



Ministry of Housing,  
Communities &  
Local Government

## Energy Performance of Buildings:

A consultation on changes to The Energy Performance of Buildings Regulations 2012, No. 3118.



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Ministry of Housing, Communities and Local Government  
Fry Building  
2 Marsham Street  
London  
SW1P 4DF  
Telephone: 030 3444 0000

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# Contents

<b>Scope of the consultation.</b>	<b>4</b>
<b>Introduction – Background to the Energy Performance of Buildings Directives (EPBDs) (origin and purpose).</b>	<b>6</b>
<b>Chapter 1 - Inspection of heating and air-conditioning systems.</b>	<b>9</b>
<b>About this Consultation.</b>	<b>13</b>
<b>Annex A: Analysis of Impact.</b>	<b>14</b>
<b>Annex B: Consultation questions.</b>	<b>20</b>
<b>Annex C: Definitions.</b>	<b>23</b>
<b>Annex D: Personal data.</b>	<b>25</b>

# Scope of the consultation

<p>Topic of this consultation:</p>	<p>Heating and powering buildings currently accounts for 40% of the UK's total energy usage<sup>1</sup>. Direct emissions, resulting from use of fossil fuel account for almost half of buildings emissions<sup>2</sup>. The UK has set in law a target to bring its greenhouse gas emissions to net zero by 2050 – one of the most ambitious targets in the world.</p> <p>This consultation seeks views on proposals to amend the existing Energy Performance of Buildings (England and Wales) Regulations 2012 (SI2012/3118) for domestic and non-domestic buildings which will contribute to improving the energy efficiency and reducing the carbon emissions of buildings.</p> <p>A consultation on the Energy Performance of Buildings (England and Wales) Regulations later in the year will seek views which will be used to inform our future domestic policy after the end of the Transition Period, and consider what flexibilities and improvements may be available now that the UK is no longer bound by EU Directives.</p>
<p>Scope of this consultation:</p>	<p>The Directive (EU) 2018/844 on the Energy Performance of Buildings amends the Directive 2010/31/EU and will partly be transposed using the Energy Performance of Buildings (EPB) Regulations 2012, No 3118.</p> <p>This consultation sets out:</p> <ul style="list-style-type: none"> <li>• The transposition of Article 14 (revisions of the requirement for inspections of heating systems).</li> <li>• Options to transpose the amendments to Article 15 (inspection of air-conditioning systems).</li> </ul>
<p>Geographical scope:</p>	<p>These proposals relate to England and Wales. The Alternative Measures (boiler) report covers England, Wales, Scotland and Northern Ireland.</p>
<p>Impact Assessment:</p>	<p>An analysis of the impact of these proposals is included in this document.</p>

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<sup>1</sup> <https://www.gov.uk/government/publications/industrial-strategy-the-grand-challenges/missions>

<sup>2</sup> <https://www.theccc.org.uk/wp-content/uploads/2014/08/Fact-sheet-buildings-updated-July-2015.pdf>

## Basic Information

To:	<p>The consultation is primarily aimed at:</p> <ul style="list-style-type: none"> <li>• Building owners and occupiers.</li> <li>• Manufacturers and suppliers of heating and cooling systems.</li> <li>• Building energy industry professionals and energy assessment professionals.</li> <li>• Local authorities and other building control bodies.</li> <li>• Environmental organisations.</li> </ul>
Body/bodies responsible for the consultation:	Ministry of Housing, Communities and Local Government (MHCLG).
Duration:	This consultation will last for 8 weeks from 19 May 2020.
Enquiries:	For any enquiries about the consultation please e-mail: <a href="mailto:EPBD3Consultation@communities.gov.uk">EPBD3Consultation@communities.gov.uk</a>
How to respond:	<p>Responses to the consultation questions may be submitted through the online survey: <a href="https://www.surveymonkey.co.uk/r/EPBD3Consultation">https://www.surveymonkey.co.uk/r/EPBD3Consultation</a></p> <p>We strongly encourage responses via the online survey, particularly from organisations with access to online facilities such as local authorities, representative bodies and businesses. Consultations receive a high-level of interest across many sectors. Using the online survey greatly assists our analysis of the responses, enabling more efficient and effective consideration of the issues raised.</p> <p>Should you be unable to respond through the online survey, responses can be e-mailed to: <a href="mailto:EPBD3Consultation@communities.gov.uk">EPBD3Consultation@communities.gov.uk</a></p> <p>If you wish to respond in writing, please make it clear which questions you are responding to. Written responses should be sent to:</p> <p>Energy Performance of Buildings Consultation, Ministry of Housing, Communities and Local Government, 2 SW, Fry Building, 2 Marsham Street, London, SW1P 4DF.</p> <p>When you reply it would be very useful if you confirm whether you are replying as an individual or submitting an official response on behalf of an organisation and include:</p> <ul style="list-style-type: none"> <li>- your name,</li> <li>- your position (if applicable),</li> <li>- the name of organisation (if applicable),</li> <li>- an address (including post-code),</li> <li>- an e-mail address and</li> <li>- a contact telephone number.</li> </ul>

This consultation opened on 19 May 2020. All comments should be received by 11.59pm on 14 July 2020.

# Introduction

## Background

- 1.1 The Energy Performance of Buildings Directive 2002/91/EC was fully implemented in England & Wales on 1 October 2008 through the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 (as amended)<sup>3</sup> and The Building and Approved Inspectors (Amendment) Regulations 2006. A Recast of the Directive (the Recast) was agreed by the European Commission (EC) on 19 May 2010 and was implemented in England & Wales on 9<sup>th</sup> January 2013 through the Energy Performance of Buildings (England and Wales) Regulations 2012<sup>4</sup> and the Building Regulations 2010<sup>5</sup>.

## Amending the Directive

- 1.2 On 30 May 2018, the European Parliament and the Council agreed Directive (EU) 2018/844 which further amends the previous recast of the Energy Performance of Buildings Directive. The estimated energy saving potential of the Directive (EU) 2018/844 across Europe by 2030 is approximately 29.1 Mtoe<sup>6</sup> for domestic buildings and 16.1 Mtoe for non-domestic buildings<sup>7</sup>. It is designed to tackle climate change by achieving a highly energy efficient and decarbonised building stock by 2050 and to enable consumers and businesses to make more informed choices to save energy and money. It supports the Government's legally binding target of net zero emissions by 2050 and its commitment to improve the energy efficiency of existing buildings.
- 1.3 The United Kingdom has left the European Union. EU obligations require that the Directive should be transposed into domestic legislation as the transposition deadline falls within the Transition Period. After the end of the Transition Period we will no longer be required to submit further Alternative Measures (boiler) reports.
- 1.4 The key elements which were changed by the amending Directive and relate to this consultation are as follows:

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<sup>3</sup> SI 2007/991 (<http://www.legislation.gov.uk/ukxi/2007/991/contents/made>) has been amended on several occasions.

<sup>4</sup> SI 2012/3118 (<https://www.legislation.gov.uk/ukxi/2012/3118/contents/made>) has been amended on several occasions.

<sup>5</sup> The Building Regulations were consolidated in 2010 by SI 2010/2214 (<http://www.legislation.gov.uk/ukxi/2010/2214/made>)

<sup>6</sup> Millions of tonnes of oil equivalent (Mtoe) is a unit of energy used to describe the energy content of all fuels, typically on a very large scale.

<sup>7</sup> <https://ec.europa.eu/energy/en/topics/energy-efficiency/targets-directive-and-rules/energy-efficiency-directive>

- *the requirement to establish regular inspections of the accessible parts of heating systems was changed from systems with an effective rated output of over 20kW to over 70kW,*
- *the requirement to establish regular inspections of the accessible parts of air-conditioning systems was changed from systems with an effective rated output of over 12kW to an effective rated output of over 70kW and*
- *inspections for combined heating and ventilation systems and combined air-conditioning and ventilation systems.*

## Implementing the Directive

- 1.5 MHCLG is responsible for the overall transposition of the amended Directive (EU) (2018/844) which amends the Energy Performance of Buildings Directive (2010/31/EU). The transposition will be achieved with the collaboration of other government departments, as set out below.
- 1.6 A consultation *The Future Homes Standard: changes to Part L and Part F of the Building Regulations for new dwellings* was published on 1 October 2019 to consult on Articles 6, 8 and Annex 1. The consultation closed on 7 February 2020. MHCLG is in the process of analysing feedback and expects to publish a response in due course; the link to the consultation is <https://www.gov.uk/government/consultations/the-future-homes-standard-changes-to-part-l-and-part-f-of-the-building-regulations-for-new-dwellings>. A further consultation will follow, proposing changes to the energy efficiency standards for new non-domestic buildings and for building work to existing homes and existing non-domestic buildings and on preventing overheating in new residential buildings.
- 1.7 A consultation *Electric Vehicle Chargepoints in Residential and Non-Residential Buildings* was published in July 2019 to consult on Articles 8.2, 8.3, 8.5, 8.6 and closed on 7 October 2019. The link to the consultation is <https://www.gov.uk/government/consultations/electric-vehicle-chargepoints-in-residential-and-non-residential-buildings>. The Office for Low Emission Vehicles (OLEV) is in the process of analysing feedback from the consultation and expects to publish a response in due course.
- 1.8 The Government will introduce changes to other domestic legislation which will support the energy efficiency of buildings towards net-zero carbon by 2050. This will include Statutory Instruments addressing energy efficiency advice to consumers and the UK's long-term renovation strategy. As referenced above, we will also make changes to Part L of the Building Regulations to provide an uplift to energy efficiency standards.

## Analysis of Impact

- 1.9 The analysis of impact at **Annex A** calculates the costs and benefits of implementing the proposals in this consultation paper.

### **Next steps**

- 1.10 The Government welcomes views on any aspect of our proposals. We are particularly keen to hear your views on the specific issues covered by the consultation questions. A full list of the questions to which we are seeking a response is at **Annex B**. For ease of reference, the relevant consultation questions are also set out underneath the description of each proposal.

# Chapter 1

## Inspection of heating systems and combined heating and ventilation systems.

- 2.1 The amended Directive increases the inspection threshold for heating systems with an effective rated output of over 20kW to those with an effective rated output of over 70kW and widens the scope to include combined heating and ventilation systems.
- 2.2 This change has been made because the European Commission's Impact Assessment<sup>8</sup> concluded that the inspections of heating systems did not sufficiently ensure the initial and continued performance of the systems and were difficult to implement.
- 2.3 The purpose of an inspection is that a heating system which is not performing as efficiently as originally installed can be adjusted or that the inspection can encourage action to improve the overall performance of the heating system through boiler adjustment, early replacement of an old and inefficient boiler, installation of better controls or insulation of primary pipework and hot water cylinders.
- 2.4 The amended Directive allows for the implementation of an alternative approach that achieves the same goals by providing advice as opposed to inspection. The Alternative Measures (boiler) report is the option adopted by the UK (England and Wales, Scotland and Northern Ireland).
- 2.5 England & Wales, Scotland and Northern Ireland have previously derogated from the requirement to have heating systems regularly inspected and instead have a system in place to provide consumers with the advice necessary to make effective decisions about their heating systems. The UK intends to continue with this approach and submit an Alternative Measures (boiler) report, including combined heating and ventilation systems as required by the amended Directive. This is because it is more cost-effective to do so and our experience thus far is that alternative measures could lead to primary energy savings of 2.7 million MWh, compared to only 1.1 million MWh saved under a hypothetical inspection scheme.
- 2.6 We have not been able to estimate the number of combined systems that would fall into scope and will need to account for this. We expect to gather further information on this for the final Impact Assessment and have asked in the consultation for any information that respondents can provide. The assessment of impact at Annex A has more detail.

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<sup>8</sup>

[https://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_impact\\_assessment\\_part1\\_v3.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/1_en_impact_assessment_part1_v3.pdf)

## Inspection of air-conditioning systems and combined air-conditioning and ventilation systems.

- 2.7 The amended Directive increases the threshold for inspections to air-conditioning systems with an effective rated output of over 12kW to those systems with an effective rated output of over 70kW.
- 2.8 The amended Directive also widens the scope of the inspections to include combined heating and ventilation systems. For example, changes will mean the inclusion of heat pump units that are used as the heating or cooling generator in a system that provides both heating and air-conditioning and rooftop heat pump units. This is because they have the added capability of providing heating and cooling simultaneously. Article 15 requires that such systems must be regularly inspected.

### Retaining the inspection regime or introducing alternative measures

- 2.9 Currently, systems in scope must lodge an Air-Conditioning Inspection Report on the Energy Performance of Buildings Register (EPB Register) at regular intervals not exceeding five years. This requirement to lodge Air-Conditioning Inspection Reports on the EPB Register became a mandatory requirement in the Energy Performance of Buildings (England and Wales) Regulations 2012, No. 3118. England and Wales intend to maintain this approach. Establishing an Alternative Measures (air-conditioning) approach would require a set of measures acceptable to the European Commission as providing carbon savings equal to or exceeding the savings to be achieved by an inspection regime, supported by a database of properties in scope and a surveillance programme. There would also be costs associated with creating and running an advice programme as part of this approach. This would be substantially in excess of the existing inspection process which costs an estimated £6.5m.

### A new threshold

- 2.10 This consultation seeks views on the threshold for the inspection of air-conditioning systems being increased to those which have an effective rated output of over 70kW.
- 2.11 Inspection requirements will not apply to buildings with technical building systems which are subject to an agreed energy performance standard or a contractual arrangement specifying an agreed level of energy efficiency improvement, such as energy performance contracting or that are operated by a utility or network operator and are therefore subject to performance monitoring measures on the system side. The Model Energy Performance Contract<sup>9</sup> has been produced under Article 18 of the Energy Efficiency Directive and is an approach designed to assist public sector organisations to retrofit their buildings by installing energy conservation measures to reduce carbon emissions and achieve substantial guaranteed annual cost savings. The requirements also will not apply to those buildings that comply with the Building

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<sup>9</sup> <https://www.gov.uk/government/publications/energy-performance-contract-epc>

Automation and Control Systems (BACS) requirement as detailed in the amended Directive.

- 2.12 Increasing the threshold to an effective rated output of over 70kW would mean that buildings with air-conditioning systems with an effective output of between 12kW and 70kW would no longer be required to be inspected at regular intervals not exceeding five years. The current estimated annual cost to building owners or occupiers of compliance with an inspection regime for air-conditioning systems with an effective rated output of over 12kW is £6.5 million (based on an estimate of 163,000 buildings having air-conditioning systems with an effective rated output of over 12kW, requiring an inspection at regular intervals not exceeding five years, with an estimated inspection cost of £200).
- 2.13 The estimated saving to building owners or occupiers annually of increasing the threshold to over 70kW totals £280,000 (based on a broad estimate of a net overall reduction in the number of buildings requiring inspection).
- 2.14 The increase in threshold would potentially enable more targeted enforcement of the requirements as well as facilitating an increased focus on the systems with the greatest potential for energy efficiency gains.
- 2.15 However, there could be a cost to businesses that produce air-conditioning inspection reports if these inspections were not required for air-conditioning systems with an effective rated output of between 12kW and 70kW. There may also be an environmental impact if building owners or occupiers with air-conditioning systems below the increased threshold did not receive advice on the ways in which the performance of the system could be improved. Owners or occupiers of buildings with these systems may continue longer with inefficient systems and opportunities to reduce carbon emissions would be missed.
- 2.16 Regarding the increased threshold, current Government policy is that the UK should not go beyond the minimum requirements of European Directives, unless there are exceptional circumstances, justified by a cost benefit analysis and consultation with stakeholders. Given this, we are minded to increase the threshold to apply to systems with an effective rated output of over 70kW.

### A wider scope

- 2.17 The new requirement for the inclusion of combined air-conditioning and ventilation systems may have an impact on costs to owners or occupiers of buildings in scope by including systems that previously would not have required an inspection. However, as the present threshold of an effective rated output of over 12kW is being increased to an effective rated output of over 70kW it is probable that any air-conditioning element of a combined system would have an effective rated output of over 12kW and would, therefore, already require an inspection under the current regime. However, the inspection of the ventilation systems (connected to or co-ordinated with) is a new requirement.
- 2.18 We have not been able to estimate the number of combined systems that would fall into scope and will need to account for this. We expect to gather further information

on this for the final Impact Assessment and have asked in the consultation for any information that respondents can provide.

- 2.19 It is anticipated that the inclusion of ventilation systems will increase the energy savings for owners or occupiers of buildings with systems in scope.

**Q1: Do you agree that the threshold of the current air-conditioning inspection regime should be increased to include only air-conditioning systems and combined systems with an effective rated output of over 70kW?**

- a. Yes.
- b. No, inspect air-conditioning systems and combined systems with an effective rated output of over 12kW.

**If your answer is no, please explain your reasoning [maximum 250 words] and provide supporting evidence if possible.**

**Q2: The analysis of impact makes a number of assumptions on the number and level of rated outputs of heating systems and air-conditioning systems and combined systems and the cost of inspections, etc.**

**Do you think the assumptions in the analysis of impact are fair and reasonable?**

- a. Yes
- b. No

**Please explain your reasoning and provide any evidence to support this [maximum 250 words].**

**Q3: Do you have any information on the number of combined air-conditioning and ventilation systems or combined heating and ventilation systems, in buildings in England and Wales?**

- a. Yes
- b. No

**If you answered yes, please provide evidence on how many there are in England and Wales with an effective rated output between 12 kW and 70 kW and how many above with an effective rated output over 70 kW as this information will contribute to a fuller impact assessment of changes to the regulations.**

# About this consultation

This consultation document and consultation process have been planned to adhere to the Consultation Principles issued by the Cabinet Office.

Representative groups are asked to give a summary of the people and organisations they represent and where relevant who else they have consulted in reaching their conclusions when they respond.

Please be aware that, as a public authority, the Department is bound by information rights legislation (including the Freedom of Information Act 2000, the Environmental Information Regulations 2004, the Data Protection Act 2018 and the General Data Protection Regulation). The Department may, therefore, be obliged to, in the event of an information request, release information provided in response to this consultation.

If you want the information that you provide to be treated as confidential, it would be helpful if you could explain to us why you believe that should be the case. If we receive a request for disclosure of information, we will take account of your explanation and where appropriate apply all relevant exemptions to withhold from disclosure the information. As each information request is judged on its own merits, we cannot give an assurance that confidentiality will be maintained in all circumstances. We will process your personal data in accordance with the law and in most circumstances, this will mean that your personal data will not be disclosed. A full privacy notice is included at Annex D.

An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

Are you satisfied that this consultation has followed the Consultation Principles? If not or you have any other observations about how we can improve the process please contact us via the [complaints procedure](#).

# Annex A

## Analysis of Impact

1. In June 2019, the Government amended the legally binding target to reduce carbon emissions in the Climate Change Act 2008 from 80% to 100% by 2050, making the UK the first G7 country to legislate a zero net emissions target.<sup>10</sup>
2. The Government has also made a number of specific commitments to develop policies that are directed at reducing carbon emissions, including the Clean Growth Strategy and the Grand Challenges which include a Buildings Mission<sup>11</sup>.
3. Heating and powering buildings currently accounts for 40% of the UK's total energy usage<sup>12</sup>. We must therefore take steps to reduce carbon emissions and improve the energy efficiency of existing buildings and make sure that new buildings are fit for the future with low carbon heating and world-leading levels of energy efficiency.
4. The Directive aims to improve the energy performance of buildings. Intervening would also help overcome several market failures which exist including:
  - Climate change creates a sizeable negative externality, in which polluters (builders and building occupiers) do not incur the true cost of their emissions. By making buildings more energy efficient, this problem reduces.
  - Information failure occurs, where building owners or occupiers are unaware of the potential benefits of improving energy efficiency, such as reduced impact on climate change and lower energy costs.
  - Building owners or occupiers typically don't feel incentivised to improve their energy efficiency, due to payback periods often seeming long and unattractive.
5. This analysis of impact section shows the varying costs and benefits of different options the UK Government can choose in order to transpose the Directive.

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<sup>10</sup> [https://www.legislation.gov.uk/ukdsi/2019/9780111187654/pdfs/ukdsiem\\_9780111187654\\_en.pdf](https://www.legislation.gov.uk/ukdsi/2019/9780111187654/pdfs/ukdsiem_9780111187654_en.pdf)

<sup>11</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/700496/clean-growth-strategy-correction-april-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf)

<sup>12</sup> <https://www.gov.uk/government/publications/industrial-strategy-the-grand-challenges/missions>

## Article 14 – Inspection of Heating Systems

6. Currently, the energy efficiency of heating systems with an effective rated output of over 20kW is provided by an Alternative Measures (boiler) report to the European Commission. This report is produced as an equivalent assessment of the energy efficiency and improvement of heating systems nationally instead of requiring individual heating systems to be assessed individually. The report must be provided to the European Commission every three years. One of the key measures in the report is Boiler Plus: The Boiler Plus standards introduced in England in April 2018 aim to increase energy efficiency of gas boilers and of domestic heating systems to reduce carbon emissions from domestic heating. The regime requires all gas boilers installed into existing systems in England to have an ErP4 efficiency of at least 92%. Therefore, whilst it does not compel individuals to proactively replace their boiler, it ensures that when a boiler is replaced consumers can be confident that they are investing in an efficient product.
7. The amendment to Article 14 increases the heating system output threshold for inspection from those systems with an effective rated output over 20kW to those systems with an effective rated output over 70kW, therefore, reducing the number of systems that would require an inspection. The scope is widened by including combined heating and ventilation systems.
8. We intend to continue to derogate from the requirement to have an inspection regime. The impact of the revised requirements will be therefore minimal – for example, programmes such as Boiler Plus are not limited to boiler size and will be largely unchanged.

### Option 0: Continue to produce the Alternative Measures (boiler) report

#### Costs

9. The cost to the Government of continuing to produce an Alternative Measures (boiler) report is an estimated £40,000 with a report produced every three years, leading to an annual cost of £13,333. This was the cost to produce the most recent Alternative Measures (boiler) report in 2017. We will need to include combined heating and ventilation systems with an effective rated output of over 70kW and have asked a question to help to determine the impact.

#### Benefits

10. We can continue to apply our domestic regime to systems below the Directive threshold, meaning that potentially we can continue to yield greater carbon savings than an inspection regime.
11. The most recent boiler equivalence report in 2017 estimated that alternative measures could lead to primary energy savings of 2.7 million MWh, compared to

only 1.1 million MWh saved under a hypothetical inspection scheme thus demonstrating the effectiveness of the Alternative Measures (boilers) approach.<sup>13</sup>

## Option 1: Establish a regular inspection regime

### Costs

12. An inspection regime in line with the Directive requires that all buildings with heating systems and combined heating and ventilation systems with an effective rated output over 70kW are regularly inspected. This means an estimated 383,000<sup>14</sup> buildings are in scope.
13. Assuming inspections are carried out at regular intervals not exceeding five years, in line with the current inspection requirements for air-conditioning units, this requires 76,600 inspections to be carried out each year, which creates an estimated additional annual cost to owners or occupiers of buildings in scope of £11.5 million<sup>15</sup>. Since an effective rated output of over 70kW is a fairly large output and occurs more frequently in non-domestic buildings, it is likely that most of these costs be incurred by businesses.
14. Alongside this the Government would have to incur the cost of both setting up and enforcing the new regime. A more detailed estimate of this impact will be produced post-consultation.

### Benefits

15. A regular inspection system would mean that a heating system which did not perform as efficiently as it did when first installed could be identified, adjusted or replaced, alongside other actions to improve energy efficiency. This would reduce heating costs and energy use and help the Government achieve its aim of reducing carbon emissions.
16. However, it is worth noting that according to the most recent Alternative Measures (boiler) report, carbon savings and energy efficiency achieved through an inspection regime would be lower than what is currently achieved through alternative measures.

### Decision

17. We intend to pursue Option 0: continue to produce the Alternative Measures (boiler) report. This option allows for householders, businesses and the Government to continue to improve energy efficiency through our domestic regime without incurring the costs of setting up and complying with an inspection scheme.

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<sup>13</sup> Energy Performance of Buildings Directive – Article 14 (4) equivalence – Fifth UK Report

<sup>14</sup> MHCLG estimate based on previous equivalence report

<sup>15</sup> Assuming an average inspection cost of £150 (150x76,600=11,490,000)

## Article 15 – Inspection of Air-Conditioning Systems

18. Currently, improvements to air-conditioning systems with an effective rated output of over 12kW are achieved through an inspection regime. Systems in scope must lodge an Air-Conditioning Inspection Report on the EPB Register at regular intervals not exceeding five years.
19. The amendment to Article 15 of the Directive increases the threshold of the effective rated output from over 12kW to over 70kW. It also widens the scope to include combined air-conditioning and ventilation systems. The rationale for this approach is set out in main body of the consultation document.
20. These changes mean that the Government must decide between continuing with an inspection regime or producing an Alternative Measures air conditioning report. If continuing with inspection, there is a choice between leaving the threshold at over 12kW or increasing the inspection threshold to systems with an effective rated output of over 70kW. Both inspection options require widening the scope to include combined air-conditioning and ventilation systems.

Option 0: Continue to inspect air-conditioning systems with an effective rated output over 12kW and widen the scope to include combined air-conditioning and ventilation systems

### Costs

21. The estimated cost of the current system to owners or occupiers of buildings in scope is £6.5 million a year (an estimated 163,000 buildings with air conditioning units over 12kW - but excluding combined systems - to be inspected at regular intervals not exceeding 5 years, with a cost per inspection of £200).
22. We have not been able to estimate the increase in combined air-conditioning and ventilation systems over 12kW and will need to account for the additional ventilation units that are connected to or co-ordinated with air-conditioning systems. We expect to gather further information on this for the final Impact Assessment and have asked in the consultation for any information that respondents can provide.

### Benefits

23. An inspection regime allows for owners or occupiers of buildings in scope to identify when their air-conditioning system is performing inefficiently and adjust or replace it if necessary, supporting improved energy efficiency and reduced energy costs to business.

Option 1: Increase output threshold for inspections to an effective rated output of over 70kW and increase the scope to include combined air-conditioning and ventilation systems

### Costs

24. The increased threshold of the inspection regime would mean that fewer inefficient, lower output air-conditioning systems would be identified, decreasing the rate of replacement and adjustment for these systems. This could potentially reduce the overall improvements to the performance of the systems and cost savings that the current inspection regime brings to the building owner.
25. The reduction in the number of air-conditioning systems that will require an inspection will also have a cost to businesses that inspect, maintain and install systems. Our estimate of that cost is £280,000 per annum based upon a net reduction of 7,000 inspections as set out in the calculation in paragraph 27 below.

### Recommendation

26. Current Government policy is that the UK should not go beyond the minimum requirements of European Directives, unless there are exceptional circumstances, justified by a cost benefit analysis and consultation with stakeholders. Amending the threshold as recommended in Option 1 would meet the requirements of the Directive and would also reduce the number of inspections overall which represents a saving to businesses and a reduction in bureaucracy for building owners or occupiers. Focussing on inspections of larger systems means that potential energy savings are likely to be larger than for lower powered systems and with fewer systems in scope the burden of enforcement bodies to undertake compliance work is lower. For these reasons we recommend Option 1: retain the inspection regime for air-conditioning systems, adding inspections for the combined air-conditioning and ventilation systems and increasing the effective rated output threshold to over 70kW.

Option 2: Produce an Alternative Measures report

### Costs

27. The costs of setting up and carrying out an Alternative Measures report for air-conditioning systems to Government and business would exceed £6.5 million. Establishing an Alternative Measures (air-conditioning) approach would require a set of measures acceptable to the European Commission as providing carbon savings equal to or exceeding the savings to be achieved by an inspection regime, supported by a database of properties in scope and a surveillance programme. There would also be costs associated with creating and running an advice programme as part of this approach. These costs are expected to outweigh the costs to businesses and homeowners of an inspection scheme for systems or combined systems of 70kW or over.

## Benefits

28. An Alternative Measures approach could potentially include a wider scope than a targeted inspection system, potentially yielding greater carbon savings and energy efficiency than an inspection regime and helping to reduce the energy costs of building owners or occupiers.
29. Taking account of the potential costs and benefits of adopting an Alternative Measures approach for air conditioning system reports we do not recommend this alternative approach to an inspections regime.

# Annex B

## Consultation questions

We strongly encourage responses via the online survey, particularly from organisations with access to online facilities such as local authorities, representative bodies and businesses. Consultations receive a high-level of interest across many sectors. Using the online survey greatly assists our analysis of the responses, enabling more efficient and effective consideration of the issues raised.

To respond to the consultation through the online survey, please access this link:  
<https://www.surveymonkey.co.uk/r/EPBD3Consultation>

### **Respondent Details**

**Please provide the below respondent details**

- a. Name
- b. Position (if applicable)
- c. Organisation (if applicable)
- d. Address (including postcode)
- e. Email address
- f. Telephone number
- g. Please state whether you are responding on behalf of yourself or the organisation stated above

**Which description below best identifies you or the organisation you are responding to this consultation on behalf of?**

- Builder/Developer
- Installer/Specialist sub-contractor
- Designer/Engineer/Surveyor
- Local Authority
- Building Control Approved Inspector
- Competent Persons Scheme Operator
- Manufacturer/Supply chain
- Property Management
- National representative or trade body
- Professional body or institution
- Research/Academic organisation
- Energy sector
- Other (please specify): \_\_\_\_\_

**Please tick the one box which best describes the size of your or your organisation's business.**

- Micro – typically 0 to 9 full-time or equivalent employees (incl. sole traders)
- Small – typically 10 to 49 full-time or equivalent employees
- Medium – typically 50 to 249 full-time or equivalent employees
- Large – typically 250+ full-time or equivalent employees
- None of the above (please specify): \_\_\_\_\_

## Consultation Questions

**Q1: Do you agree that the threshold of the current air-conditioning inspection regime should be increased to include only air-conditioning systems and combined systems with an effective rated output of over 70kW?**

**a. Yes**

**b. No inspect air-conditioning systems and combined systems with an effective rated output of over 12kW.**

**If your answer is no, please explain your reasoning [maximum 250 words] and provide supporting evidence if possible.**

**Q2: The analysis of impact makes a number of assumptions on the number and level of rated outputs of heating systems and air-conditioning systems and combined systems and the cost of inspections, etc.**

**Do you think the assumptions in the analysis of impact are fair and reasonable?**

**a. Yes**

**b. No**

**Please explain your reasoning and provide any evidence to support this [maximum 250 words].**

**Q3: Do you have any information on the number of combined air-conditioning and ventilation systems; or combined heating and ventilation systems, in buildings in England and Wales?**

**a. Yes**

**b. No**

**If you answered yes, please provide evidence on how many there are in England and Wales with an effective rated output between 12 kW and 70 kW and how many above with an effective rated output of 70 kW as this information will contribute to a fuller impact assessment of changes to the regulations.**

# Annex C

## Definitions

- 1.1 Definitions introduced in the latest amendment of the Directive are in *italics* in the text below. We propose to use those definitions unless indicated otherwise. In some cases, it will not be necessary to put these definitions into regulation as they are concerned with methodological, rather than legislative requirements. This has been noted where this is the case.
- 1.2 The Energy Performance of Buildings Directive 2010/31/EU definitions are amended as follows:

**Technical building system** means technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site electricity generation, or a combination thereof, including those systems using energy from renewable sources, of a building or building unit;

**Building automation and control system** means a system comprising all products, software and engineering services that can support energy efficient, economical and safe operation of technical building systems through automatic controls and by facilitating the manual management of those technical building systems;

**Heating system** means a combination of the components required to provide a form of indoor air treatment, by which the temperature is increased;

**Heat generator** means the part of a heating system that generates useful heat using one or more of the following processes:

- a) the combustion of fuels in, for example, a boiler;
- b) the Joule effect, taking place in the heating elements of an electric resistance heating system;
- c) capturing heat from ambient air, ventilation exhaust air, or a water or ground heat source using a heat pump.

**Energy performance contracting** means energy performance contracting as defined in point (27) of Article 2 of Directive 2012/27/EU of the European Parliament and of the Council (\*1)<sup>16</sup>; a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole

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<sup>16</sup> (\*1) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).";"

term of the contract, where investments (work, supply or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings.

**Micro isolated system** means micro isolated system as defined in point 27 of Article 2 of Directive 2009/72/EC of the European Parliament and of the Council (\*2)<sup>17</sup>.

2009/72/EC Article 2.27: '**micro isolated system**' means any system with consumption less than 500 GWh in the year 1996, where there is no connection with other systems;

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<sup>17</sup> (\*2) Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (OJ L 211, 14.8.2009, p. 55).'"

# Annex D

## Personal Data

The following text explains your rights and gives you information you are entitled to under the Data Protection Act 2018.

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

### **1. The identity of the data controller and contact details of our Data Protection Officer**

The Ministry of Housing, Communities and Local Government (MHCLG) is the data controller. The Data Protection Officer can be contacted at [dataprotection@communities.gov.uk](mailto:dataprotection@communities.gov.uk)

### **2. Why we are collecting your personal data**

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

### **3. Our legal basis for processing your personal data**

The Data Protection Act 2018 states that, as a government department, MHCLG may process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

### **3. With whom we will be sharing your personal data**

We do not intend to share any personal data collected outside of MHCLG; and any data that will be shared with organisations outside of MHCLG will be anonymised. However, if further data sharing is required you will be informed via a revision to our privacy notice.

### **4. For how long we will keep your personal data, or criteria used to determine the retention period.**

Your personal data will be held for two years from the closure of the consultation

### **5. Your rights, e.g. access, rectification, erasure**

The data we are collecting is your personal data and you have considerable say over what happens to it. You have the right:

- a. to see what data we have about you
- b. to ask us to stop using your data, but keep it on record

- c. to ask to have all or some of your data deleted or corrected
- d. to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at <https://ico.org.uk/>, or telephone 0303 123 1113.

**6. Your personal data will not be sent overseas**

**The Data you provide directly will be stored by Survey Monkey on their servers in the United States. We have taken all necessary precautions to ensure that your rights in terms of data protection will not be compromised by this.**

**7. Your personal data will not be used for any automated decision making.**

**8. Your personal data will be stored in a secure government IT system. After the consultation closes, we will move the data from the third-party system used to gather the data to our internal systems.**