

RCPE Domestic Solid Fuel Burning Final

9. Do you feel the proposed new emissions limit of 1g per hour (plus 0.1g per 0.3 kW of output) for stoves is appropriate?

No xx

10. If no, please explain what you feel the emissions limit should be and why

A lower limit is justified on public health grounds because there is no safe level of fine particulate matter (PM_{2.5}) exposure.

WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide

<https://www.who.int/europe/publications/i/item/9789240034228>

Fine particulate pollution from combustion is linked to many health issues including cardiovascular disease, respiratory disease, and neurological effects.

An 18 year data-linkage study on the association between air pollution and acute limb ischaemia. <https://econtent.hogrefe.com/doi/full/10.1024/0301-1526/a000972>

Adverse health effects associated with household air pollution: a systematic review, meta-analysis, and burden estimation study.

[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(20\)30343-0/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30343-0/fulltext)

Cardiovascular effects of air pollution. <https://pubmed.ncbi.nlm.nih.gov/27216170/>

A significant number of cancers have also been linked to wood smoke, including lung and breast cancers.

Indoor wood-burning from stoves and fireplaces and incident lung cancer among Sister Study participants.

<https://www.sciencedirect.com/science/article/pii/S0160412023004014>

Indoor Wood-Burning Stove and Fireplace Use and Breast Cancer in a Prospective Cohort Study. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5744698/>

Importantly many of these households have children within them, and for childhood, when cells are dividing, the damaging effects of PMs are often permanent.

Children are especially vulnerable to air pollution: we need data on transport emissions near schools. doi: <https://doi.org/10.1136/bmj.p2675>

From a health perspective the optimum value is therefore 0 g/hour, because there is no safe exposure. However, if an appliance standard is required in the short term and recognising that achieving zero emissions immediately may be technically challenging, we suggest a substantially lower interim limit of 0.5 g/hour (plus 0.05 g per 0.3 kW of output) for all stoves. This would better reflect the strength of current health evidence than the suggested 1 g/hour.

In addition, a clear policy objective over the next 3–5 years should be implemented, to achieve zero particulate emissions from domestic heating, with a defined timetable for implementation. This is achievable through existing cleaner technologies such as electric heating, solar and heat pumps.

It was disappointing to see that both the Scottish Government and Westminster have permitted wood stoves in future new builds, despite us providing science-based evidence to the former.

Doctors call on Scottish Government to reconsider its decision to drop ban on wood burners in homes. <https://www.rcpe.ac.uk/news/doctors-call-scottish-government-reconsider-its-decision-drop-ban-wood-burners-homes>

College joins call for tougher wood burning regulations.
<https://www.rcpe.ac.uk/news/college-joins-call-tougher-wood-burning-regulations>.

For new buildings the appropriate emission limit should be 0 g/hour immediately, because non-polluting heating technologies are already widely available. Allowing wood stoves in new builds risks locking in avoidable air pollution exposure for decades, as retrofitting alternative heating systems later is costly and difficult.

Additionally, in practice, allowing wood stoves in new builds provides a cheaper option than heat pumps or solar heating for developers and can encourage them to default to lower-cost stoves, potentially creating long-term public health impacts.

It is also notable that wood stoves are permitted in new builds while gas boilers are not, despite the fact that the Chief Medical Officer for England has highlighted that modern stoves emit far more particulate pollution than gas heating systems.

CMO Annual Report on Air Pollution
<https://assets.publishing.service.gov.uk/media/639aeb81e90e0721889bbf2f/chief-medical-officers-annual-report-air-pollution-dec-2022.pdf>

Further evidence shows that wood-burning stoves can produce large indoor particulate spikes during normal use, meaning laboratory emissions limits may underestimate real-world exposure. This consultation also does not specify limits for peak particulate emissions, which should be addressed.

Particulate matter exposure from different heating stoves and fuels in UK homes.
<https://www.nature.com/articles/s41598-025-05886-1>

In summary, the scientific evidence strongly suggests that 0 g/hour is the appropriate medium-term target. We therefore recommend an immediate reduction to 0.5 g/hour, combined with a clear 3–5 year timeline to achieve zero emissions, and an immediate zero-emission requirement for heating systems in all new builds.

11. Do you have any comments on the impact (positive or negative) resulting from the proposed new standard? This could be in terms of air quality, human health, the economy or the stove industry, for example.

In the UK, PM_{2.5} emissions from domestic burning are comparable to levels from road transport, with wood burning responsible for around 20% of PM_{2.5}.

Department for Environment, Food and Rural Affairs. Particulate matter exposure from different heating stoves and fuels in UK homes
<https://www.gov.uk/government/statistics/emissions-of-air-pollutants>

No fire without smoke: is it time to ditch burning wood in the home?
<https://bylines.scot/health/no-fire-without-smoke-is-it-time-to-ditch-burning-wood-in-the-home/>

Thus, domestic wood burning is a significant contributor to air pollution in the UK, and tighter emission standards should therefore see improved air quality. Particular benefit should be seen by those living in wood burning homes, and by their neighbours, as smoke from domestic burning affects neighbouring properties as well as the household using the appliance.

However, the overall impact will depend on whether the test standards accurately reflect real-world use. Evidence suggests that emissions during normal operation, particularly during lighting, refuelling and ash removal, can be substantially higher than those measured under laboratory testing conditions. If these real-world conditions are not adequately reflected in the testing schedules, the expected air quality improvements may be smaller than anticipated.

Indoor Air Pollution from Residential Stoves: Examining the Flooding of Particulate Matter into Homes during Real-World Use. <https://www.mdpi.com/2073-4433/11/12/1326>

There may also be economic implications. While tighter standards could increase costs for stove manufacturers in the short term, they may also stimulate innovation and encourage the development of additional cleaner heating technologies. Importantly, reducing particulate pollution is likely to produce substantial economic benefits through improved public health, including reduced healthcare costs and increased productivity.

The health benefits of interventions to reduce indoor air pollution from solid fuel use: a cost-effectiveness analysis.
<https://www.sciencedirect.com/science/article/abs/pii/S0973082608604664>

Domestic wood burners kill thousands and cost NHS millions a year, report suggests.
<https://www.bmj.com/content/391/bmj.r2257>

Health Impacts from Domestic Burning in the UK.
https://www.actionforcleanair.org.uk/files/health_impacts_from_domestic_burning_in_the_uk.pdf

12. To what extent do you agree or disagree that a 3 – 5 year timescale for the new limits coming into force following new legislation is appropriate?

strongly disagree x

13. If you disagree, please explain why and give your views on an alternative timeframe

A 3–5 year delay is too long given the scale of the health damage we shall see from fine particulate pollution, and the evidence that domestic burning is already a major source of PM_{2.5} in the UK. Defra's own document states that PM_{2.5} is considered the air pollutant most harmful to human health, and that domestic burning contributed about 20% of total UK PM_{2.5} emissions in 2023. Further long-term exposure to air pollution in the UK is estimated to contribute to 29,000 - 43,000 deaths every year. It also notes that the health effects fall disproportionately on children, pregnant women, older people, those with existing illness, and low-income communities, worsening health inequalities.

De-Minimis Assessment. For Self-Certified Measures in Defra Consultation on Solid Fuel Burning. <https://consult.defra.gov.uk/domestic-burning/consultation-on-solid->

[fuel-burning/user_uploads/domestic-burning-de-minimis-assessment-january-2026.pdf](#)

Such a long implementation period is particularly difficult to justify when Defra's own assessment indicates that around 70% of stoves tested since 2018 already meet the proposed new 1g/hour standard, suggesting that much of the market is already technically capable of compliance at that level (although we do not believe this level is low enough). Defra also estimates very large financial benefits from the proposed implementation (£904 million), while Defra suggest the net direct cost to business is only about £0.09 million. On Defra's own figures, the public health and societal gains are substantial whereas the direct business losses appear modest.

From a health perspective, every additional winter of delay means continued but avoidable exposure to PM_{2.5} inside the home and in neighbours' properties. Wood smoke is linked to respiratory and cardiovascular disease, stroke, cancer, dementia, adverse effects in pregnancy, and often permanent harm to children's development, and that even short exposures can stiffen arteries, promote blood clotting and disrupt heart rhythm.

Long-Term Exposure to Air Pollution and Incidence of Venous Thromboembolism in the General Population: A Population-Based Retrospective Cohort Study.

<https://www.mdpi.com/2077-0383/11/12/3517>

A more appropriate timeframe would therefore be 12 months from the date of the legislation, with an absolute maximum of 24 months, should our lower recommendation of 0.5g be accepted. New products entering the market can be manufactured to meet these standards within this time frame. We note this proposal applies only to new appliances and not to stoves already installed in people's homes, and so the lead in time of 12 months should be selected. This would be consistent with Defra's own evidence, referenced above, that much of the sector is already close to compliance. We stress again, however, that scientific evidence firmly suggests that 1g will continue to lead to significant ill-health.

14. Do you have a view on which standard or regime could be used for a single testing regime for appliance emissions?

The testing regime could be based on the existing Ecodesign framework for solid fuel local space heaters (Commission Regulation (EU) 2015/1185 and the UK Ecodesign for Energy-related Products Regulations 2010), as this is already widely used by manufacturers and regulators. It therefore provides a practical starting point. It would also align with the consultation's aim of streamlining testing methods so that one testing process can demonstrate compliance with the new emission limits.

However, from a public health perspective, it is important that any testing mechanism reflects real-world emissions, rather than only laboratory conditions, as is currently the case. Evidence suggests that emissions during normal stove operation particularly during lighting the stove, adding more wood, and ash removal, can be much higher than those recorded under laboratory tests.

Indoor Air Pollution from Residential Stoves: Examining the Flooding of Particulate Matter into Homes during Real-World Use. <https://www.mdpi.com/2073-4433/11/12/1326>

The emissions from wood stoves are highly variable with stove design, fuel type, burning conditions and user (e.g. opening door behaviour). It is therefore not easy to generalise what the emissions from these stoves will be in the real world from lab testing. We believe that

tests should reflect realistic operational conditions and should measure emissions across a full cycle, including start-up and adding wood, which are known to produce high spikes of PM_{2.5}.

Importantly the tests should also ensure that emissions are measured not only by g/hour, but especially also for PM_{2.5} and ultrafine particles, which are the pollutants most strongly associated with adverse health. PM_{2.5} is widely recognised as the air pollutant posing the greatest risk to human health because these particles are small enough to penetrate deep into the lungs and enter the bloodstream, contributing to cardiovascular disease, respiratory disease, cancer, and neurological conditions. Its measurement should therefore form part of the testing schedule. Any form of combustion generates high levels of ultra fine particles that will be particularly rich in organic carbon compounds, which are also recognised to be some of the most harmful constituents to health.

Finally, the testing regime should clearly specify the actual fuels tested in the appliances, and emissions results should be linked to those specific fuels. The consultation itself notes that many stoves are marketed as “multi-fuel” despite being tested only with wood, which may result in higher real-world emissions if other fuels are used. Further different types of wood, and wood preparation can affect particle release.

A burning reality: Managing the health risks of residential wood smoke.

<https://ncceh.ca/resources/blog/burning-reality-managing-health-risks-residential-wood-smoke>

The Effect of Wood Species on Fine Particle and Gaseous Emissions from a Modern Wood Stove. <https://doi.org/10.3390/atmos15070839>

15. To what extent do you agree or disagree that solid fuel appliances should be subject to periodic retesting after being on the market, to ensure continued compliance with air quality and efficiency standards?

strongly agree x

16. If you put agree or strongly agree, how often do you think retesting should be carried out?

Every 3 – 4 years x

17. To what extent do you agree or disagree with the introduction of a mandatory labelling scheme for solid fuel appliances?

strongly agree x

18. Please provide further detail to support your response

Labelling opinion

This labelling would be a very valuable introduction for a number of reasons. It would allow the public to make informed choices. We already know that the term ‘eco stove’ has misled many shoppers to think the stove is eco-friendly i.e. safe, when we know this is not the case.

Where there’s fire, there’s smoke – Emissions from domestic heating with wood.

<https://eeb.org/en/library/where-theres-fire-theres-smoke-emissions-from-domestic-heating-with-wood/>

For example, an Eco-design stove has an estimated emission rate of PM six times greater than that of a Euro 6 HGV.

Figure 2 (page 18). In: AIR QUALITY EXPERT GROUP. *The Potential Air Quality Impacts from Biomass Combustion*. 2017. [https://uk-air.defra.gov.uk/assets/documents/reports/cat11/1708081027_170807_AQEG Biomass_report.pdf](https://uk-air.defra.gov.uk/assets/documents/reports/cat11/1708081027_170807_AQEG_Biomass_report.pdf)

Further it will improve public awareness of the health impacts of domestic burning, as many are still unaware of this.

“This is not a burning issue for me”: How citizens justify their use of wood heaters in a city with a severe air pollution problem.

<https://www.sciencedirect.com/science/article/abs/pii/S0301421513000682>

Perception of Risks from Wood Combustion and Traffic Induced Air Pollution: Evidence from Northern Europe. <https://www.mdpi.com/2071-1050/14/15/9660>

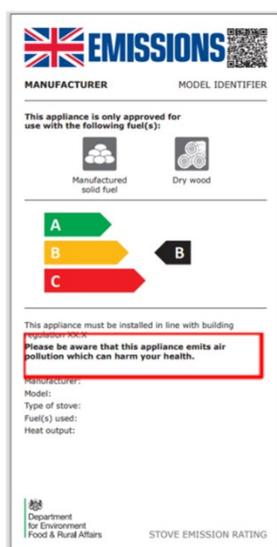
Including a clear health message on the label is particularly important because many people currently consider wood burning to be a “natural” or environmentally friendly form of heating and may not be aware of the significant health risks.

Evidence shows that domestic wood burning is now one of the largest contributors to PM_{2.5} emissions in the UK. As a result, even households that do not burn fuel themselves may be exposed to pollution from neighbouring properties. Increasing public understanding of this wider risk is therefore an important step in reducing exposure.

However, to be effective the labelling system should be clear and easily understood by consumers. A health warning in the red box in the demonstrated label is crucial. We believe this is the single most important aspect for labelling. We comment below on how to improve the labelling and make the wide health harms of air pollution clearer.

The simple rating scale shown in the demo label will help buyers identify the least polluting appliances. It would also be helpful for the label to clearly specify which fuels the appliance has been tested with, as some stoves are marketed as “multi-fuel” despite being tested only with a single fuel type. The demo label does mention two types of fuel, but we are making this point also as it is essential.

19. To what extent do you agree or disagree that the example label above effectively communicates information about the air pollution emissions of a solid fuel appliance?



strongly disagree X

20. Please provide further detail to support your response.

Further detail on air pollution information

Evidence from environmental labelling research suggests that clear visual indicators such as rating scales or traffic-light systems improve consumer understanding of environmental impacts and influence purchasing decisions.

A traffic light food labeling intervention increases consumer awareness of health and healthy choices at the point-of-purchase. <https://doi.org/10.1016/j.yjmed.2013.07.001>

Psychological Determinants of Paying Attention to Eco-Labels in Purchase Decisions: Model Development and Multinational Validation.
<https://link.springer.com/article/10.1023/A:1007122319675>

Why Eco-labels can be Effective Marketing Tools: Evidence from a Study on Italian Consumers. <https://doi.org/10.1002/bse>

However, the effectiveness of the label will depend on how clearly it communicates the health implications of emissions, which this example does not. PM_{2.5} is widely recognised as causing cardiovascular disease, stroke, respiratory disease, cancer, and adverse effects on child development. We believe that the current label 'Please be aware that this appliance emits air pollution which can harm your health' is not strong enough. Scientific research has compared wood burning to cigarette smoking, and in the Sister Study, it was suggested that domestic wood burning was linked to 64-99% of lung cancers in non-smoking women, and also to breast cancer.

Indoor wood-burning from stoves and fireplaces and incident lung cancer among Sister Study participants.
<https://www.sciencedirect.com/science/article/pii/S0160412023004014>

Indoor Wood-Burning Stove and Fireplace Use and Breast Cancer in a Prospective Cohort Study. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5744698/>

That the effects are permanent in children needs also to be explained. A better label, akin to cigarette labelling could be 'This appliance emits air pollution. Air pollution has been strongly linked to a range of serious health conditions including lung and heart disease, various cancers and to permanent harm in children.' Expert advice from experts with detailed understanding of effectiveness of public health harm warnings should be consulted,

As above the label should clearly state the fuels with which the appliance has been tested. Some stoves are marketed as "multi-fuel" despite being tested only with wood, and emissions may vary significantly depending on the fuel used. Clear information on tested fuels would improve transparency and ensure that emissions ratings more accurately reflect real-world use.

21. To what extent do you agree or disagree that the example label above effectively informs consumers about the fuels permitted for use in a given solid fuel appliance?

strongly disagree x

22. Please provide further detail to support your response.

Detail on fuel information

While providing information about which fuels an appliance is permitted to burn is useful, the example label does not, we believe, adequately communicate the health issues from using those fuels. Simply identifying permitted fuels may give consumers a false impression that the fuels are safe from a health point of view. In contrast there is substantial scientific evidence showing that burning wood and other solid fuels produces harmful air pollution.

As above we know wood burning contributes to tens of thousands of premature deaths annually in the UK, so failing to warn a purchaser about these known hazards, would be a mistake.

Importantly, the health risks are not confined to the individual using the appliance. All members of the household, including children are exposed, and it affects neighbouring homes and the wider community. Children are particularly vulnerable because exposure to air pollution during early life can impair lung development and may lead to long-term health consequences. Thus, the label should have details about these health hazards, the permanence of the effect in children, and the possibility of harm to neighbours and the local community.

To be effective, the labelling system should provide clearer information about the health impacts of emissions and should not unintentionally imply that using a permitted fuel eliminates the associated health risks.

23. To what extent do you agree or disagree that health labelling should be mandatory on solid fuel appliances?

strongly agree x

24. Please provide any evidence you have to support your response.

Burning wood and other solid fuels releases fine particulate matter (PM_{2.5}), ultrafine particles, but also other toxic chemicals including benzene, formaldehyde and polycyclic aromatic hydrocarbons.

Identification of Substances Emitted During Combustion and Thermal Decomposition of Wood-based Materials.

<https://www.cetjournal.it/index.php/cet/article/view/CET24111048>

The question here is why would you not have a health label? The evidence is so convincing that wood burning seriously damages health.

Large epidemiological studies have shown strong associations between long-term exposure to PM_{2.5} and increased mortality. As previously stated, the World Health Organization has concluded that there is no safe level of exposure to particulate pollution. These significant health risks have been referenced in the responses above. The science shows these stoves harm, and labels to inform the public of this is a public health imperative.

Health labelling could address the current lack of awareness by ensuring that consumers are informed about the potential health impacts at the point of purchase. Similar approaches have been effective in other public health contexts where clear warnings are provided directly on products associated with health risks.

Warning Labels as a Public Health Intervention: Effects and Challenges for Tobacco, Cannabis, and Opioid Medications.

<https://www.annualreviews.org/content/journals/10.1146/annurev-publhealth-060922-042254>

The impact of strengthening cigarette pack warnings: Systematic review of longitudinal observational studies.

<https://www.sciencedirect.com/science/article/pii/S0277953616302921>

New alcohol warnings outperform the current U.S. warning in a national survey experiment. <https://www.jsad.com/doi/abs/10.15288/jsad.25-00226>

A clear and prominent health warning on solid fuel appliances is essential to support informed decision-making and reduce avoidable exposure to and societal costs from harmful air pollution.

25. To what extent do you agree or disagree that the example label above effectively conveys that there are health impacts of using solid fuels appliances to consumers?

strongly disagree x

26. Please provide further detail to support your response.

Details on health impact

While the proposed label indicates that there may be health impacts associated with the use of solid fuel appliances, it does not effectively illustrate the scale or seriousness of those risks to consumers. The current wording is general and may not make clear that burning wood and other solid fuels produces air pollutants that are scientifically proven to cause disease.

As above, burning wood and other solid fuels releases fine particulate matter (PM_{2.5}), ultrafine particles and a range of toxic combustion products including polycyclic aromatic hydrocarbons, benzene and other volatile organic compounds. Also, as documented above, exposure to PM_{2.5} is linked to cardiovascular disease, stroke, respiratory disease, lung cancer, adverse pregnancy outcomes, neurological disease and harm in children. As with cigarette/tobacco labelling it would be best to indicate these health hazards, not only to the whole household but to neighbours.

Given the serious nature of these health risks, the label should provide clearer and more explicit information about the potential health hazards of using solid fuel appliances. Public health research shows that warning labels help improve consumer understanding of that product's risks and can influence behaviour. A stronger health message, similar in approach to warning labels used for tobacco products, would therefore better inform consumers and support more informed decision-making

Effectiveness of cigarette warning labels in informing smokers about the risks of smoking: findings from the International Tobacco Control (ITC) Four Country Survey.

https://tobaccocontrol.bmj.com/content/15/suppl_3/iii19.short

The impact of strengthening cigarette pack warnings: Systematic review of longitudinal observational studies.

<https://www.sciencedirect.com/science/article/pii/S0277953616302921>

Warning Labels as a Public Health Intervention: Effects and Challenges for Tobacco, Cannabis, and Opioid Medications.

<https://www.annualreviews.org/content/journals/10.1146/annurev-publhealth-060922-042254>

Strengthening the health messaging would improve public understanding and better reflect the scientific evidence of the serious health effects of particulate air pollution.

27. To what extent do you agree or disagree that the health statement “Please be aware that this appliance emits air pollution which can harm your health” is appropriate?

strongly disagree x

28. If you disagree, please suggest an alternative health statement

“Burning wood or other solid fuels produces fine particles of air pollution (PM_{2.5}). This can cause serious health problems including heart disease, lung disease and cancer for your household and your neighbours.”

29. Are there any additional elements or considerations which you think should be included in the labelling specification or design?

Yes x

30. If yes, what considerations you think should be included in the labelling specification or design?

We have dealt with the actual wording of the health warnings in the questions above, but there are other considerations. The health warning should be prominently placed on the stove and clearly visible, rather than appearing as small text on the energy efficiency label. Research on warning labels in other public health contexts has shown that prominent warnings with clear wording are significantly more effective at communicating risk and influencing consumer awareness – (see references above). Countries that increased the size of health warnings on cigarette packages to 50–65% of the pack surface saw major increases in awareness of health risks, recall of warnings and intention to quit smoking.

Health warning messages on tobacco products: a review.

<https://tobaccocontrol.bmj.com/content/20/5/327>

The health warning should therefore be placed in a very visible position on the label, and presented in a readable font size of not less than 10, as font sizes of <8 online are often ignored.

The effects of font type and size on the legibility and reading time of online text by older adults. <https://dl.acm.org/doi/abs/10.1145/634067.634173>

Second, the label should clearly indicate that emissions from the appliance contain fine particulate matter (PM_{2.5}). People are becoming familiar with this term and the fact that it is the air pollutant most strongly associated with adverse health outcomes.

As mentioned, the label should make it clear that pollution from domestic burning can affect others beyond the user’s home such as neighbouring properties.

Consideration should be given to including simple colour-coded or graded emissions ratings, to help consumers compare different appliances more easily. As there are already energy efficiency gradings, there should definitely be air pollution/particulate release gradings. Evidence shows that clear visual labels improve consumer understanding of product impacts and can influence purchasing decisions.

Customer Response to Carbon Labelling of Groceries.

<https://link.springer.com/article/10.1007/s10603-010-9140-7>

Also as previously mentioned, the label should clearly specify which fuels the appliance has been tested with, as emissions may vary substantially depending on the fuel used. Clear

information about tested fuels would improve transparency and help ensure that emissions ratings accurately reflect real-world use.

31. Do you agree or disagree that Trading Standards should be the enforcing body for the proposed labelling requirements?

Agree X

32. If disagree, please provide further detail to support your response.

Trading Standards are a logical enforcing authority because they already oversee compliance with product labelling and safety requirements. However, given that the labelling relates directly to air pollution and public health, effective enforcement may be aided by working with local authority environmental health and air quality teams, which have expertise in the health impacts of air pollution. These teams are often responsible for implementing smoke control legislation and addressing air quality complaints. Many Local Authorities have Joint Boards with their local NHS, and involvement of health professionals would also be useful.

Trading Standards (and any supporting services) must also be resourced to enforce the requirements.

33. To what extent do you agree or disagree that a range of penalties between £300-£2000 should be used for breaches of the proposed new labelling requirements?

disagree x

34. If you disagree, please provide alternative options

While financial penalties for breaches of labelling are to be encouraged, the range of £300–£2000 may not provide a sufficiently strong deterrent. For larger manufacturers or retailers, the lower end of this range may represent only a small cost of doing business and may therefore have limited effect. Given that the purpose of the labelling is to ensure that consumers are properly informed about the health impacts, effective enforcement is particularly important.

A more effective approach could include higher starting penalties of £1000-2000, increased maximum penalty to £4000, particularly for manufacturers or distributors placing non-compliant appliances on the market. Then there should be further escalating penalties for repeated breaches, where repeated non-compliance leads to larger fines capped at £10,000.

There should also be powers to force corrective action, such as withdrawing or relabelling non-compliant products. Further, publication of breaches on the Trading Standards website can provide an additional deterrent and improve transparency.

35. To what extent do you agree or disagree that an increased penalty within the proposed range of £300-£2000 for repeat offenders should be introduced to deter continued non-compliance?

disagree x

36. Please provide further detail to support your response

Given that the purpose of the labelling requirements is to ensure that consumers receive accurate information about the health impacts of emissions from solid fuel appliances, it is important that enforcement measures are sufficiently strong to ensure the requirements are

taken seriously. There should be further escalating penalties for repeated breaches, where repeated non-compliance leads to larger fines capped at £10,000.

37. To what extent do you agree or disagree that the enforcing body should be able to enter a premises at a reasonable time, inspect goods and require persons to provide information?

strongly agree x

38. Please provide further detail to support your response.

Without the ability to inspect appliances and check labelling at the point of manufacture, distribution or retail, it may be difficult for enforcement authorities to identify the non-compliant products. The enforcement powers will help to ensure the proposed labelling is actually applied consistently.

39. To what extent do you agree or disagree that the enforcement authority should be allowed to charge persons the costs incurred in performing their functions?

strongly agree x

40. Please provide further detail to support your response.

Allowing enforcement authorities to recover costs associated with investigating and addressing non-compliance is reasonable and consistent with practice in many other areas of consumer protection and product safety.

Recovering costs helps ensure the enforcement is adequately resourced and ensures the cost does not fall entirely on public authorities. It also reinforces the principle that those who fail to comply with regulations should bear the associated costs of addressing that non-compliance.

41. To what extent do you agree or disagree that health labelling should be mandatory on solid fuel packaging?

Example A



Example B



This option would likely require new legislation in order to apply across the UK with agreement from the Scottish Government, the Welsh Government and the responsible Department in Northern Ireland.

strongly agree x

42. Please provide any evidence you have to support your response.

Views on mandatory health labelling

Many consumers currently perceive wood burning as a natural or environmentally friendly form of heating and may not be aware that combustion of wood and other solid fuels produces harmful air pollution.

Evidence from public health research shows that clear and prominent warning labels improve consumer awareness of health risks and can influence behaviour. Studies examining warning labels on tobacco and other products demonstrate that visible health warnings increase understanding of risks and support more informed consumer decisions

Example A shown is helpful because simple visual warnings can draw attention to the health message. However, the accompanying wording should clearly communicate that burning solid fuels produces particulate air pollution linked to serious health effects.

Example B is non informative and should not be selected.

43. Are there any additional elements or considerations which you think should be included in the labelling specification or design?

Yes x

44. If yes, please provide details of the other elements or considerations you think should be included in the labelling specification or design

Additional elements

As for the comments on stove labelling, prominence of the health warning, including a minimum font size and clear placement needs to be specified, so that the warning is easily visible at the point of purchase (for both in-store and online purchases)

Reference should be made to the fact that particulate pollution (PM_{2.5}), which is the pollutant most strongly associated with adverse health outcomes, is produced during combustion of wood and other solid fuels.

As above there should be clear wording that emissions may affect others, including members of the household and neighbouring properties, not only the user of the appliance.

There should be consistency of labelling across UK, so that consumers receive the same health information regardless of where appliances or fuels are purchased.

45. Which of the following health statements do you prefer?

Option A: This product causes negative health impacts

Option B: This product causes negative health impacts to you and your family

Option C: Burning solid fuels to heat your home can lead to debilitating health conditions, including cardiovascular disease and asthma, which can result in premature death X

46. Please give a reason for your choice

Reason for label option

Options A and B should not be considered as do not give the information needed to make an informed choice. Simply stating that a product causes “negative health impacts” does not explain what those impacts are or why they are important. Option C is preferred because it provides some specific information about the nature and seriousness of the health risks.

47. If you would prefer an alternative health statement, please provide this and give your reasoning

Option C could be further improved by some key additions e.g.:

“Burning solid fuels to heat your home produces air pollution that can lead to debilitating health conditions, including cardiovascular disease, dementia and asthma, which can result in premature death for your household and neighbours”.

More specific wording is also consistent with evidence from public health research showing that clear warning messages are more effective than vague statements to communicate risk and to increase awareness of health harms.

The statement now also makes clear that the health impacts are not limited to the person using the appliance.

An additional point, not considered within the consultation is the inclusion of these health warnings in all marketing material. Wood burning advertisements saying “a modern wood-burning stove is a very low emission way to heat the main living space in your home” and that “a modern stove and dry wood fuel can significantly lower emissions” were recently found to breach the UK advertising code and the Advertising Standards Agency indicated that these adverts must not appear again in that form. So legislating so that correct information appears in advertisements is also a needed step.

ASA Ruling on Stove Industry Alliance Ltd t/a Stove Industry Association.

<https://www.asa.org.uk/rulings/stove-industry-alliance-ltd-a25-1292745-stove-industry-alliance-ltd.html>

48. To what extent do you agree that increasing the fixed penalty notice for suppliers under the Domestic Solid Fuels Regulations would deter non-compliance?

strongly agree X

49. What do you think the cost of a fixed penalty notice should be for suppliers breaching the Domestic Solid Fuels Regulations?

£1000 x

50. To what extent do you agree that an increased penalty for repeat offenders should be introduced to deter continued non-compliance?

strongly agree X

51. Please provide further detail to support your response.

Please see our response to question 49. The same rationale is relevant here. If penalties remain the same regardless of how often rules are breached, there is a risk that some suppliers may view them as a routine cost rather than a meaningful enforcement measure.

Increasing penalties for repeated offences is commonly used in regulatory systems and they help encourage compliance. Such an approach would also help ensure a level playing field

for suppliers who do actually comply with regulations and invest in meeting the required standards.

52. Do you have any additional evidence, data, or relevant information that should be considered by Defra to inform the development of these policies?

Burning wood or other solid fuels in the home not only releases PM_{2.5} but numerous other toxic products, including some of the same carcinogens found in tobacco smoke. From a public health perspective there are clear parallels with tobacco as both involve the production of harmful smoke in domestic environments, exposing not only the user but also other household members (and neighbours). As the health risks of second-hand tobacco smoke became clear, public policy moved progressively toward restricting smoking in indoor/shared environments. A similar precautionary principle is actually appropriate for domestic wood burning. While improved standards and labelling are useful interim measures, the long-term policy objective should be to phase out polluting combustion appliances in homes unless technologies can demonstrate genuinely zero emissions under real-world conditions.