

# Vulnerability & Carbon Monoxide Allowance (VCMA)

Project Eligibility Assessment (PEA)  
McCann Worldgroup Carbon Monoxide  
Market Research Study 2

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## Gas Network Vulnerability & Carbon Monoxide Allowance (VCMA) Governance Document - Project Eligibility Criteria

<b>Section 1 - Eligibility criteria for company specific projects (other than condemned essential gas appliance repair and replacement)</b>	
In order to qualify as a VCMA project, a project must:	
<b>VCMA Eligibility Criteria</b>	<b>Criteria Satisfied (Yes/No)</b>
<b>a)</b> Have a positive, or forecasted positive Social Return on Investment (SROI), including for the gas consumers funding the VCMA project;	<b>No</b> (see SROI section below)
<b>b)</b> Either: <ul style="list-style-type: none"> <li><b>i.</b> Provide support to consumers in vulnerable situations, and relate to energy safeguarding, or</li> <li><b>ii.</b> Provide awareness on the dangers of CO, or</li> <li><b>iii.</b> Reduce the risk of harm caused by CO;</li> </ul>	<b>Yes</b>
<b>c)</b> Have defined outcomes and the associated actions to achieve these;	<b>Yes</b>
<b>d)</b> Go beyond activities that are funded through other price control mechanism(s) or required through licence obligations; and	<b>Yes</b>
<b>e)</b> Not be delivered through other external funding sources directly accessed by a GDN, including through other government (national, devolved or local) funding.	<b>Yes</b>
<b>Section 2 - Eligibility criteria for company specific essential gas appliance servicing, repair and replacement projects</b>	
In order to qualify as a VCMA project, unsafe pipework and essential gas appliance servicing, repair or replacement must meet the following criteria:	
<b>a)</b> A GDN has to isolate and condemn unsafe pipework or an essential gas appliance following a supply interruption or as part of its emergency service role;	<b>N/A</b>
<b>b)</b> The household cannot afford to service, repair or replace the unsafe pipework or essential gas appliance; and;	<b>N/A</b>
<b>c)</b> Sufficient funding is not available from other sources (including national, devolved or local government funding) to fund the unsafe pipework or essential gas appliance servicing, repair or replacement.	<b>N/A</b>
<b>Section 3 - Eligibility criteria for collaborative VCMA projects</b>	

In order to qualify as a collaborative VCMA project, a project must:	
a) Meet the above company specific and boiler repair and replace (if applicable) project eligibility criteria;	N/A
b) Have the potential to benefit consumers on the participating networks; and	N/A
c) Involve two, or more, gas distribution companies.	N/A

## Gas Network Vulnerability and Carbon Monoxide Allowance (VCMA) Governance Document - Project Registration Table 2

Information Required	Description
<b>Project Title</b>	McCann Worldgroup Carbon Monoxide Market Research Study 2
<b>Funding GDN(s)</b>	Cadent - the project provides insight that will benefit gas consumers across all 4 of Cadent's networks
<b>Role of GDN(s) *For Collaborative VCMA Projects only</b>	Not applicable - Cadent company specific project
<b>Date of PEA Submission</b>	10 <sup>th</sup> March 2022
<b>VCMA Project Contact Name, email and Number</b>	Phil Burrows Head of Customer Vulnerability Social Programme Delivery E: phil.m.burrows@cadentgas.com T: 07773 545451
<b>Total Cost (£k)</b>	£35,255.00
<b>Total VCMA Funding Required (£k)</b>	£35,255.00
<b>Problem(s)</b>	<p><u>The health risks posed by CO to UK households</u></p> <p>Carbon monoxide still presents a serious health risk to both gas and non-gas customers across the UK. Department of Health data estimates that 14,000 people are admitted to accident and emergency each year in England due to CO poisoning.</p> <p>Further statistics report that 200 people per year in England and Wales are admitted to hospital for a</p>

<sup>1</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/260211/Carbon\\_Monoxide\\_Letter\\_2013\\_FinalforPub.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/260211/Carbon_Monoxide_Letter_2013_FinalforPub.pdf)

<sup>2</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/260211/Carbon\\_Monoxide\\_Letter\\_2013\\_FinalforPub.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/260211/Carbon_Monoxide_Letter_2013_FinalforPub.pdf)

long-term visit and experience time off work due to carbon monoxide poisoning.

Finally, industry statistics report that <sup>3</sup>30.3 UK deaths are caused by carbon monoxide poisoning each year in the most severe cases.

### The findings from the first research study

There may be a strong link between the number of fatalities and hospital admissions above and the problems uncovered by the first research study.

The first McCann Worldgroup carbon monoxide market research project helped Cadent achieve its objective of identifying the most at risk audiences to CO poisoning. These audiences included:

- 18–34-year-old, ethnic minorities, from lower income households;
- 18-34-year-old, white females, from lower income households and with children at home;

These audiences shared the below criteria:

1. Less aware on the dangers of CO and the perceived threat to their health.
2. More confused about the key symptoms of CO and most likely to believe that CO emits a smell.
3. Most likely to use gas appliances and least likely to own a CO alarm.

This helped Cadent understand that there is a massive problem with CO alarm ownership and awareness of CO signs, symptoms, and dangers amongst these groups. Additionally, the first round of market research uncovered that these groups scored highly in how frequently they used their gas appliances, whilst scoring much lower in regularity of appliance servicing.

Additionally, the first project helped highlight an issue of perceived immunity to CO amongst the most at risk groups. For example, the first project allowed participants to request further free safety information and an audible alarm. Only 13% of all respondents that requested further support were

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<sup>3</sup> <http://www.co-gassafety.co.uk/wp-content/uploads/2019/01/Statistics-sheet-presspack-Jan-2019-18.01.19.pdf>

	<p>from the most at risk audiences identified by the study.</p> <p>In terms of other problems that the first research study uncovered, evidence stated that 15% of participants from younger age groups (under 35s) were completely unaware of any dangers from CO.</p> <p>The research study also revealed that there is a massive issue of incorrectly associating CO safety with CO2 and climate change in some groups. 166 respondents associated words like "environment" and "climate" with carbon monoxide.</p> <p><u>Carbon monoxide ownership and gas appliance servicing</u></p> <p>The installation of an audible CO alarm remains one of the most effective methods of mitigating the risk of CO poisoning. However, recent statistics report relatively low alarm ownership across Cadent's networks. Reports suggest that between 60%-70% of homes across Cadent's four networks do not have an audible CO alarm installed.</p> <p>The Covid-19 pandemic has led to a lot of UK families experiencing increased financial hardship. Decreases in household income have meant that some families can no longer afford necessary gas appliance servicing and repairs. This is shown by demand for installing, servicing, and repairing boilers shrinking by 34 per cent during a year of the pandemic. This, coupled with many families not having the financial means to purchase a CO alarm greatly increases the risk of exposure to the dangers of CO.</p>
<p><b>Scope and Objectives</b></p>	<p><u>Project Scope</u></p> <p>The second phase of the McCann Worldgroup carbon monoxide research study looks to build on the first piece of research completed in September 2021.</p> <p>The two studies are linked, with the first phase aiming to help Cadent to identify the most at risk audiences to CO poisoning. The second phase of research will focus on the "why" and "how" questions behind the most at risk groups identified through phase one.</p> <p>The project aims to understand "why" these audiences are more at risk and identify the key behavioural barriers and drivers Cadent needs to leverage to reduce their risk of CO poisoning.</p> <p>Finally, the project aims to understand "how" best</p>

to reach and influence these audiences, to ensure any future VCMA campaigns are effectively reaching these audiences and shifting behaviour.

As well as surveying the 18-34 age groups identified as most at risk by phase one, the project will also interview parents of this age group to understand any reasons behind an intergenerational gap.

### Project Objectives

The project objectives can be split between the two audience groups that the survey will focus on.

For the priority audience of 18–34-year-olds, the project has the objective(s) of:

1. Understanding what the key drivers are for these audiences owning a CO alarm?
2. Understanding what the key barriers are for not owning a CO alarm, and being less knowledgeable about the symptoms and threats of CO poisoning?
3. Understand who our priority audiences trust and rely upon for information in general, and health & safety information in particular (i.e. government, media, communities, family, faith groups, community leaders etc...) and why this is the case.
4. Reaching a clear conclusion on the key barriers and drivers to leverage in future campaigns to ensure the greatest reduction in CO harm for this audience.

For the secondary audience of parents of 18–34-year-olds, the project has the objective(s) of:

1. Understanding their level of concern about the threat of CO;
2. Understanding if they, or anyone they know has ever been affected by carbon monoxide
3. Revealing awareness of symptoms and signs of CO poisoning;
4. Revealing whether they currently have a CO alarm in their home, and if they do/don't or are unsure, why this is case;
5. Understanding if they have ever spoken to their children about the dangers of CO poisoning;

	<p>6. Understanding if their children own an alarm, and based on this response understand the interplay between parents and their children, in relation to CO alarm ownership;</p>
<p><b>Why the Project is Being Funded Through the VCMA</b></p>	<p>We believe that this project meets the majority of the required company specific VCMA project eligibility criteria.</p> <p>With regards to providing a positive (or forecasted positive) social return on investment, we believe that this project will provide exceptional benefit for Cadent and the other GDNs on future CO-related projects.</p> <p><b>a. Has a positive, or forecasted positive SROI, including for the gas consumers funding the VCMA project:</b></p> <p>The previous phase of the McCann Worldgroup research project and other VCMA initiatives have delivered tangible, measurable social return on investment (e.g. the reduction of harm caused by CO or the improvement in home energy efficiency.</p> <p>This outputs of this VCMA project will be invaluable in accurately shaping future Cadent (and wider GDN) projects to effectively engage the most at risk customers to CO.</p> <p>The meeting of this project's objectives will give Cadent insight into customer's attitudes towards:</p> <ul style="list-style-type: none"> <li>• Drivers in purchasing a carbon monoxide alarm;</li> <li>• Barriers for having a low level of awareness on the dangers of carbon monoxide;</li> <li>• Information sources trusted by customers for the purpose of receiving critical home safety advice;</li> </ul> <p>This insight will benefit customers of future VCMA-funded CO safety initiatives. Cadent will also be able to cascade the learning from this project to the other GDNs.</p> <p>However, it has been challenging to accurately place a monetary social return on investment value on this benefit, as factors such as future project size, location and strategy are unknown at this stage.</p>



	<p>In summary, we believe the investment of £35,255 on this project to be effective, as it will increase the accuracy and positive impact created on future initiatives.</p> <p><b>b. Either:</b></p> <ul style="list-style-type: none"> <li><b>i. Provide support to consumers in vulnerable situations, and relate to energy safeguarding, or,</b></li> <li><b>ii. Provide awareness on the dangers of CO, or,</b></li> <li><b>iii. Reduce the risk of harm caused by CO;</b></li> </ul> <p>This project will help reduce the risk of harm caused by CO to customers on future VCMA-funded projects. The project will also allow Cadent to effectively raise customer's awareness on the dangers of CO on future VCMA-funded projects.</p> <p><b>c. Have defined outcomes and the associated actions to achieve these;</b></p> <p>This project has clearly defined actions and associated outcomes, the meeting of which will quantify success. Further information on the project's outcomes and associated actions can be found in the relevant section below.</p> <p><b>d. Go beyond activities that are funded through other price control mechanism(s) or required through licence obligations;</b></p> <p>We believe that this market research project goes beyond activities funded through other price control mechanisms. The nature and type of market research project being conducted by Cadent, and McCann is a first for the industry and goes outside of a GDN's BAU activities.</p> <p>The method of creating project outputs, such as customer insight into CO alarm ownership barriers is innovative and goes beyond Cadent's BAU activities.</p> <p><b>e. Not be delivered through other external funding sources directly accessed by a GDN, including through other government (national, devolved, or local) funding.</b></p> <p>This project will solely be delivered by Cadent's VCMA funding.</p>
<p><b>Evidence of Stakeholder/Customer Support</b></p>	<p><u>Customer evidence from phase one of the project</u></p>



An element of the first phase of market research included asking participants for their reactions to the below statement:

*"Carbon monoxide (CO) is an incredibly poisonous gas that poses a serious threat to health if exposure occurs. Each year there are around 40 deaths in England and Wales from carbon monoxide poisoning. Carbon monoxide has no smell at all, making it very difficult to detect a leak. Further to that, you can't taste or see the gas either this is part of the reason it's known as 'The Silent Killer'. Having working audible carbon monoxide alarms in your home and learning to spot the physical signs and symptoms of carbon monoxide poisoning is essential in minimising the health risks posed by a leak."*

Analysis of participant's reactions indicated that there is much concern around the dangers of CO. For example, 21% of participants stated that they felt worried after reading the passage on CO. 15% felt concerns, whilst 14% felt fear and shock from reading the text.

#### Stakeholder evidence from Cadent's business plan formations

Cadent's RIIO-GD2 business plan <sup>4</sup>formations found that our customers prioritise safety above all other considerations. In particular, our customers strongly highlighted the importance of safeguarding the most vulnerable in society.

Research from Energy UK's 'CO Be Alarmed!' campaign found that CO alarm ownership is relatively low versus customer's perceived levels of awareness. The research found that one in three Britons (over 17 million people) are at risk of not identifying carbon monoxide through not owning an alarm. However, nine in ten Britons stated that they are aware of the dangers posed by CO. This project looks to help Cadent understand both customer's attitudes towards not owning a CO alarm and customer's misconceptions towards the dangers of carbon monoxide.

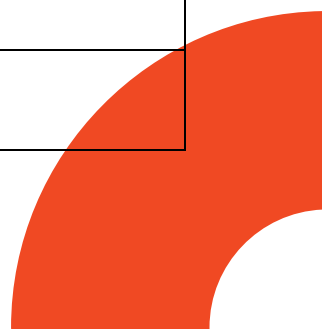
#### Customer surveys and Cadent statistics

Data from surveys conducted by Cadent throughout RIIO-GD1 suggested that customer knowledge on CO is much lower than the results from previous external surveys (Energy UK's CO Be Alarmed campaign). Cadent CO survey data from 5010

<sup>4</sup> [https://cadentgas.com/nggdwsdev/media/Downloads/business-plan/APP\\_CAD\\_07-03-10-CO-Awareness.pdf](https://cadentgas.com/nggdwsdev/media/Downloads/business-plan/APP_CAD_07-03-10-CO-Awareness.pdf)

	<p>respondents rated their knowledge as 5.07/10 on average.</p> <p>Cadent's network is home to many of the communities with the highest carbon monoxide risk across Great Britain. Four of the top five UK cities in terms of lack of carbon monoxide alarm ownership are situated on Cadent's network - Liverpool *(47%), Norwich *(44%), Manchester *(42%) and Nottingham *(39%).</p> <p>Additionally, Cadent gathered statistics on the number of incidents relating to UK deaths from unintentional carbon monoxide poisoning between 01.09.1995 to 31.08.2018. Staggeringly, the top three areas in terms of the highest number of deaths were all located in Cadent's networks - Greater London (60 deaths), South Yorkshire (32 deaths) and Derbyshire (27 deaths).</p>
<p><b>Information Required</b></p>	<p><b>Description</b></p>
<p><b>Outcomes, Associated Actions and Success Criteria</b></p>	<p><u>Project outcomes</u></p> <p>The second phase of the McCann Worldgroup carbon monoxide research study looks to build on the first piece of research completed in September 2021.</p> <p>The two studies are linked, with the first phase aiming to help Cadent to identify the most at risk audiences to CO poisoning. The second phase of research will focus on the "why" and "how" questions behind the most at risk groups identified through phase one.</p> <p>The project aims to understand "why" these audiences are more at risk and identify the key behavioural barriers and drivers Cadent needs to leverage to reduce their risk of CO poisoning.</p> <p><u>Project approach/associated actions</u></p> <p>In order to achieve the project's objectives, McCann Worldgroup and Cadent will divide the research process into two key phases:</p> <ol style="list-style-type: none"> <li>1. Exploration:             <ol style="list-style-type: none"> <li>a. Qualitative research = McCann Worldgroup will conduct an online community with members from the previously identified at risk groups to understand their barriers and drivers</li> </ol> </li> </ol>

	<p>to owning a CO alarm, and how best to reach this audience.</p> <p>b. Quantitative research = McCann will conduct a conversational online survey with parents of 18-34 year olds to reveal the influence they have on their adult children being aware of the threat of CO, and ownership of a CO alarm.</p> <p>2. Analysis, creation, and reporting:</p> <p>a. McCann will analyse the data and provide Cadent with the key messaging they need to include in future campaigns to bring about the greatest reduction in the risk of CO poisoning, amongst those most vulnerable.</p> <p><u>Success criteria</u></p> <p>The success of this project will be judged against the meeting of the objectives stated in this project eligibility assessment.</p> <p>The objectives of this project focus on gaining invaluable customer insight including:</p> <ol style="list-style-type: none"> <li>1. Cadent will understand what the key drivers are for the at-risk audiences owning a CO alarm.</li> <li>2. Cadent will understand what the key barriers are for the at-risk audiences not owning a CO alarm and being less knowledgeable about the symptoms and threats of CO poisoning.</li> <li>3. Cadent will understand who the priority audiences trust and rely upon for information in general, and health &amp; safety information (i.e., government, media, communities, family, faith groups, community leaders etc...) and why this is the case.</li> <li>4. Cadent will reach a clear conclusion on the key barriers and drivers to leverage in future campaigns to ensure the greatest reduction in CO harm for this audience.</li> </ol>
<p><b>Project Partners and Third Parties Involved</b></p>	<p>McCann Worldgroup</p>



<p><b>Potential for New Learning</b></p>	<p>The rationale behind investing VCMA funding into this project, and the measure of its success, centres around the potential for new learning.</p> <p>The outputs from this project will be used to shape future CO initiatives to ensure that they effectively reach and influence the most risk groups.</p> <p>In particular, this project will deliver the below areas of new learning:</p> <ol style="list-style-type: none"> <li>1. What the key drivers are for at risk groups owning a CO alarm.</li> <li>2. What the key barriers are for at risk groups not owning a CO alarm and being less knowledgeable about the symptoms and threats of CO poisoning.</li> <li>3. Who the priority audiences trust for accessing information on health and safety, and why?</li> <li>4. A clear conclusion on the key barriers and drivers to leverage in future campaigns.</li> </ol>
<p><b>Scale of VCMA Project and SROI Calculations</b></p>	<p><u>Project scale</u></p> <p>As referenced above, the research study is split between an online community with members from the previously identified at risk groups, and a conversational online survey.</p> <p>The online community will feature 40 respondents that each spend 20 minutes per day completing tasks assigned by McCann Worldgroup. The group will be comprised of an equal mix of genders between the ages of 18-34.</p> <p>The conversational online survey will centre on short 5-10 minutes conversations with approx. 300 parents of 18–34-year-olds. The purpose of the conversations will be to gain insight on links between aged 18-34 respondents answers and those of parents.</p> <p><u>Social return on investment calculations</u></p> <p>It is difficult to definitively calculate a SROI benefit from such a project because the true value won't be realised until the insight has been implemented on future CO initiatives.</p> <p>However, the project will enable us to better focus our CO awareness and harm mitigation projects</p>

	<p>more effectively. In effect, this will change the SROI calculations for future initiatives in this space. For example, Cadent currently utilises CO proxies developed alongside SIA Partners to evaluate the social return on investment of its VCMA projects.</p> <p>All of the calculations are based on percentages derived from UK statistics on CO-related illness. For instance, Cadent currently applies a 0.0000459% chance likelihood of avoiding a CO-related death. This percentage risk is calculated based on 30.3 deaths annually from a population of 66,040,200.</p> <p>Given that the research will enable us to target our activities on those most at risk from harm from CO, we will need to increase these likelihood values as we will no longer be engaging with 'the average' population.</p> <p>Per 100 customers currently educated on the dangers of CO, we assume a SROI benefit of £261.83 (based on avoided A&amp;E visits, reduction in NHS costs and the cost of death). Through this research even if we simply able to double the likelihood of our awareness campaigns reaching audience members most likely to be at risk from CO poisoning, the benefit would increase (per 100 informed) to £512.82.</p> <p>In 2022/23, our range of CO projects will hit over 1m customers. Without the benefits of this research, the 5-year SROI benefit associated with 1m customers would have been £2,618,319.84. By applying the learning from this project, we believe that benefit will be £5,128,196.20.</p> <p>The difference is £2,509,876.36, and therefore represents a SROI benefit. It is possible to use the same logic on other CO campaigns (e.g., CO alarm distribution), but that is already more targeted through our continued partnership with the fire and rescue services in our network. Therefore, we will only apply the logic to awareness campaigns.</p> <p>The net SROI for 5 years is therefore £2,474,621.36. The net annual SROI benefit is £490,408.97.</p>
<b>VCMA Project Start and End Date</b>	Project start date: 04/10/2021 Project completion date: 02/02/2021
<b>Geographical Area</b>	The project will survey participants from and deliver value to customers located across all four of Cadent's networks.
<b>Remaining Amount in the Allowance at Time of Registration</b>	Remaining funding to be confirmed upon project registration.

## Gas Network Vulnerability and Carbon Monoxide Allowance (VCMA) Governance Document - PEA Control Table

<p>In order to ensure that a VCMA project is registered in accordance with the Ofgem VCMA governance document (incl. project eligibility assessment), the below table should be completed as part of the project registration process.</p>	
<p>Stage 1: Sustainability &amp; Social Purpose Team PEA Peer Review</p>	
<p>Date Immediate Team Peer Review Completed: 01/02/22</p>	<p>Review Completed By: Gemma Norton</p>
<p>Stage 2: Sustainability &amp; Social Purpose Team Management Review</p>	
<p>Date Management Review Completed: 02/02/22</p>	<p>Review Completed By: Philip Burrows</p>
<p>Step 3: Director of Sustainability and Social Purpose Sign-Off</p>	
<p>Director of Sustainability and Social Purpose Sign-Off Date: 10/03/2022</p>	
<p>Step 4: Upload PEA Document to the Website &amp; Notification Email Sent to Ofgem (vcma@ofgem.gov.uk)</p>	
<p>Date that PEA Document Uploaded to the Website: March 22</p>	
<p>Date that Notification Email Sent to Ofgem: March 22</p>	