



Elmhurst Energy's Final response to:

## Improving Boiler Standards and Efficiency

Prepared for: BEIS



Date: 13/03/2023

## Introduction

Elmhurst Energy are pleased that BEIS are consulting on "Improving Boiler Standards and Efficiency" and as such we are delighted to respond to each question in turn.

The consultation asked 53 questions and we have answered them all below. We hope you find the responses considered and useful for helping to improve the energy efficiency and performance of the boilers in the UK working towards the Government's target of net zero.

## Executive Summary

In summary, we support this scheme that aims to reduce greenhouse gas emissions by improving the energy efficiency and performance of boilers in our country. The aim is to phase out the installation of natural gas boilers by 2035, with a focus on low-carbon heating systems. Proposals include new 'hydrogen ready' boilers and exploring the potential of hybrid heating systems.

The key points throughout this consultation response are as follows:

- We welcome any improvements to boiler efficiency and increases to minimum energy performance standards that may have a positive impact on the EPC rating. An up to date EPC would be required to show any improvements made at the property.
- It is important to ensure the correct heat pump / hybrid system is installed in a property. Independent advice should therefore be sought. The use of a competent person who is qualified to calculate building heat loss calculations should be consulted to help the homeowner make informed decisions when installing an appropriate sized heat pump.





## Questions and Answers

1. Do you agree that all gas boilers should be placed on the market with controls that meet Energy Labelling Class VI? Yes/No. Please expand on your views.

No strong opinion.

2. Do you think we should require all gas boiler controls to meet Energy Labelling Class VI, irrespective of whether they are placed on the market with a gas boiler?

No strong opinion.

3. Should Energy Labelling Class VIII controls be allowed as an alternative route to compliance? Yes/No. Please expand on your views, including on which boiler systems or property types are most suitable for these controls.

No strong opinion.

4. a) Is it necessary to mandate that all available boilers and controls use open protocols? Yes/No. Please expand on your views. b) Is an appropriate route for achieving this through a government mandate that boilers are sold with open protocol adaptors? Yes/No. Please expand on your views.

No strong opinion.



5. a) Should FGHR systems be required as an alternative or additional requirement to Class VI controls, for example, alongside larger combination boilers over 35kW? Yes/No. Please explain your answer. b) If so, should this be limited to certain types of FGHR systems, for example, limited to inbuilt Passive FGHR systems with thermal storage? Yes/No.

No strong opinion.

6. Do you agree that all domestic-scale gas combination boilers should be able to modulate to 10% of their maximum output without on/off cycling? Yes/No. Please expand on your views.

No strong opinion.

7. Should minimum boiler outputs be capped, and, if so, at what level? Please expand on your views.

No strong opinion.

8. Do you agree that we should extend the revised requirements to include system and regular boilers? Yes/No. Please expand on your views.

No strong opinion.

9. What additional installer training, if any, would be needed to support system and regular boiler inclusion in these requirements?

No strong opinion.

10. Do you agree that the minimum modulation range should apply to system and regular boilers? Yes/No. Please expand on your views.

No strong opinion.



11. What role, if any, can FGHR systems have with system and regular boilers?

No strong opinion.

12. Should the tested minimum energy performance standard for a domestic sized gas boiler be increased to a) 93% or b) 94%?

Please explain your answer.

No strong opinion.

13. What real-world efficiency benefits might be realised by such an increase to minimum energy performance standards?

We welcome anything that will have a positive impact on the EPC rating. An updated EPC would be strongly recommended to show any improvements to the property for both the homeowner and to help with Government reporting with regards to improving the UK housing stock.

14. What risks or disbenefits might arise from such an increase to minimum energy performance standards?

No strong opinion.

15. Do you agree that the government should set a requirement for all cylinders to have a minimum efficiency rating of B? Yes/No.

Please expand on your views.

No strong opinion.

16. What additional measures may be required to ensure that cylinders are future-proofed for use alongside heat pumps?

No strong opinion.



17. a) What additional information can be collected or recorded by installers to ensure full commissioning for boiler installations take place, for example should heat loss calculations be recorded? b) What available technologies can be used to speed up this process, including more time-consuming practices like hydraulic balancing?

No strong opinion.

18. How can regular heating system servicing be encouraged, what practices should be included and what are the potential benefits and costs consumers should expect? Should low temperature heating system training be mandatory for gas boiler installers to help ensure Building Regulations are met? Yes/No. Please expand on your views.

No strong opinion.

20. What appropriate technological solutions currently exist or could be developed for collecting and displaying real-time efficiency information? Please explain your answer.

No strong opinion.

21. Do you agree that the proposals for new boiler and hot water tank product standards should be applied to new boiler installations from 2025? Yes/No. Please expand on your views.

No strong opinion.

22. a) Could the proposals be applied to new boiler installations earlier to help lower bills for consumers sooner? Yes/No. Please expand on your views. b) What additional steps or refinements may be required to support an earlier implementation date?

No strong opinion.



23. What are your views on the cost implications of the various proposals for the average boiler installation? Please expand on your views.

No strong opinion.

24. Do you agree that the government should use Ecodesign legislation to implement the proposals? Yes/No. Please expand on your views.

No strong opinion.

25. What are your views on extending the regulations to cover all gas boilers up to 70kW? Please expand on your views.

No strong opinion.

26. What opportunities and challenges would requiring all newly installed domestic-scale natural gas boilers to be hydrogen-ready from 2026 present? Please provide evidence and reasoning to support your answer.

No strong opinion.

27. If made mandatory, can hydrogen-ready boilers match the cost of current natural gas boilers? Yes/No. Please provide evidence and reasoning to support your answer.

No strong opinion.

28. Do you anticipate the installation of a hydrogen-ready boiler to take the same time as a natural gas boiler replacement? Yes/No. Please expand on your views.

No strong opinion.



29.a) For early adopters of hydrogen-ready boilers, in advance of a government mandate, can consumers expect to pay more for hydrogen-ready boilers? Yes/No. Please expand on your views. b) What protection can be put in place to support consumers?  
No strong opinion.

30. Do you agree with the proposed basis for a definition for hydrogen-ready boilers? Yes/No. Please expand on your views.  
No strong opinion.

31. a) Do you agree that domestic-scale hydrogen-ready boilers should continue to meet 92% ErP efficiency? Yes/No. Please expand on your views. b) If ErP efficiency standards for gas boilers were raised to 93% or 94%, as set out in question 12, could hydrogenready boilers meet this increased standard, when operating using both natural gas and hydrogen? Yes/No. Please expand on your views.  
No strong opinion.

32. Could hydrogen-ready boilers meet lower nitrogen oxide emission limits, when running on hydrogen gas? Yes/No. Please provide evidence and reasoning to support your answer.  
No strong opinion.

33. Do you agree that any requirement for domestic gas boilers to be hydrogen-ready in 2026 should be made through an update to UK Ecodesign legislation? Yes/No. Please expand on your views.  
No strong opinion.





34. Would you support increasing the scope of the hydrogen-ready mandate to include gas boilers with capacity of up to 70kW in 2026 or at a later date? Yes/No. Please expand on your views.

No strong opinion.

35. Do you agree that hydrogen-ready boiler conversion kits should only be supplied when a hydrogen grid conversion of an area has been confirmed? Yes/No. Please expand on your views.

No strong opinion.

36. Do you agree that information regarding the location and model of the hydrogen-ready boiler needs to be collected in an easily accessible format for manufacturers and networks to ensure a smooth future hydrogen conversion and roll out? Yes/No. Please expand on your views.

No strong opinion.

37. Building on question 18, we welcome views as to whether the change to hydrogen-ready boilers is likely to mean the government should look to strengthen the amount of regular maintenance required on boilers throughout their life span, given the need to ensure their fitness for hydrogen conversion can be preserved? Please expand on your views.

No strong opinion.

38. Do you agree that installers should be required to complete a module in hydrogen training prior to being permitted to fit hydrogen-ready boilers? Yes/No. Please expand on your views.

No strong opinion.



39. What is a reasonable minimum SSHEE value for hybrid heat pumps? Please provide evidence and reasoning to support your answer.

No strong opinion.

40. What is a reasonable minimum seasonal heating output, from the heat pump, for a hybrid system? Please provide evidence and reasoning to support your answer.

No strong opinion.

41. Do you think specific smart controls standards, that go beyond those for smart heat pumps, are needed for hybrid heating systems? Yes/No. Please expand on your views.

No strong opinion.

42. Do you think other measures are required to support low-carbon operation of hybrid heating systems? Please expand on your views.

No strong opinion.

43. What further measures can the government and industry take to support consumer choices and ensure hybrids are installed where most appropriate?

We would suggest the further development of the Surveying and calculating heat loss schemes to allow for competent persons who are qualified to advise and quote for the correctly sized heating systems for a property. Helping homeowners to make informed decisions. This will also improve the efficiency for quoting and specifying heating systems, streamlining the process for installers and in turn hopefully reducing the associated costs.



44. Do you agree that installers of hybrid heating systems should develop all of the skills required to install standalone heat pumps, to be considered competent to install hybrid systems (excluding when installing a compact hybrid)? Yes/No. Please expand on your views.

No strong opinion.

45. Do you think there is sufficient guidance available on ensuring that hybrid installations comply with appropriate regulations e.g., Gas Safety Regulations and Building Regulations? Yes/No. Please expand on your views.

No strong opinion.

46. Do you have suggestions on how the relevant standards regimes (e.g., Building Regulations, competent person schemes) should be expanded or altered to adequately cover hybrids systems? Please expand on your views.

As we mention in question 43, we would recommend using a qualified competent person who can carry out the surveying and calculating of building heat loss calculation to help determine the right sized heat pump being installed in a property. Streamlining the process between the installer and homeowner.

47. Do you agree with our assessment of the significance of the flexibility benefits provided by the deployment of hybrids, in the time frame until 2028? Yes/No. Please expand on your views.

No strong opinion.

48. Do you agree with our current understanding of risks and benefits of widespread deployment of hybrids from 2028? Yes/No. Please provide evidence and reasoning to support your answer.

No strong opinion.



49. What levels of energy efficiency and carbon-intensity may be achievable for compact hybrids or other hybrid technologies with further innovation and investment? Please provide evidence and reasoning to support your answer and please specify to which types of hybrid system your answer refers.

No strong opinion.

50. What further technological developments can be expected from compact hybrid systems, or hybrids of other types, to support the widespread roll out of hybrids across the UK building stock? Please provide evidence and reasoning to support your answer and please specify to which types of hybrid system your answer refers.

No strong opinion.

51. What scale of cost reductions is possible for compact hybrids, or hybrids of other types, and what are the conditions required to deliver such cost reductions? Please provide evidence and reasoning to support your answer and please specify to which types of hybrid system your answer refers.

No strong opinion.

52. Do you have views on whether, and to what extent, the policy proposals here might disproportionately impact upon certain types of consumer, with a particular focus on those in groups with protected characteristics? Please provide evidence and reasoning to support your answer.

No strong opinion.



53. Do you have any further views to make on our proposals that are not already captured in your responses to the previous consultation questions?

No strong opinion.

## Contact Details

Should you require any further clarification please contact us at:



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