



## *Action for Warm Homes*

### **National Energy Action Response to Department for Communities and Local Government Consultation on Review of the Smoke and Carbon Monoxide Alarm (England) Regulations 2015**

#### **ABOUT NATIONAL ENERGY ACTION**

Around 4 million UK households are in fuel poverty, unable to afford to live in a warm, dry and safe home. National Energy Action (NEA) is the national charity working to end fuel poverty in England, Wales and Northern Ireland. We also work with our sister charity, Energy Action Scotland. Our work encompasses campaigning and advocacy, research and analysis, along with project delivery in local communities.<sup>1</sup>

#### **INTRODUCTION AND BACKGROUND TO OUR RESPONSE**

NEA welcomes the review of The Smoke and Carbon Monoxide Alarm (England) regulations and thanks the Department for Communities and Local Government (DCLG) for the opportunity to provide input. Our response is limited to commenting on the effectiveness of the requirement to fit carbon monoxide (CO) alarms in private rented homes under the regulations. We take an interest in this matter due to the relationship between fuel poverty and CO risk in low income households. Specifically, NEA recently completed a two year programme of research with 349 households which found the factors which cause or expose households to the risk of fuel poverty – low income, poor quality housing and the age and health of occupants – can impact on the heating and servicing behaviours of households to elevate CO risk in homes.<sup>2</sup> NEA is also a member of the All-Party Parliamentary Carbon Monoxide Group and participated in its recent inquiry into the CO regulations.<sup>3</sup> Our response below draws both from NEA's own research as well as the inquiry findings.

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<sup>1</sup> For more information visit: [www.nea.org.uk](http://www.nea.org.uk)

<sup>2</sup> NEA. 2017. [Understanding Carbon Monoxide Risk in Households Vulnerable to Fuel Poverty](#).

<sup>3</sup> APPCOG. 2017. [Carbon Monoxide Alarms: Tenants Safe and Secure in Their Homes](#).

## **RESPONSE**

**Question 1:** Please indicate whether you are applying to this consultation as: Landlord; Tenant; Letting Agent; Local Authority enforcement officer; Fire and Rescue authority officer; Other interested party (please specify).

**Response:** Other interested party – NEA is a fuel poverty charity.

**Question 2:** Before reading this document, were you aware of the Smoke and Carbon Monoxide Alarm (England) Regulations 2015?

**Response:** Yes.

**Question 3:** Before reading this consultation document, were you aware that under the regulations: Landlords must ensure that a working smoke alarm is installed on every storey of a rental property; Landlords must ensure that a working carbon monoxide alarm is installed in any room containing a solid fuel combustion appliance; Landlords must ensure that alarms are in working order on the first day of a tenancy; Whilst the regulations do not impose legal obligations upon Tenants, they are advised to test the alarms regularly to ensure they are working; I was not previously aware of the requirements; I thought the regulations imposed different requirements. Please provide details.

**Response:** Yes, NEA is aware of all aspects of the regulations.

**Question 4:** How were you made aware of the regulations? I was not aware before reading this document; The Gov.uk website; Communication from DCLG; Social media; Word of mouth (friend/family); Letting or managing agent; Professional association; Informed by tenant; Communication from landlord; Local authority remedial notice; Other (please specify).

**Response:** Other – NEA is a member of the All-Party Parliamentary Carbon Monoxide Group and participated in its recent inquiry into the CO regulations.

**Question 5:** Do you consider that information about the regulations is easily accessible? If 'no', how could the information be improved?

**Response:** No comment.

**Question 6:** Have the regulations had a positive impact on the number of smoke and carbon monoxide alarms installed? Please provide details.

**Response:** NEA does not hold data on the impact the regulations have had on the number of CO alarms installed. Nonetheless, our research<sup>4</sup> with low income households found a CO alarm was fitted in only 35% of homes surveyed. Amongst private rented tenants, only 33% had an alarm fitted and only 19% of alarm owners reported receiving theirs from their landlord. One factor contributing to low alarm ownership rates may be a lack of awareness about the dangers of CO, particularly in comparison to the threat of fire in homes. CO-related behaviours were perceived by households in NEA's research to pose less risk relative to behaviours such as failing to fit a smoke alarm. This underlines the importance of regulation in mandating CO alarm ownership.

**Question 7:** Have the regulations had a positive impact on protecting tenants from death or injury resulting from smoke or carbon monoxide poisoning? Please provide details.

**Response:** NEA does not hold data on the impact the regulations have had on protecting tenants from death or injury. However our research<sup>5</sup>, which included a programme of CO monitoring in 89 homes, recorded elevated CO levels greater than 10 ppm in 35% of monitored homes. Above this threshold, prolonged exposure can have negative health effects. Of major concern to NEA is the finding that fuel poverty characteristics were present in a number of these homes. Notably, one fifth of households with extended CO spikes (above 10 ppm and lasting longer than 15 minutes) reported rarely turning their central heating on and a number were fuel poor under the Low Income High Costs definition used in England. Furthermore, working-age households, amongst which the highest fuel poverty rates are found across England, recorded lower mean temperatures in our study and also a greater number of CO spike events. In one example, fuel poor private renters in a deprived area of Leeds recorded 361 higher CO readings over a period of only two months. The occupants were using their gas fire for heating because they could not afford to run the central heating. No CO alarm was fitted in the property. An example such as this underlines the absolute necessity to extend the regulations to include all fuel burning appliances and thereby protect a far greater number of low income, vulnerable and fuel poor tenants.

**Question 8:** Are the regulations still required in full? If 'no', please provide details.

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<sup>4</sup> NEA. 2017. [Understanding Carbon Monoxide Risk in Households Vulnerable to Fuel Poverty](#).

<sup>5</sup> NEA. 2017. [Understanding Carbon Monoxide Risk in Households Vulnerable to Fuel Poverty](#).

**Response:** Yes, NEA believes the regulations are still required and should be extended to require CO alarms are fitted in all private rented accommodation with any fuel burning appliance.

**Question 9:** Do you think that the properties excluded from the regulations are the right ones? If no, please provide details.

**Response:** No, NEA does not agree with exempting properties which do not contain a solid fuel burning appliance from the CO alarm regulations. On this matter, NEA supports the conclusions of the All-Party Parliamentary Carbon Monoxide Group inquiry<sup>6</sup> that:

- Determining what falls under the definition of a solid fuel burner is not in practice straightforward and having to distinguish between different fuel-burning sources adds complexity for landlords;
- The regulations in Scotland require CO monitors in all private rented properties with any fuel burning appliance. This means that national landlords have to apply different regulations in their properties north and south of the border, which is confusing and potentially adds cost;
- The regulations would be simpler if they were extended to all fuel-burning appliances. This would fit with the government's policy of better regulation.

Moreover, NEA stresses that extending the regulations would have a positive impact on vulnerable households living in fuel poverty. In England, 38% of fuel poor households (941,000) are in private rented accommodation and 79% of the fuel poor (1.98 million) use gas for heating.<sup>7</sup> Extrapolating these figures suggests that up to 743,390 fuel poor households in England would be protected to stay safe in their homes if the CO regulations were improved to encompass gas burning appliances. It is critical the Government takes steps to protect these households; many of whom are on extreme low incomes which fall well below the poverty line.<sup>8</sup> Finding even twenty odd pounds to purchase a CO alarm is an amount of money these households simply cannot afford. Instead, NEA is of the view the financial burden must fall on the landlord to protect the safety of their vulnerable tenants. Experiences such as the Grenfell Fire Tower Tragedy reinforce this.

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<sup>6</sup> APPCOG. 2017. [Carbon Monoxide Alarms: Tenants Safe and Secure in Their Homes.](#)

<sup>7</sup> BEIS. 2017. [Fuel poverty detailed tables 2015 data.](#)

<sup>8</sup> The median annual income of a fuel poor household in England after housing costs is £10,118. This is £2,815 below the poverty line. 85% of households in fuel poverty in England are located in the bottom two income deciles. See: NEA. 2017. [Bridging the gap: Addressing the cost of living facing UK households this winter.](#)

**Question 10:** Do you think that the regulations could be improved? If 'yes', please provide details of any improvements needed.

**Response:** NEA supports the conclusions of the All-Party Parliamentary Carbon Monoxide Group inquiry<sup>9</sup> into the CO regulations. Specifically, NEA is of the view the regulations can be significantly improved through their extension to all tenants in private rented accommodation with any fuel burning appliance. Key evidence to underpin such extension includes:

- The cost of fitting a CO monitor has reduced and is now regarded by the National Landlords Association as minimal, altering substantially the cost-benefit analysis;
- One in five of all households live in private rented accommodation and the numbers are increasing;
- Tenants rightly expect to be safe and secure in their homes. But we should not assume that is the case. The dangers from CO poisoning - whether from faulty stoves or poorly maintained gas boilers - are very real. CO is a silent killer; it is colourless and odourless and can travel through walls, floors and ceilings;
- 2.7 million renters live in homes with gas appliances so - in terms of groups at risk - there are significantly more tenants at risk from dangerous gas appliances than there are from dangerous solid-fuel burning appliances;
- Recent research into CO poisoning carried out by NEA, and also research undertaken by Liverpool John Moores University, supports the public perception that the poorest in society are the most vulnerable to CO poisoning in rented accommodation;
- Protecting the most vulnerable households should be a priority outcome from this review;
- Expanding the remit of the Regulations to include all private rented properties would bring England in line with the rest of the UK, which would reduce confusion amongst landlords and tenants. It would make householders living in private-rented properties in England as safe as those in the remainder of the UK;
- Extension of the regulations is supported by the National Landlords Association and by utilities organisations such as SGN, the Gas Industry Safety Group, and the Institution of Gas Engineers and Managers.

In conclusion, NEA reiterates its view the regulations must be extended to require CO alarms to be fitted in all private rented accommodation with any fuel burning appliance.

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<sup>9</sup> APPCOG. 2017. [Carbon Monoxide Alarms: Tenants Safe and Secure in Their Homes](#).

Moreover, DCLG should take the opportunity afforded by this review to support action on this matter under the Building Regulations review by Dame Judith Hackitt. Ultimately, all homes – irrespective of ownership – should be protected from CO, the silent killer.

**National Energy Action**  
**8 January 2018**

## APPENDIX I

### Understanding Carbon Monoxide Risk in Households Vulnerable to Fuel Poverty

National Energy Action. 2017.

Full report available at: <http://www.coportal.org/data/197/nea:-understanding-carbon-monoxide-risk-in-households-vulnerable-to-fuel-poverty/>

### Executive summary

This research investigated the relationship between fuel poverty and carbon monoxide (CO) risk in households on low incomes and in vulnerable situations. Over the course of two heating seasons (October to April) in 2015/16 and 2016/17 NEA collected data from 349 households, targeting those on low incomes and with a range of vulnerabilities. The main conclusion to draw from this research is that the factors which cause or expose households to the risk of fuel poverty – low income, poor quality housing and the age and health of occupants – can impact on the heating and servicing behaviours of households to elevate CO risk in homes. Key findings emerging from this study are summarised below.

#### ***CO levels in homes***

CO and temperature measurements were recorded in 90 homes. CO data showed 35% of properties with exceedances (spikes) greater than 10 ppm (the threshold at which prolonged exposure can have possible health effects) and 22% recorded spikes greater than 10 ppm lasting longer than 15 minutes. Fuel poverty characteristics were present in a number of these homes. In particular, statistical analysis (Pearson's correlation) undertaken by IEH Consulting for NEA observed significantly increased maximum CO levels in households reporting stress and anxiety about energy affordability ( $p=0.026$ ;  $r=0.237$ ). Also, the number of CO spikes above 10 ppm was significantly negatively correlated with the minimum temperature ( $p=0.04$ ;  $r=-0.23$ ) and the mean temperature ( $p=0.003$ ;  $r=-0.32$ ) in households. That is, the number of CO spikes increased in households with lower minimum and mean temperature. This could indicate a possible relationship between under-heating and elevated CO. Notably, one fifth of households with extended CO spikes (lasting longer than 15 minutes) reported rarely turning their central heating on and a number were fuel poor under the Low Income High Costs definition. Furthermore, working-age households, amongst which the highest fuel poverty rates are found across England, recorded lower mean temperatures in our study and also a greater number of CO spike events.

#### ***Boiler type and risk***

Amongst homes where boiler type could be verified (n131), 63% were using safer and more efficient combi condensing models, some of which had been installed free of charge under government energy efficiency programmes such as the Energy Company Obligation (ECO).

This confirms the importance of grant schemes to upgrade heating appliances in low income households. However a statistically significant relationship ( $p < 0.0001$ ) was observed between living in an off-gas and rural home and having an older and riskier (non-condensing) boiler type. This supports evidence that low income non-gas homes have disproportionately missed out on subsidised heating measures under government programmes such as ECO. Targeting these households in future schemes for both fuel poverty and CO safety reasons may therefore be beneficial.

### ***Household heating behaviours***

In addition to central heating boilers, nearly half of participants (47%) had combustion secondary space heating in their homes (mainly gas and solid fuel fires). These appliances emerged as a key source of warmth for households vulnerable to fuel poverty and a possible cause of CO spikes in these properties. Specifically, households displaying financial, structural, health and age vulnerabilities were more likely to be reliant on a gas or solid fuel fire; running it for extended periods in place of central heating or together with a primary system. Factors contributing to this behaviour were: low income (preventing a household replacing an inefficient boiler, installing first time central heating or causing occupants to ration central heating); a lack of agency amongst tenants (forced into using secondary heating to cope with a cold home); and susceptibility to the cold (where attempts to achieve adequate warmth led to households relying on a fire to supplement their primary system). Using these appliances frequently and for long periods increases opportunity to be exposed to CO from these sources, particularly if the appliances are older and not maintained.

### ***Appliance servicing***

While servicing rates of boilers in the sample were relatively high (77%), only 40% of gas fires were reported by households as checked over the past 12 months. Cost was cited as a factor by 21% of owner-occupants with un-serviced appliances. This group of households may be conscious of gas safety but do not always have the disposable income available to practise gas safe behaviour. When considering the reliance on secondary heaters such as gas fires amongst many households vulnerable to fuel poverty in our sample, it is worrying that such households are not always able to prioritise servicing of these appliances.

The other area of concern is gas cookers. While 59% of homes had a gas cooker fitted only one quarter report having this appliance checked. Amongst households monitored for CO (n89), maximum CO levels were significantly increased in homes with ovens fuelled by mains gas or LPG ( $p = 0.001$ ;  $r = 0.336$ ) and also hobs fuelled by mains gas or LPG ( $p = 0.019$ ;  $r = 0.247$ ). Worryingly, a lack of awareness that cookers can pose CO risk was observed widely in the sample. Additionally, in social rented properties, most tenant-owned cookers are going un-serviced as they are not covered by landlord safety checks. Neglect of these appliances is particularly concerning given 15% of households with gas cookers reported using the appliance for room heating. While this behaviour is not practised regularly, the

factors which drive fuel poverty – living on a low income and in an inefficient home – are contributing to a small but notable number of households turning to their cooker occasionally as a source of ‘cheap’ and ‘instant’ heat or because their primary system is insufficient.

### ***CO alarm ownership***

Of 132 households where CO alarm ownership could be verified, 35% had an alarm fitted. Rates of ownership were highest in the owner-occupied sector (44%) while 22% of alarm owners reported receiving theirs from a charity, local authority or fire and rescue service. This underlines the importance of frontline service providers in supporting and protecting vulnerable households. One factor contributing to low alarm ownership rates may be a lack of awareness about the dangers of CO, particularly in comparison to the threat of fire in homes. CO-related behaviours were perceived by households to pose less risk relative to behaviours such as failing to fit a smoke alarm. Furthermore, not servicing a boiler was considered less risky than not having a CO alarm fitted. This is concerning given CO alarms should not replace maintenance of appliances.

Based on our findings, NEA makes the following observations and recommendations for policy makers and industry:

#### **1. *Join up fuel poverty and gas safety initiatives***

Government energy efficiency programmes such as ECO replace old and inefficient boilers and install first-time boilers and central heating in low income households in order to alleviate fuel poverty. This is welcomed however CO risk will not necessarily be addressed in these households if occupants continue to use and rely on older room heaters such as gas fires. This research has shown it is not always correct to assume that households with modern boilers will favour them over other heating systems. Instead, amongst occupants vulnerable to fuel poverty, combustion room heaters may be preferred for cost reasons or both primary and secondary appliances will be run concurrently in attempts to achieve adequate warmth. Consideration should therefore be given to supporting households replace or maintain appliances such as gas fires. Equally, it is critical that households are educated on their central heating systems and occupants on low incomes are supported to optimise use of these systems without compromising on energy affordability. A key role is required for frontline service providers such as local authorities and community organisations, who are already reaching and protecting households in need. These agencies should be supported to deliver integrated fuel poverty and CO safety initiatives, including providing measures such as CO alarms to fuel poor households. Here, there is a clear role for gas distribution network companies to support these agencies. The gas networks have existing obligations on fuel poverty and CO awareness under the regulator Ofgem’s RIIO-GD1 price control model. Ofgem should further incentivise the gas networks to join up action on fuel poverty and CO awareness in the next price control period (after 2021).

2. ***Support non-gas households to replace old and risky boilers***

Historically, non-gas homes have disproportionately missed out on heating measures under ECO and this study shows rural households with boilers not fuelled by mains gas are disproportionately older, riskier and inefficient models. Rural off-gas homes are at increased risk of living in severe fuel poverty, nor are they served by free safety checks of gas appliances offered to low income owner-occupants under the Priority Services Register (PSR). For both energy affordability and safety reasons these households must be targeted in future government energy efficiency programmes. Specifically, NEA recommends a minimum target for installation of first time central heating systems under the next iteration of ECO (from October 2018) and that this target is aligned to Ofgem's fuel poor network extension scheme to provide free connections to the mains gas network for fuel poor non-gas homes.

3. ***Promote the PSR as a pathway to free gas safety checks***

Gas suppliers are required to offer free gas safety checks to low income and vulnerable households but the volume of these checks has historically been very low. This is unfortunate because this service can help to address CO risk in low income owner-occupant households who may be neglecting to service appliances for cost reasons but may also be more susceptible to adverse effects from CO exposure for reasons of age or ill health. The gas industry (suppliers and network distributors) must improve efforts to sign-up low income and vulnerable customers to the PSR and passport eligible households into annual free servicing plans.

4. ***Improve public awareness about the CO risks of combustion appliances beyond gas boilers***

Households servicing gas boilers are not always extending this behaviour to include other gas appliances in the home. Gas cookers in particular are perceived to pose a low CO risk relative to boilers and households are largely unaware that such appliances require maintenance. Gas safety messages should be made clearer to communicate about the risks posed by different gas appliances and advised on their proper installation, use and maintenance. Gas fires and gas cookers should be prioritised in such messages and catch-all and ambiguous terms such as 'appliance' should be avoided.

5. ***Target and tailor CO safety messages to account for different household, appliance and fuel types***

Safety may not always be the most effective message to prompt households to check their appliances. Instead, an understanding of the appliance and household type should inform CO campaigns. For example, emphasising reliability and comfort may help drive boiler servicing, particularly in older age households susceptible to the cold. While a

focus on safety may be more suitable for appliances such as cookers. Amongst low income families and working-age households, integrated CO and fuel poverty interventions should be considered (elevated CO levels and lower mean temperatures were observed in these homes). Clear messaging about landlord and tenant responsibilities is also critical, particularly in social rented housing where appliances are more likely to be owned by tenants and not covered by landlord gas safety checks. Households off mains gas should be targeted with bespoke campaigns addressing servicing of oil, solid fuel and LPG appliances.