

Public consultation on the review of ecodesign and energy labelling measures for solid fuel boilers

Fields marked with * are mandatory.

Introduction

Public Consultation on the review of Commission Regulation (EU) 2015/1189 with regard to ecodesign requirements for solid fuel boilers and Commission Delegated Regulation (EU) 2015/1187 with regard to energy labelling requirements for solid fuel boilers

Context

EU energy labelling and ecodesign legislation helps to improve energy efficiency of products. Whereas ecodesign sets common EU-wide standards to remove the least performing products from the market, energy label gives consumers a clear and simple indication of the energy efficiency and other key features of products at the point of purchase. Both policies reduce greenhouse gas emissions while helping consumers to save money on their household energy bills.

For solid fuel boilers, ecodesign and energy labelling requirements should not only improve the energy efficiency of products but also reduce pollutant emissions. Since January 2020, solid fuel boilers with a rated heat output of 500 kW or less are subject to minimum energy efficiency requirements and to limits to the emissions of pollutants. Furthermore, since April 2017, solid fuel boilers with a rated heat output of 70 kW or less must display an energy label.

What is the purpose of this consultation?

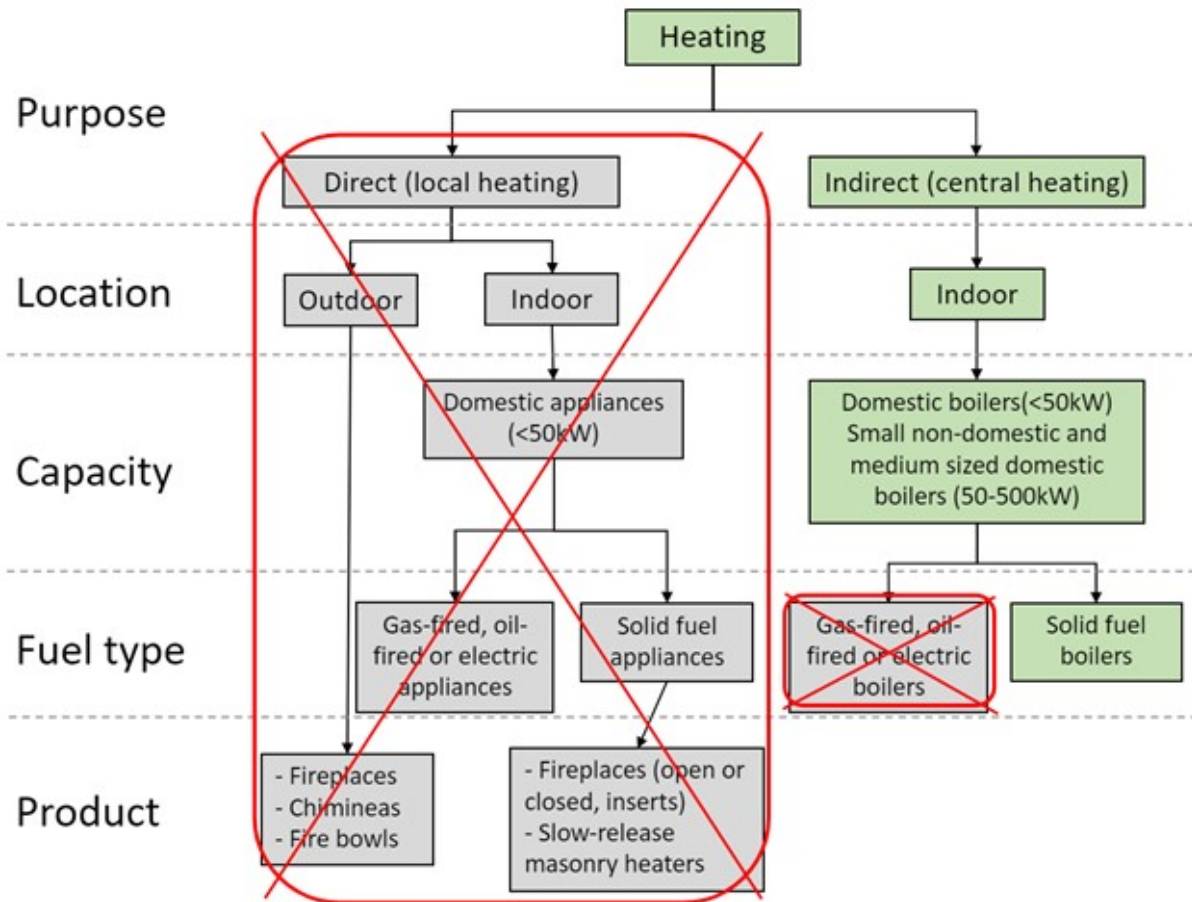
The Commission is now reviewing the current ecodesign and energy labelling measures for solid fuel boilers, laid down in Regulation (EU) 2015/1189 and Regulation (EU) 2015/1187 respectively.

The purpose of the consultation is to gather feedback from society that can be later used in the performance of that review. How can I participate?

This survey is tailored depending on the type of respondent, therefore you must answer only to the section that corresponds to your activity. The available sections are: Users of solid fuel boilers: questions U1 to U37 Retailers selling solid fuel boilers: questions R1 to R30 Installers/repairers of solid fuel boilers: questions I1 to I14 Manufacturers of solid fuel boilers: questions M1 to M37 NGOs/General public not user of a solid fuel boiler: questions N1 to N18 SCOPE OF THIS QUESTIONNAIRE

The figure below gives an idea of the equipment in the scope of this questionnaire. This questionnaire focusses on solid fuel boilers used for central heating, this is that can heat different areas in a building at the same time, and often also produce domestic hot water. Equipment intended to heat only one room such

as stoves and fireplaces is excluded. Solid fuel boilers are fueled with either fossil fuels such as coal or with biomass such as wood pellets or wood logs.



About you

* Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Greek
- Hungarian
- Irish

- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

* First name

Cristina

* Surname

Pricop

* Email (this won't be published)

cristina.pricop@epha.org

* Organisation name

255 character(s) maximum

European Public Health Alliance (EPHA)

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

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* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

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| <input type="radio"/> Afghanistan | <input type="radio"/> Djibouti | <input type="radio"/> Libya | <input type="radio"/> Saint Martin |
| <input type="radio"/> Åland Islands | <input type="radio"/> Dominica | <input type="radio"/> Liechtenstein | <input type="radio"/> Saint Pierre and Miquelon |
| <input type="radio"/> Albania | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania | <input type="radio"/> Saint Vincent and the Grenadines |
| <input type="radio"/> Algeria | <input type="radio"/> Ecuador | <input type="radio"/> Luxembourg | <input type="radio"/> Samoa |
| <input type="radio"/> American Samoa | <input type="radio"/> Egypt | <input type="radio"/> Macau | <input type="radio"/> San Marino |
| <input type="radio"/> Andorra | <input type="radio"/> El Salvador | <input type="radio"/> Madagascar | <input type="radio"/> São Tomé and Príncipe |
| <input type="radio"/> Angola | <input type="radio"/> Equatorial Guinea | <input type="radio"/> Malawi | <input type="radio"/> Saudi Arabia |
| <input type="radio"/> Anguilla | <input type="radio"/> Eritrea | <input type="radio"/> Malaysia | <input type="radio"/> Senegal |
| <input type="radio"/> Antarctica | <input type="radio"/> Estonia | <input type="radio"/> Maldives | <input type="radio"/> Serbia |
| <input type="radio"/> Antigua and Barbuda | <input type="radio"/> Eswatini | <input type="radio"/> Mali | <input type="radio"/> Seychelles |
| <input type="radio"/> Argentina | <input type="radio"/> Ethiopia | <input type="radio"/> Malta | <input type="radio"/> Sierra Leone |
| <input type="radio"/> Armenia | <input type="radio"/> Falkland Islands | <input type="radio"/> Marshall Islands | <input type="radio"/> Singapore |

- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan

- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso

- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands

- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland

- Grenada
- Guadeloupe

- Guam

- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau

- Guyana

- Haiti
- Heard Island and McDonald Islands
- Honduras

- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova

- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar/Burma

- Namibia
- Nauru

- Nepal

- Netherlands
- New Caledonia
- New Zealand
- Nicaragua

- Niger
- Nigeria
- Niue
- Norfolk Island

- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland

- Syria

- Taiwan
- Tajikistan
- Tanzania
- Thailand

- The Gambia
- Timor-Leste
- Togo

- Tokelau

- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena
- Ascension and Tristan da Cunha
- Tonga
- Trinidad and Tobago
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia

- Democratic Republic of the Congo
- Lesotho
- Saint Kitts and Nevis
- Zimbabwe
- Denmark
- Liberia
- Saint Lucia

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association', 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

Public

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

User questionnaire

Note: If you wish to respond about heating with solid fuel boilers for multiple boilers e.g., in multiple buildings, this questionnaire must be filled out once for each boiler and submitted separately. In these cases, please use the same contact details each time.

U1. Please choose the option that best reflects your respondent category:

- User - Responding about a residential building

- User - Responding about a non-residential building

U2. Where is your building located?

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- Non-EU

U3. Which option better describes the location of your building?

- Urban
- Suburban

- Rural

U4. Which of the following options apply to the energy infrastructure at your building location?

- Mains electricity connection
- Mains gas connection
- District heating connection
- Individual installation

U5. In which year was your solid fuel boiler installed?

U6. What is the rated heat output of the boiler in kW?

U7. Approximately how much did your solid fuel boiler cost, in €?

	Purchase cost	Installation cost	Total cost (purchase + installation)
Cost in €			

U8. Which of the following fuels does your manufacturer recommend for use in your solid fuel boiler?

- Wood pellets
- Chipped wood
- Log wood
- Wood briquettes
- Other woody biomass, e.g. sawdust
- Non-woody biomass
- Coal (bituminous, brown including briquettes)
- Coke, anthracite or blended fossil fuel briquettes
- Other

U9. Which of the following fuels do you actually use

- Wood pellets
- Chipped wood
- Log wood
- Wood briquettes
- Other woody biomass, e.g. sawdust
- Non-woody biomass
- Coal (bituminous, brown including briquettes)
- Coke, anthracite or blended fossil fuel briquettes
- Other

If you answered "Other", please specify the type of fuel

U10. Approximately how much (in €/year) do you spend on fuel for your solid fuel boiler?

U11. How much fuel do you use per year on average (e.g. tons, m³, etc.)?

U12. How much do you pay in average per unit of fuel? (please specify the unit too, e.g. per kg, per tonne, per m³ etc.)

U13. Has your solid fuel boiler ever been repaired (not including routine maintenance)?

- No
- Yes, just once
- Yes, more than once

If you answered “yes”, please explain what failed:

U14. If you answered “yes” to U13, how old was the solid fuel boiler when it was repaired?

- Less than 2 years
- Between 2 and 10 years
- More than 10 years
- No opinion

U15. If you answered “yes” to U13 and if you repaired the boiler yourself, was it easy to get spare parts?

- Yes
- No
- No opinion

U16. How long is the warranty of your boiler, in months, in addition to the two years that are mandatory by law?

U17. Did you use the energy label information about energy class (A, B, C etc.) when choosing your solid fuel boiler?

- Yes, it was the main selection criterion
- Yes, it was part of the selection criterion
- No
- No opinion

Please specify why it was or it was not helpful

U18. Which of the following options best reflects the use you make of the energy label?

- I only want to compare the energy efficiency of a solid fuel boiler with other solid fuel boilers
- I want to compare the energy efficiency of a solid fuel boiler with boilers using different heat sources like gas, oil, or heat pumps (electricity)
- No opinion

U19. Which problems do you see associated with the use of solid fuel boilers?

- Biomass/wood is a scarce resource that needs time to renew and should primarily be used for other uses (e.g. construction)
- Solid fuel boilers remain less efficient than boilers using other fuels
- Solid fuel boilers are a source of air pollution and, depending on the location, expose vulnerable citizens
- Solid fuel boilers are cumbersome to feed and clean
- Other

If you answered "Other", please explain your concerns on solid fuel boilers

U20. Are you concerned about the potential negative effect of solid fuel boilers on air quality in your area?

- Yes
- No
- No opinion

Please explain your choice

U21. Energy labels for solid fuel boilers do not currently display information on the emissions of pollutants. To what extent would you support including that information on the label?

	Strongly against	Against	Neutral	Supportive	Strongly supportive
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Particulate matter (PM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon monoxide (CO)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic gaseous compounds (OGCs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nitrogen oxides (NOx)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

U22. How do you think that the emission of pollutants should be displayed on the label?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
By means of a scale (e.g. from A to D) similar to the scale already existing for energy efficiency (e.g. A to D)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By showing the numerical value in mg/m ³	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

U23. How likely are you to replace your current solid fuel boiler with a new solid fuel boiler?

- Not at all, I'll for sure use a different heating such as a gas boiler or a heat pump
- I'll probably use a different heating product
- I'll probably continue to use a solid fuel boiler
- I'll definitely continue to use a solid fuel boiler
- No opinion

Can you please explain the reason?

U24. How important are the following aspects when choosing a specific model of solid fuel boiler among the models in the market?

	Very important	Somewhat important	Not important	No opinion
Better energy efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower emission of pollutants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Potential to use local fuels and to replace gas and electricity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower CO2 emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

U25. The minimum energy efficiency thresholds according to Regulation (EU) 2015 /1189 are set at 75 % for solid fuel boilers with a rated heat output of 20 kW or less, and at 77 % for larger boilers. Should the minimum energy efficiency performance requirements be more ambitious?

- Yes
- No
- No opinion

Can you please explain the reason?

U26. Are you aware of technological improvements developed over the last years that would support raising the minimum energy efficiency performance thresholds? Which ones?

U27. Should the requirements on pollutant emissions set out in Regulation (EU) 2015/1189 be more ambitious?

- Yes
- No
- No opinion

Can you please explain the reason? If you answered "Yes", could you suggest what the new value(s) should be and for which pollutants?

U28. Are you aware of technological improvements developed over the last years that would support lowering the pollutant emission limits?

U29. Should emission limits depend on whether the solid fuel boiler is manually or automatically stoked, as currently in Regulation (EU) 2015/1189?

- Yes
- No, a single limit should be set for both cases
- No, but the limits should depend on a different criteria, such as the fuel used

Can you please explain the reason?

U30. Apart from the pollutants already regulated, should new pollutants be included in the revision of Regulation (EU) 2015/1189?

- Yes
- No
- No opinion

Please explain your choice. If you chose “yes”, what new pollutants should be included in the Regulation and why?

U31. Current ecodesign rules cover particulate matter (PM) as a whole, rather than specifying any particular fractions. Finer PM fractions (PM2.5 and smaller) are known to have the greatest health impacts. Should the current requirements for PM emissions be revised?

- Yes, by differentiating particles by size (PM10, PM2.5 and ultrafine particles) in the technical information of the product
- Yes, by setting mandatory limits to particulate matter depending on its size (PM10, PM2.5 and ultrafine particles)
- Yes, but none of the two options above are adequate
- No
- No opinion

Please explain your choice

U32. Should ecodesign legislation also cover non-woody biomass boilers (such as straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells)? (the scope of the legislation is currently limited to woody biomass)

- Yes

- No
- No opinion

Please explain your choice

U33. Should the same energy efficiency thresholds apply for non-woody biomass as for woody biomass?

- Yes
- No
- No opinion

Please explain your choice. If you answered "No", could you suggest what the value (s) should be?

U34. Should the same maximum pollutant emission limits apply for non-woody biomass boilers as for woody biomass boilers?

- Yes
- No, they should be more stringent
- No, they should be less stringent
- No opinion

Please explain your choice. If you answered "No", could you suggest what the value (s) should be and for which pollutants?

U35. Circular economy aspects are increasingly being introduced into ecodesign regulations for different products. To what extent would you support that the following circular economy requirements for solid fuel boilers are introduced in future regulatory reviews?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Mandatory availability of spare parts for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to repair and maintenance information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reparability score on the basis of the weighted average of a number of aspects such as the disassembly steps, the need of specific tools for assembly /disassembly or the use of removable/ reusable fasteners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum recycled content (eg making mandatory the recyclability of around 90% of the product)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you suggest modifications to the aspects included in the table or including new ones?

U36. Are you aware of any regional or national initiatives that promote or restrict the installation and/or use of solid fuel boilers?

- Yes
- No

If you answered “yes”, please enter the names or links to the initiatives

U37. Please feel free to add any further comments or reflections about solid fuel boilers

Retailer questionnaire

R1. In which countries do you sell solid fuel boilers?

R2. Please select the percentages of your sales regarding the solid fuel specified by the manufacturer: (Answers should balance out to sum up to around 100%) (in case of boilers able to use several types of fuels, please choose only the preferred one, as declared by the manufacturer)

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
Wood log	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chipped wood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wood pellets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fossil fuel (e.g. coal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-woody biomass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other types of solid fuel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

R3. If you answered "Other types of solid fuel", could you please specify which ones?

R4. What is the typical purchase price range of solid fuel boilers, in € and excluding VAT?

R5. Is the price of a solid fuel boiler related to the energy efficiency label class?

- Yes
- No
- No opinion

If you answered "Yes", can you estimate how much the price depends on the energy class of the label? (in % or in €)

R6. How has energy efficiency improved in solid fuel boilers since the introduction of the label? You may explain here how the shares of your sales have shifted towards higher classes in the energy label?

R7. Based on your sales, please select the percentages for sales volumes in terms of rated heat output: (Answers should balance out to sum up to around 100%)

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
< 20 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 20 kW and 70 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 70 kW and 100 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 100 kW and 200 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 200 kW and 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Above 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

R8. What is the typical lifetime range of solid fuel boilers? (in years)

R9. How important are the following aspects for your customers when choosing a specific model of solid fuel boiler among the models in the market? (please place “X” in the corresponding cells)

	Very important	Somewhat important	Not important	No opinion
Better energy efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower emission of pollutants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Potential to use local fuels and to replace gas and electricity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower CO2 emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

R10. Has the energy label a significant influence on the decision of your customers to purchase or not a solid fuel boiler?

- Yes
- No
- No opinion

Please explain your choice

R11. Which of the following options best reflects customer’s interest on the label?

- The customer only wants to compare the energy efficiency of a solid fuel boiler with other solid fuel boilers
- The customer wants to compare the energy efficiency of a solid fuel boiler also with other boilers that do not use solid fuel like gas, oil, or electricity.
- Other

Please explain your choice

R12. Energy labels for solid fuel boilers do not currently display information on the emissions of pollutants. To what extent would you support including that information on the label?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Particulate matter (PM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon monoxide (CO)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic gaseous compounds (OGCs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nitrogen oxides (NOx)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your choice

R13. How do you think that the emission of pollutants should be displayed on the label?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
By means of a scale (e.g. from A to D) similar to the scale already existing for energy efficiency (e.g. A to D)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By showing the numerical value in mg/m ³	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

R14. Should the energy label display a water heating efficiency class for combination boilers?

- Yes
- No
- No opinion

R15. Is there any other information that should be displayed in the energy label?

- Yes
- No
- No opinion

If you chose "yes", what this information should be?

R16. The minimum energy efficiency thresholds according to Regulation (EU) 2015 /1189 are set at 75 % for solid fuel boilers with a rated heat output of 20 kW or less, and at 77 % for larger boilers. Should the minimum energy efficiency performance requirements be more ambitious?

- Yes, but only for boilers with a rated heat output of 20 kW or less
- Yes, but only for boilers above 20 kW of rated heat output
- Yes, for all
- Yes, but according to a criteria other than the rated heat output
- No, they should remain the same
- No opinion

Please explain your choice. If you chose yes, what should the new value(s) be?

R17. Are you aware of technological improvements developed over the last years that would support raising the minimum energy efficiency performance thresholds?

R18. Are you aware of technological improvements developed over the last few years that would support the introduction of stricter limits for pollutant emissions?

R19. One method to decrease pollutant emissions is to apply a post-combustion treatment by means of e.g a mechanical or electrostatic particle filter. Do you offer post-combustion equipment for solid fuel boilers or solid fuel boilers with post-combustion equipment already integrated?

- Yes
- No
- No opinion

R20. If you answered "yes" in R19, please mention what kind of equipment is sold

- Electrostatic precipitator
- Cyclonic separator
- Ceramic filter

- Catalyst
- Flue gas extraction fan
- Automatic combustion air flow controls

Equipment not mentioned above

R21. If you answered “yes” in R19, how big a share of the solid fuel boilers is sold with post-combustion equipment?

- Less than 5%
- 5%-10%
- 10%-25%
- More than 25%

R22. By how much, in €, does the price of the solid fuel boiler increase when incorporating such equipment?

R23. If you answered "yes" in R19, can you please indicate what is the share of boilers with integrated post-combustion equipment vs post-combustion equipment sold separately from the boiler?

R24. Should ecodesign legislation cover also solid fuel boilers between 500 kW and 1000 kW heat output? (the scope of the legislation is currently limited to boilers of 500 kW or less)

- Yes
- No
- No opinion

Please explain your choice

R25. Should ecodesign legislation also cover non-woody biomass boilers (such as straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells)? (the scope of the legislation is currently limited to woody biomass)

- Yes
- No
- No opinion

Please explain your choice

R26. Should the same energy efficiency thresholds apply for non-woody biomass as for woody biomass?

- Yes
- No
- No opinion

Please explain your choice. If you answered "No", could you suggest what the value (s) should be?

R27. Should the same maximum pollutant emission limits apply for non-woody biomass boilers as for woody biomass boilers?

- Yes
- No, they should be more stringent
- No, they should be less stringent
- No opinion

Please explain your choice. If you answered "No", could you suggest what the value (s) should be and for which pollutants?

R28. Are you aware of any regional or national initiatives that promote or restrict the installation and/or use of solid fuel boilers?

- Yes
- No

If you answered "yes", please enter the names or links to the initiatives

R29. Circular economy aspects are increasingly being introduced into ecodesign regulations for different products. To what extent would you support that the following circular economy requirements for solid fuel boilers are introduced in future regulatory reviews?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Mandatory availability of spare parts for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to repair and maintenance information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reparability score on the basis of the weighted average of a number of aspects such as the disassembly steps, the need of specific tools for assembly /disassembly or the use of removable/ reusable fasteners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum recycled content (eg making mandatory the recyclability of around 90% of the product)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you suggest modifications to the aspects included in the table or including new ones?

R30. Please feel free to add any further comments or reflections about solid fuel boilers

Installer/repairer questionnaire

I1. Which of the following services does your company provide regarding solid fuel boilers?

- Installation
- Maintenance
- Repair

I2. In which countries do you install/maintain/repair solid fuel boilers?

I3. What is the typical lifetime range of solid fuel boilers? (in years)

I4. Please select the percentage of number of installations in terms of fuel specified by the manufacturer

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
Wood log	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wood briquettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wood pellets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fossil fuel (e.g. coal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other types of solid fuel (e.g. charcoal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. What is the typical purchase price range of solid fuel boilers? (please include both the purchase and installation prices, in € without VAT)

16. What is the percentage of the solid fuel boilers you install or maintain according to the rated heat output?

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
< 20 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 20 kW and 70 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 70 kW and 100 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 100 kW and 200 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 200 kW and 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
> 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please choose which of the following causes for failure of solid fuel boilers are most common

- Inappropriate installation
- Inappropriate fuels
- Inadequate maintenance of the combustion chamber
- Mechanical failure of internal feeder
- Mechanical failure of other parts in the boiler
- Electrical failure or failure of electronic control parts of the boiler
- Improper operation /operation failure
- Wrong setting
- Software issue

Other (please explain). You also may wish to provide more details about the reasons for failure indicated above

18. Typically how old is a solid fuel boiler when it fails for the first time?

- Less than 2 years
- 3 to 10 years
- More than 10 years
- No opinion

19. As a professional, do you have easy access to spare parts?

- Yes, always
- Yes, normally
- Often not
- Never

If you answered “often not” or “Never”, can you please provide more details?

110. What is the typical cost of repair in €?

I11. How long is the typical warranty of a solid fuel boiler, in months, in addition to the two years that are mandatory by law?

I12. Circular economy aspects are increasingly being introduced into ecodesign regulations for different products. To what extent would you support that the following circular economy requirements for solid fuel boilers are introduced in future regulatory reviews?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Mandatory availability of spare parts for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to repair and maintenance information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reparability score on the basis of the weighted average of a number of aspects such as the disassembly steps, the need of specific tools for assembly /disassembly or the use of removable/ reusable fasteners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum recycled content (eg making mandatory the recyclability of around 90% of the product)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you suggest modifications to the aspects included in the table or including new ones?

I13. Are you aware of any regional or national initiatives that promote or restrict the installation and/or use of solid fuel boilers

- Yes
- No

If you answered “yes”, please enter the names or links to the initiatives

I14. Please feel free to add any further comments or reflections about solid fuel boilers

Manufacturer questionnaire

M1. In which countries do you manufacture solid fuel boilers?

M2. In the market of which countries do you place solid fuel boilers?

M3. Based on your production, please select the percentages of production regarding the solid fuel used: (answers should balance out to sum up to around 100%) (in case of boilers able to use several types of fuels, please choose only the preferred one, as declared by the manufacturer)

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
Wood log	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wood briquettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wood pellets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fossil fuel (e.g. coal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other types of solid fuel (e.g. charcoal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

M4. How have production volumes of solid fuel boilers evolved since 2015 regarding the fuel used?

M5. Please select the percentages of your sales in terms of rated heat output: (answers should balance out to sum up to around 100%)

	None	Very low share (< 10%)	Low share (10-30%)	Medium share (30-50%)	High share (50-70%)	Very high share (70-90%)	Dominant share (>90%)
< 20 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 20 kW and 70 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 70 kW and 100 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 100 kW and 200 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 200 kW and 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
> 500 kW	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

M6. What is the typical lifetime range of solid fuel boilers? (in years)

M7. What is the typical production cost range of solid fuel boilers, in €?

M8. What is the typical installation cost range of solid fuel boilers, in €?

M9. Is the price of a solid fuel boiler related to the class in the energy label?

- Yes
- No
- No opinion

If you answered "yes", can you estimate how much the price depends on the energy label classes, when all or most of the other technical characteristics are similar? (In % or in €)(please also indicate if it depends on fuel types)

M10. does the energy label for solid fuel boilers (Regulation (EU) 2015/1187) provide useful information to the consumer about the energy performance of solid fuel boilers, e.g. by allowing to compare energy efficiency of different models of boilers?

- Yes
- Yes, but it can be improved
- No
- No opinion

Please explain your choice

M11. To what extent do you agree to the following statements on ecodesign Regulation (EU) 2015/1189?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion

It has helped improve energy efficiency of solid fuel boilers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It has helped reduce pollutant emissions from solid fuel boilers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It has increased the cost of solid fuel boilers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

M12. How has the ecodesign Regulation (EU) 2015/1189 impacted your company's product portfolio of solid fuel boilers since 2015?

- No impact, no product has been removed from the market or redesigned, and no new product has been developed
- Some impact. New product development has focused on pushing products into a higher energy label class or lower emission levels
- High impact. Products in the lower energy labelling class are taken out and/or new products are introduced for the highest possible class and/or less polluting products have been developed
- No opinion

Please explain your choice

M13. One method to decrease pollutant emissions is to apply a post-combustion treatment by means of e.g a mechanical or electrostatic particle filter. Do you produce any of the following equipment to reduce pollutant emissions from solid fuel boilers (or boilers with any of these ancillary products already included)?

- Electrostatic precipitator
- Cyclonic separator
- Ceramic filter
- Catalyst
- Flue gas extraction fan
- Automatic combustion air flow controls

Equipment not mentioned above

M14. In your company, how big a share of solid fuel boilers is produced with post-combustion equipment?

- None
- Less than 5%
- 5%-10%
- 10%-25%
- More than 25%

M15. By how much, in € or %, does the cost of the solid fuel boiler increase when incorporating a post-combustion equipment?

M16. To what extent would you support having information on pollutant emissions on the energy label for solid fuel boilers?

	Strongly against	Do not support	Neutral	Support	Strongly support
Particulate matter (PM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon monoxide (CO)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organic gaseous compounds (OGCs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nitrogen oxides (NOx)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

M17. How do you think that the emission of pollutants should be displayed on the label?

- By means of a scale (e.g. from A to D) similar to the scale already existing for energy efficiency (e.g. A to D)
- By showing the numerical value in mg/m³
- Other

Please explain your choice

M18. Should the energy label display a water heating efficiency class for combination boilers?

- Yes
- No

- No opinion

Please explain your choice

M19. Is there any other information that should be displayed in the energy label?

- Yes
- No
- No opinion

If you answered "yes", please explain what this information should be

M20. The classes displayed in the energy label for solid fuel boilers have been designed to allow a direct comparison of solid fuel boilers with the space heaters in the scope of Regulation (EU) 811/2013, namely space and combination heaters using other energy carriers, such as gas, oil or electricity. Due to this intend to set a direct comparison between boilers of different technologies, solid fuel boilers cannot reach class A+++ of the energy label and are mostly accumulated in two energy efficiency classes (normally A+ and B).

In addition, the label classes for solid fuel boilers are calculated with a “biomass label factor” to give biomass boilers a “bonus” compared to fossil fuel boilers.

In your opinion, should the two energy labels be merged to give consumer a clear comparison between boilers using different technologies, or should solid fuel boilers keep their own label?

- The solid fuel boiler label should be specific and stand alone with no links to Regulation (EU) 811/2013 for gas, oil or electric boilers
- Both labels should be merged and the current biomass label factor of 1,45 should be kept
- Both labels should be merged, applying a lower biomass label factor
- Both labels should be merged but the biomass label factor should be removed
- No opinion

Please explain your choice

M21. Should the minimum energy efficiency performance requirements in the ecodesign Regulation (EU) 2015/1189 be more ambitious?

- Yes, but only for boilers with a rated heat output of 20 kW or less
- Yes, but only for boilers above 20 kW of rated heat output
- Yes, for both above and below 20 kW of rated heat output
- Yes, but according to different rated heat output values or a criteria other than the rated heat output
- No
- Other
- No opinion

Please explain your choice. If you chose yes, what should the new value(s) be?

M22. Which technological improvements developed over the last years would support raising the minimum energy efficiency performance thresholds?

M23. What would you consider today as best available technology (BAT) and best not (yet) available technology (BNAT) concerning improvement of energy efficiency?

M24. Should the pollutant emissions limits in Regulation (EU) 2015/1189 be more ambitious?

- Yes, but only for boilers with a rated heat output of 20 kW or less
- Yes, but only for boilers above 20 kW of rated heat output
- Yes, for both above and below 20 kW of rated heat output
- Yes, but according to different rated heat output values or a criteria other than the rated heat output
- No
- Other
- No opinion

Please explain your choice. If you chose yes, what should the new value(s) be?

M25. Which technological improvements developed over the last years would support more ambitious pollutant emissions limits?

M26. Should emission limits depend on whether the solid fuel boiler is manually or automatically stoked, as currently in Regulation (EU) 2015/1189?

- Yes
- No, a single limit should be used for both cases
- No, but the limits should depend on a different criteria, such as the fuel used

Please explain your choice

M27. Apart from the pollutants already regulated, should new pollutants be included in the revision of Regulation (EU) 2015/1189?

- Yes
- No
- No opinion

Please explain your choice. If you answered “yes”, what new pollutants should be included in the Regulation and why?

M28. Current ecodesign rules cover particulate matter (PM) as a whole, rather than specifying any particular fractions. Finer PM fractions (PM2.5 and smaller) are known to have the greatest health impacts. Should the current requirements for PM emissions be revised?

- Yes, by differentiating particles by size (PM10, PM2.5 and ultrafine particles) in the technical information of the product
- Yes, by setting mandatory limits to particulate matter depending on its size (PM10, PM2.5 and ultrafine particles)
- Yes, but none of the two options above are adequate
- No
- No opinion

Please explain your choice

M29. Should the scope of Ecodesign Regulation (EU) 2015/1189 be extended to solid fuel boilers between 500 kW and 1000 kW heat output?

- Yes
- No
- No opinion

Please explain your choice

M30. Should the scope of Regulation (EU) 2015/1189 be extended to non-woody biomass boilers?

- Yes
- No
- No opinion

Please explain your choice

M31. Should the same energy efficiency thresholds as for woody biomass apply to non-woody biomass?

- Yes
- No, they should be more stringent
- No, they should be less stringent
- No opinion

Please explain your choice

M32. Should the same maximum pollutant emission limits as for woody biomass apply to non-woody biomass?

- Yes
- No, they should be more stringent
-

No, they should be less stringent

No opinion

Please explain your choice

M33. What are the costs of compliance tests of the products according to the current ecodesign and energy label regulations? Please write your typical test price per single test in €. (Some details of methods are provided in Annex III of Ecodesign Regulation 2015/1189 and Annex VIII of Energy Labelling Regulation 2015/1187. The test standard is EN 303-5).

M34. For particulate matter (PM) and dust the test standard (EN 303-5 and CEN /TS 15883:2009) refers to three different test methods that coincide respectively with the so-called combined Austrian and German method, the so-called Norwegian method, and the so-called UK method. According to which of these test method(s) are your products normally tested? Which advantages or disadvantages have the different approaches from your perspective?

M35. Circular economy aspects are increasingly being introduced into ecodesign regulations for different products. To what extent would you support that the following circular economy requirements for solid fuel boilers are introduced in future regulatory reviews?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Mandatory availability of spare parts for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to repair and maintenance information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reparability score on the basis of the weighted average of a number of aspects such as the disassembly steps, the need of specific tools for assembly /disassembly or the use of removable/ reusable fasteners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum recycled content (eg making mandatory the recyclability of around 90% of the product)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you suggest modifications to the aspects included in the table or including new ones?

M36. Are you aware of any regional or national initiatives that promote or restrict the installation and/or use of solid fuel boilers?

- Yes
- No

M37. Please feel free to add any further comments or reflections about solid fuel boilers

NGOs/General public questionnaire

N1. Please choose the option that best reflects your respondent category

- Individual not owner of a solid fuel boiler
- NGO
- Other

N2. Are you concerned about the potential effect of solid fuel boilers on air quality in your area?

- Yes
- No
- No opinion

Please explain your choice

Europe's air quality status 2023 report by the EEA recognises solid fuel burning as the main source of PM10 and as one of the top three sources of PM2.5 respectively. Careful consideration must be given to the specific air pollutants emitted during biomass burning, recognising their direct correlation with health impacts. Epidemiological studies point to causal links between PM and asthma in children and adults, acute lower respiratory infections in young children, chronic obstructive pulmonary disease (COPD), ischemic heart diseases, and diabetes in adults, and development of cataracts in women. Links between lung cancer and inhalation of biomass combustion products have also been found. The review should therefore prioritise minimising emissions and promoting clean alternatives.

N3. Are you concerned about energy efficiency of solid fuel boilers?



- Yes
- No
- No opinion

Please explain your choice

N4. How supportive are you of having EU regulations that:

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
...set minimum energy efficiency requirements for solid fuel boilers on the EU market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
...set maximum limits for pollutant emissions from solid fuel boilers on the EU market	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

N5. The minimum energy efficiency thresholds according to Regulation (EU) 2015 /1189 are set at 75 % for solid fuel boilers with a rated heat output of 20 kW or less, and at 77 % for larger boilers. Should the minimum energy efficiency performance requirements set out in Regulation (EU) 2015/1189 be more ambitious?

- Yes
- No
- No opinion

Please explain your choice. If you chose yes, could you suggest what the new value (s) should be?

N6. Are you aware of technological improvements developed over the last years that would support raising the minimum energy efficiency performance thresholds?

N7. Should the pollutant emissions limits set out in Regulation (EU) 2015/1189 be more stringent?

- Yes

- No
- No opinion

Please explain your choice. If you chose yes, could you suggest what the new value (s) should be?

Scientific evidence shows that there is no evidence of a safe level of air pollution. Therefore, any regulation must strive to achieve the highest air quality standards, while safeguarding public health comprehensively.

N8. Are you aware of technological improvements developed over the last years that would support more stringent pollutant emission limits?

N9. Energy labels for solid fuel boilers do not currently display information on the emissions of pollutants. To what extend would you support including that information on the label set out by Regulation (EU) 2015/1187?

	Strongly against	Do not support	Neutral	Support	Strongly support
Particulate matter (PM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Carbon monoxide (CO)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Organic gaseous compounds (OGCs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Nitrogen oxides (NOx)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

N10. Should emission limits depend on whether the solid fuel boiler is manually or automatically stoked, as currently in Regulation (EU) 2015/1189?

- Yes
- No, a single limit should be used for both cases
- No, but the limits should depend on a different criteria, such as the fuel used

Please explain your choice

N11. Apart from the pollutants already regulated, should new pollutants be included in the revision of Regulation (EU) 2015/1189?

- Yes
- No
-

No opinion

Please explain your choice. If you answered “yes”, what new pollutants should be included in the Regulation and why?

New pollutants regulated should include Ultrafine Particles and Black Carbon as pollutants of emerging and increasing concern in the health community.

N12. Current ecodesign rules cover particulate matter (PM) as a whole, rather than specifying any particular fractions. Finer PM fractions (PM_{2.5} and smaller) are known to have the greatest health impacts. Should the current requirements for PM emissions be revised?

- Yes, by differentiating particles by size (PM₁₀, PM_{2.5} and ultrafine particles) in the technical information of the product
- Yes, by setting mandatory limits to particulate matter depending on its size (PM₁₀, PM_{2.5} and ultrafine particles)
- Yes, but none of the two options above are adequate
- No
- No opinion

Please explain your choice

This is the science- and evidence-based policy option, as the WHO Air Quality Guidelines set different values for PM₁₀ and PM_{2.5}.

N13. Should ecodesign legislation also cover non-woody biomass boilers (such as straw, miscanthus, reeds, kernels, grains, olive stones, olive cakes and nut shells)? (the scope of the legislation is currently limited to woody biomass)

- Yes
- No
- No opinion

Please explain your choice

N14. Should the same energy efficiency thresholds as for woody biomass apply to non-woody biomass?

- Yes
- No, they should be more stringent

- No, they should be less stringent
- No opinion

N15. Should the same maximum pollutant emission limits as for woody biomass apply to non-woody biomass?

- Yes
- No, they should be more stringent
- No, they should be less stringent
- No opinion

Please explain your choice

N16. Are you aware of any regional or national initiatives that promote or restrict the installation and/or use of solid fuel boilers?

- Yes
- No

N17. Circular economy aspects are increasingly being introduced into ecodesign regulations for different products. To what extent would you support that the following circular economy requirements for solid fuel boilers are introduced in future regulatory reviews?

	Strongly against	Against	Neutral	Supportive	Strongly supportive	No opinion
Mandatory availability of spare parts for 10 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to repair and maintenance information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reparability score on the basis of the weighted average of a number of aspects such as the disassembly steps, the need of specific tools for assembly /disassembly or the use of removable/ reusable fasteners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Minimum recycled content (eg making mandatory the recyclability of around 90% of the product)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Would you suggest modifications to the aspects included in the table or including new ones?

N18. Please feel free to add any further comments or reflections about solid fuel boilers

In addition to fuel and appliance changes, ringfencing adequate funding, especially for vulnerable and marginalised population groups, is essential to enable a fair transition and address existing health inequities. Additionally, if conceived and funded in an equitable way, renovations represent an opportunity to improve people's lives in a very concrete way; better outdoor air quality by phasing out polluting energy sources, lower energy bills as a result of increased efficiency, and increased health and wellbeing, including through more stable and healthier indoor air and temperatures

Contact

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