disbelief and irrelevant tests, as well as saving costs for the NHS.
2. Recent reports from CLASP and the EU have clearly stated how dangerous gas cookers are and should be banned or at least phased out.

*Please see* [*https://epha.org/wp-content/uploads/2024/10/epha\_cleancooking\_pressrelease\_final.pdf*](https://epha.org/wp-content/uploads/2024/10/epha_cleancooking_pressrelease_final.pdf) *and* [*https://www.clasp.ngo/wp-content/uploads/2023/01/Gas-Report.pdf*](https://www.clasp.ngo/wp-content/uploads/2023/01/Gas-Report.pdf) *and*

[*https://www.globalactionplan.org.uk/files/policy\_pathway\_for\_the\_transition\_to\_electric\_cooking\_in\_the\_uk.pdf*](https://www.globalactionplan.org.uk/files/policy_pathway_for_the_transition_to_electric_cooking_in_the_uk.pdf)

We also have some data from a test undertaken by Cadent’s Wayne Merry at Cadent’s ‘model kitchen’ of the CO and CO2 from a gas cooker with the window open and again with the window closed. We can provide the full details but here are the important extracts.

Highest carbon monoxide (CO)

With the window open was 49 PPM after 6 minutes.

With the window closed the highest CO was 203 PPM after 30 minutes.

The highest carbon dioxide (CO2) was also interesting.

With the window open 9218 PPM after 6 minutes.

With the window closed the highest CO2 was 32327 PPM after 11 minutes.

*Note WHO guidelines are 7 (mg/mg3) which are 5.68 PPM for 24 hours.*

*AQG level is 4 (mg.mg3) which are 3.5 PPM over 24 hours.*

[*https://iris.who.int/bitstream/handle/10665/345329/9789240034228-eng.pdf*](https://iris.who.int/bitstream/handle/10665/345329/9789240034228-eng.pdf) *page 134.*

*Converter used* [*https://www.lenntech.com/calculators/ppm/converter-parts-per-million.htm*](https://www.lenntech.com/calculators/ppm/converter-parts-per-million.htm)

**Having been informed of these facts, how can HSE and Ofgem fail to take specific and detailed action?**

1. It is almost impossible even for someone who can afford to pay for a test for CO to obtain one because only 1.4% of Registered Gas Safe Engineers are qualified under CMDDA1, which allows them to investigate for CO. The GDNs do now seem to us to have many of these qualified engineers who are willing to undertake these investigations.

Despite our pleas for British Gas to supply a service of investigation of CO, including CEO, Chris O’Shea, BG does not offer this. Therefore, how does even a wealthy person obtain a test to find out if there is CO in their home and if so whether or not it’s the gas cooker, the gas fire or the gas boiler etc. that is emitting the CO?

1. The problem is at least doubled for tenants who often do not wish to risk becoming homeless by ‘making a fuss’ about CO about which they know little or nothing.
2. Technology has made testing for CO easier and cheaper because four rooms can now be tested at the same time. The research undertaken by NGN, although way back in 2011-12, showed that testing for CO would only add 5-7 minutes onto a visit and was unanimously supported by their engineers ‘as time well spent given what was at stake’. Please see <https://www.northerngasnetworks.co.uk/wp-content/uploads/2017/04/Giving-carbon-monoxide-nowhere-to-hide.pdf>
3. Why is there no mandatory duty on the gas emergency service to test for CO at least whenever practicable? Could Ofgem please work with HSE to achieve this?
4. Another benefit of testing for CO is that data can be collected, compiled and published. But the only data we have managed to access which was from NGN\*, does not include the Parts Per Million of CO when CO has been found.

*\**[*https://northerngasopendataportal.co.uk/*](https://northerngasopendataportal.co.uk/) *It is not easy to access the data from this link and we have a copy which we can send Ofgem if Ofgem requests us.*

1. Another benefit of testing for CO is that the data, correctly collected, can illuminate the highest dangers and thereby act as research leading to public warnings and action to prevent poisoning by CO etc. in the future.
2. **The GDNs and the duty on Ofgem to raise awareness of CO**
3. The GDNs have been doing a good job raising awareness in schools but sadly, have not continued CO-Gas Safety’s example of having a prize giving event at the Houses of Parliament, which itself raised awareness in the legislature and publicity about prevention of death and injury from CO, in the country.
4. Despite a great deal of work by CO-Gas Safety in coming up with an idea for a warning film to encourage regular servicing etc. the GDNs showed no enthusiasm for our suggested warning film or for coming up with an idea of their own. Yet a film would prevent future poisoning by encouraging regular servicing and chimney/flue checking and cleaning.
5. Ofgem is providing huge sums to the GDNs to spend on raising awareness and on helping vulnerable customers, but the GDNs do have a conflict of interest, so surely Ofgem has a duty to regulate the use of these public funds?
6. We could find no mention of funding to provide an independent body to replace the work of independent registered charity CO-Gas Safety. This voluntary organisation was launched at the House of Commons in 1995 and has managed on a shoestring to compile known deaths from unintentional CO since 01.09.1995 (and ongoing).

CO-Gas Safety also provides the only specific victim/survivor/family support and lobbies for safety improvements, relying on our data and case studies of both fatal and non-fatal incidents of exposure to CO written, with our help by the victim/survivor/family concerned and only published with their written prior permission.

CO-Gas Safety cannot continue forever. I am the main worker and was so at the launch at the House of Commons in 1995 when aged 45. CO-Gas Safety has always worked as a catalyst to lead by example and to persuade industry and government to follow our experience and research on prevention.

CORT would like to take over our work but naturally needs funding to do so. We would like to provide our data (and work so far) to a body that is properly set up and funded to do what we have spent three decades doing as volunteers. We have no objection to providing our data free for all to learn from. However, it is worth noting that this data over 30 years is probably worth at least £7.5 million (£250,000 x 30). We have had help from a professional statistician three times.

1. We have already stated above that one of the benefits of testing for CO is the provision of Parts Per Million of CO to the person exposed or could have been exposed thereby making diagnosis simpler and saving distress of disbelief and irrelevant, unnecessary tests to the patient and saving costs for the NHS.
2. Materials for the Citizens Advice Bureaus - Representatives of the CAB are recognised as helping those who may be being exposed to CO. However, such representatives do contact us and have told us that they do not know much about CO at all. Some have seen the very basic material issued by the GDNs, but not all. There seems to be no further material. We have worked hard to try to raise this and offered our material, (one minute film, animation and leaflet) but nobody seems to want to grasp this issue or use our materials.Surely Ofgem should be taking action on this?

These matters may seem very detailed to Ofgem but as all politicians understand, details are important. Governments have fallen as a result of ignoring the importance of detail, e.g. Margaret Thatcher with regard to the poll tax. Ofgem also has statutory duties.

**Answers to questions which we think are relevant to CO-Gas Safety and to which we may be able to make a contribution.**

**OVQ1 We would welcome any views on the enduring role of the ISGs during RIIO-3 and for future price controls?**

Ofgem correctly takes notice of Independent Stakeholder Groups but in our experience of attending these: -

1. Most people, including those on these groups still do not know much, if anything, about carbon monoxide (CO).
2. Therefore, our assertion that it is almost impossible to obtain a test of this deadly gas that cannot be sensed using human senses yet can kill at less than 2% in the air in under three minutes, is met with shock and we suspect, disbelief.
3. Those who are injured suffer a degree of brain and neurological injury and find lobbying or attending Stakeholder Groups almost impossible.
4. Many of those exposed to CO do not even know they’ve been exposed to CO and cannot prove it. Prevention is vital. (The most vulnerable people, recognised worldwide, are of course those who do not even realise they are vulnerable.)
5. Most meetings are online only which makes it difficult to form relationships with those working for the GDNs. Having worked for over 30 years when we mostly had face to face meetings, it was much easier to persuade employees of the GDNs of the need for the action we requested.
6. CO-Gas Safety is often siloed into break out groups with specific interests (such as cost of energy etc.) that do not include carbon monoxide safety. Therefore, those in policy rarely, if at all now, hear what CO-Gas Safety has to say.

**Measuring Outputs for the GDNs**

* 1. ‘Through the RIIO model we use outputs to reflect the attributes of network service quality that are of most value to current and future consumers (including those in vulnerable situations). Outputs should be specific, measurable and substantively within the control of network companies to deliver.’

We think measuring for the GDNs with regard to dealing with CO is difficult - because there is no proper research on the incidence of exposure to CO now or rather there was a study, but it has never been made public. This was John Moore’s Liverpool University (JMLU) study, but we have never been able to access the full original research. Perhaps Ofgem and HSE could be more successful and obtain the original research?

Further research of 75,000 homes was promised, apparently funded but then forgotten. Only persistent questioning by CO-Gas Safety eventually produced the answer that funding for this wider study had quietly been withdrawn without an announcement being made.

**UIOLI Allowance** (i.e. Use It Or Lose It)

CO-Gas Safety considers the UIOLI allowance has inhibited the GDNs. As part of the gas industry, the GDNs are perhaps understandably inhibited anyway from researching by testing just how many homes have CO, particularly high levels, so the UIOLI mechanism does not seem to help the GDNs do what the charity considers is the right thing. We think this shows that Ofgem and HSE should be more involved and that much more research needs to be done and made public.

For example, we are extremely concerned about gas cookers and consider they should be banned or at least phased out. Please see <https://epha.org/wp-content/uploads/2024/10/epha_cleancooking_pressrelease_final.pdf> and <https://www.clasp.ngo/wp-content/uploads/2023/01/Gas-Report.pdf>

Please see the recent report in 2025 about gas cookers and the replacement by induction hobs. Please see <https://www.globalactionplan.org.uk/files/policy_pathway_for_the_transition_to_electric_cooking_in_the_uk.pdf> which makes the points even more clearly.

Should banning or phasing out of gas cookers really be something the gas industry should be asked if they are kind enough to do, with no compulsion? Surely the gas industry has an obvious conflict of interest?

**Ofgem has a statutory duty to protect the interests of consumers. Are HSE and Ofgem working together to follow the recommendations of these reports, to ban or phase out gas cookers?**

Despite this, in our opinion, the GDNs are probably the most impartial part of the gas industry, at the moment.

**We also think the GDNs would now test for CO if they were told to do so and Ofgem worked to make sure the necessary data was properly collected, collated and published and if provided with the necessary funds.**

However, the GDNs also need rules on how to collect, collate and publish data because this work would be done using in effect, public funds and the GDNs, being part of the gas industry, do have a conflict of interest.

These rules would cover testing for CO, providing PPM found to those exposed or possibly exposed, collecting, collating and publishing the PPM of CO found, which appliance, its fuel, age, serial number, cause of the CO leak amongst other fields. Also providing this data to Ofgem and publishing it on a yearly basis.

CO-Gas Safety would be happy to assist with this work, and we have the expertise having spent the last 30 plus years undertaking similar data work on deaths from unintentional CO.

**Q. OVQ8 Do you agree with our approach taken to review of the Climate Resilience strategies?**

Probably yes, but there are some things we would like Ofgem to acknowledge. Firstly, that increasing temperature is likely to mean more air conditioning is used.

Secondly, we are concerned about sealed houses to keep heat in or out. Toxins in indoor air easily become more concentrated. For example, if there are products of combustion including CO leaking into homes, there is a vicious circle of less oxygen, more CO2 and then yet more CO created.

**Q. OVQ9 Do you agree with our views on the Workforce Resilience Strategy?**

We applaud the proposals to upskill and multi-skill the workforce but why not insist that every First Call Operative for the gas emergency service must be skilled to at least turn the gas appliances back on (after the customer is told to turn everything off before the FCO arrives) and test the air in the property? This can be now done quite quickly and easily because now four rooms can be tested at once. For more information about this please contact us [office@co-gassafety.co.uk](mailto:office@co-gassafety.co.uk) and Kane International.

We are deeply concerned about the retirement of skilled and experience gas engineers and consider that with regard to upskilling, multi-skilling and retention of experts.

What encouragement does Ofgem provide to the GDNs to do this? Where is the funding? Where are the incentives? Where are the requirements?

Ofgem is the regulator and has statutory duties that are relevant to CO, so why is it that finance seems to be so prominent and sometimes even oppressive\* to the GDNs, which despite a conflict of interest, are now starting to realise what they should surely have been doing over 30 years ago by testing air and emissions for CO, whenever practicable?

*\*e.g. financial limits on some projects when we submit that unless and until work is done, to find out the scale of the problem, there is a danger that work will never be done.*

**Gas Depreciation**

Even when we started, over 30 years ago, registered gas engineers seemed to be retiring at a high rate and now it is extremely difficult to find a knowledgeable, experienced gas engineer to do anything, let alone with the qualification CMDDA1 and who is willing to test for CO, yet this is crucial for all customers’ safety.

Now gas seems something grandfathers did so surely there is a need to appreciate what few experts the gas industry has left, encourage younger people to train and make sure there are incentives, mentors and a career structure because surely gas will be needed at least to heat some homes for the foreseeable future?

We would be only too happy if gas was phased out by something far safer but so far, although the CLASP reports and an EU report recommend banning or phasing out gas cookers, there seems no appetite to even start phasing gas cookers out. Yet in our opinion, this would be an easy win.

However, we fully appreciate and understand that the toxins from burning coal and wood are far more dangerous to people than burning gas, provided all the preventative measures are taken. So, we are in favour of gas continuing to heat homes and water but not used for cooking.

**Data sharing**

**Q OVQ 37 Do you agree to our approach to the data sharing licence condition?**

Yes, we think the data must be shared with Ofgem and published, particularly as we understand that this data is collected wholly or partly with public funds levied by the licence fee and given back to the companies for specific purposes. CO-Gas Safety is willing to share its data provided certain conditions are met e.g. no danger of corruption of our data, breach of confidentiality for survivors and that a body is set up and properly funded to do our work.

Would the matters we have raised even be discussed had CO-Gas Safety not existed?

We believe there should be an OFGEM annual report on behalf of all GDNS responding to CO alarm incidents so it's possible to see national data, not wade through individual GDN reports.

Such data might include how many callouts GDNs responded to, how many were for CO, how many were found to be caused by CO related incidents, how many repeat callouts to the same property.

Given OFGEM uses taxpayer and energy user funds, surely it is time we receive an annual & timely report on GDN emergency call out activity?

**Re-Opener**

**Q OVQ38 Do you agree with our proposed design of the Digitalisation reopener.**

I’m not sure we fully understand this, but if it means that the companies only have one chance to come back to argue for more funding in 2028, no, we don’t agree.

It is often difficult to fully appreciate the needs of any project until you are doing it and so CO-Gas Safety’s view is that it would be off putting to companies even getting started on the more interesting and challenging projects, such as setting up a free or subsidised service to test for CO whenever practicable. However, we think that is exactly what is needed along with a body based on the ASA\* template to provide full and specific victim support as well as research.

\* [*https://www.asa.org.uk/*](https://www.asa.org.uk/)

**Stephanie Trotter, President & Director of CO-Gas Safety**