Renewable Heat Incentive: Expanding the non-domestic scheme

GSHPA Consultation Response

Introduction to the GSHPA

The Ground Source Heat Pump Association (GSHPA) aims to encourage the growth and development of the ground source heat pump industry in the UK and help to set and safeguard standards. For more information about the GSHPA visit: www.gshp.org.uk

The GSHPA has for a number of months been communicating directly with DECC through our lobbying to encourage positive decisions to be made about the tariffs available for GSHP systems within the RHI. Recent letters between the Association and DECC include those from Fiona Mettam as well as directly to Gregory Barker MP and recent meetings with Stephen Martin and Paul Hollinshead should also strengthen the case that the GSHPA is putting forward for a fair, level incentive to support all renewable heating technologies.

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Response to above consultation on behalf of the **Ground Source Heat Pump Association**.

Consultation Questions

Proposals for new support

Air to air heat pumps

1. Do you agree that the reversible air to air heat market is sufficiently strong that no RHI support is required?

ASHPs have been installed for 30 years with no support. The concern is that a large number of these existing systems will be replaced on a like-for-like basis and drain the RHI budget, without actually delivering any additional renewable energy.

2. Do you think that heating only air to air heat pumps should be supported by the RHI? Can you supply any further evidence to support your view?

No, they should not be supported. The mechanism for determining whether an installation is considered as delivering renewablw energy is not developed sufficiently to distinguish between the very significantly different levels of performance of air source heat pumps. Compliance with MCS as it currently stands is not adequate since ASHP performance can deteriorate significantly at colder temperatures. Our concern is that an RHI tariff will incentivise cheap air source heat pumps with low capital costs but poor efficiencies resulting in higher running costs than the replaced system and higher carbon emissions.

3. Do you think that, were we to use a 'one size fits all' approach, a tariff of 0.97p/kWh would be appropriate for this technology?

We do not believe that any support is required for air to air heat pumps, this is already a mature market with a mature supporting industry.

4. Do you agree that any support for air to air heat pumps should be banded by size?

See above.

Preliminary reporting from the cost investigation being undertaken by Sweett appears anomolous, particularly for larger air source heat pump systems and it would be premature for any ASHP tariff to be established before further cost and performance evidence is gathered.

As an Association, we will continue to work with all relevant parties to develop and feedback on the Sweett and other sources cost data, especially the areas that are anomalous. Specific industry expertise is required to establish and confirm the accuracy of the collated data.

5. Can you provide any views or evidence on the installation capactity limit at which the higher rate should be applied?

See above.

6. Do you think we should use a deeming or metering approach to determine the RHI payment for air to air heat pumps, or is there an alternative method that you can suggest?

See above.

All non domestic installations should be metered for consistency with the treatment of other technologies and to ensure that the system is not abused.

Comparison between EPC and measured data is certainly useful for developing deeming calculations. However, we would like to highlight the following report which highlights the difference between deemed and measured results. In this case study, the measured results from the "E" rated property were better than the "B"rated property:

Put in Sarah's NEF link from the other day….. ask Sarah if in doubt. And please can you check if they are E & B rated buildings.

7. If we were to pursue a 'deeming' approach, what methodology do you suggest we use?

We feel that deeming is entirely inappropriate for non-domestic installations.

8. If we were to pursue a metering approach, can you suggest a methodology that would be neither unreliable nor obstructively expensive?

The metering requirements for non domestic RHI are already established and it seems uneccessary to change these at this time.

Seasonal performance factor requirements for heat pumps (Air and Ground source)

9. Do you agree that any changes to the heat pump efficiency requirements should be based on the European Commission guidance?

We agree that the methodology is correct but that a UK specific generating efficiency should be used, this would result in a threshold minimum SPF of 2.8. This would allow UK government to know that any payments made for renewable heat genuinely reflected the delivery in the UK. It would eliminate any issues over changes in European wide generation mix or reporting thereof.

10. Were a minimum SPF required, how do you suggest that it should be demonstrated as part of the RHI application process?

The MCS installer should routinely include a copy of his SPF calculations in the RHI submission for each project. These can then be reviewed by OFGEM prior to RHI award. For sub-45 kW non domestic submissions, the MIS 3005 v3 spreadsheet can be used for this work. For over 45 kW non domestic submissions, the installation company should have enough expertise to model the SPF for the RHI application.

Biomass Direct Air Heating

11. Do you agree that biomass direct air heating should be supported under the RHI and that it should be restricted to systems specifically designed and installed to use biomass only?

Our understanding is that 'direct air heating' could be nothing more than an open fire and regardless of type would be impossible to meter. We dont believe these kinds of installation need incenticising.

12. Do you agree that a tariff of 2.1p/kWh is appropriate for installations below 1MW capacity? Please provide evidence to support your answer.

No we don't believe any tariff is required

13. Do you agree that there should be a different tariff level for installations over 1MW, and that a tariff of not more than 1p/kWh is appropriate?

No.

14. How do you think we should determine the RHI payment for direct air biomass installations?

We don't believe it is possible to adequately assess the heat generated by direct air biomass and any tariff could create a 'gamed' market for biomass burning.

Biogas combustion over 200kW

15. Do you think we should introduce support under the RHI for biogas combustion installation plants over 200kWth?

No comment.

16. What are your views on tariff bandings of 200-500kW for a medium tariff and >500kW for a lower tariff? Please provide evidence to support you answer, particularly if you have proposed alternative bandings.

No comment.

17. Do you think a tariff of approximately 5.9p/kWh for medium installations and a tariff of 2.2p/kWh for large installations is appropriate?

No comment.

18. Can you provide any evidence for the tariff levels required for medium and large installations?

No comment.

19. Can you suggest any alternative methods of calculating support for this technology?

No comment.

20. Do you think that we should introduce a requirement for biogas CHP systems to be CHPQA accredited in order to receive RHI payments?

No comment.

21. Do you agree that we should continue to base the capacity limit for biogas CHP installations on the thermal jacket, regardless of whether or not we introduce CHPQA requirements?

No comment.

Changes in support

Biomass and Bioliquid Combined Heat and Power

22. Do you agree that a separate tariff should be introduced to support biomass combined heat and power?

No comment.

23. Do you think the proposed tariff of 4.1p/kWh is appropriate for this technology?

No comment.

24. Do you agree that we should support bioliquid CHP through the RHI and the tariff level of 4.1p/kWh is appropriate?

No comment.

25. Do you agree with the proposal to limit the amount of bioliquid qualifying for the RHI? Please provide reasons to support your answer.

No comment.

26. Is an enforced link to the Renewables Obligation or a lower tariff the best mechanism for providing this limit? What alternatives do you suggest?

No comment.

Deep Geothermal

27. Do you agree that there should be a separate tariff to properly incentivise deep geothermal heat?

Yes, we agree that there should be a separate tariff as costs involved are so different. We note that there are 2 types of deep geothermal heat, direct deep geothermal heat and deep geothermal heat which is a by-product of deep geothermal power and so different RHI tariffs (and potentially a matched FiT tariff) are required for the different applications. There is geothermal expertise both in the UK and through our geothermal contacts in Europe such as EGEC (www.egec.org).

28. Do you think that a specific deep geothermal heat tariff of 5.0p/kWh is appropriate? Please provide supporting evidence and/or data to help set an appropriate tariff for deep geothermal heat.

Without cost data it is difficult to comment on the tariff either way.

29. Is 500 metres the correct depth to define geothermal? If not what do you believe should be the correct depth and why?

This depends on whether or not a heat pump is being used – if so, it should be the GSHP tariff. If not, and the heat is being used directly, then it should be considered geothermal.

The Association notes that there are places in the UK where you can draw water from the near surface >20 °C. These opportunities for very efficient GSHP applications should be appropriately incentivised with good GSHP tariffs.

Other changes

Energy Efficiency

30. Do you agree that the RHI should not include energy efficiency requirements for process heating?

We disagree with this proposal and that the energy hierarchy should be considered – always do what you can to reduce the amount of energy being lost before generating more.

It would be wrong to pay RHI to companies who have introduced a process technology to reap the rewards of the tariff without first addressing energy inefficiencies in their buildings or processes.

31. If you disagree, what process heat uses should be required to meet energy efficiency standards, and what do you suggest they should be?

The requirements should be similar to those imposed on users implementing building heating technologies. There needs to be a duty of care that the manufacturing engineers have considered the lowest energy industrial processes before implementing renewable heating measures.

32. Do you think that we should be consistent with the domestic RHI and introduce a requirement based on 'green ticks' for small scale district heating networks?

Heat losses should be addressed first in any situation. It is important to ensure that a district heating scheme isnt used to deliver excessive heat to poorly insulated buildings. The same approach should be used for district heating as for discrete heat sources. We note that similar to the domestic "green ticks" approach, it is not realistic to include SWI in the required measures.

33. How do you think we should define as a 'small scale heat network'?

A small scale heat network should be defined as any system heating a multiple number of buildings or properties. In the case of ground source heat pump systems this should include multiple heat pumps on a common ground loop.

34. Do you think that energy efficiency measures should be introduced as eligibility criteria of RHI for large scale district heating networks?

Yes. See above

35. Do you think that a sliding scale approach is suitable for district heating networks?

Economies of scale should be realised with district heating networks. However modelling these district heating scheme economies of scale is not a specific area of expertise for the Association,

As with our answer to question 4, we will continue to work with the relevant parties to develop accurate cost models of all types of GSHP applications including district heating schemes linked to GSHP systems. Our members have some examples of these types of GSHP system.

36. What do you suggest the correct proportion of green deal tick compliance should be for each district heating size banding?

See answer to question 32.

37. Do you agree that we should require energy efficiency measures to be installed before the renewable heating system is able to receive RHI payments? If not, what do you propose?

Yes

38. Do you agree that we should allow a range of energy efficiency assessment methodologies to prove a minimum standard of energy efficiency has been met?

Minimum standards of energy efficiency are set out in Part L. Implementation of compliance with Part L would be a good measure of performance. Setting out assessment methodologies is only one half of the equation. As measured building performance is frequently much higher than as modelled building performance and so, if the renewable heating system is sized to the assessment methodology, it will not meet the buildings energy needs.

39. Can you provide any views or evidence as to whether these requirements would act as too significant a barrier to the uptake of renewable heat?

Compliance with Part L (or Section 6 in Scotland) is a regulatory requirement. Therefore, it can't or shouldn't act as a barrier.

40. Other than BREEAM, Green Deal, EPCs and DECs, can you suggest other methodologies which could be used?

Field trials need to be implemented to compare "as assessed" and "as built" building performance for these methodologies so that an assessment methodology feedback loop is developed to continuously improve the assessment methods.

41. What minimum standards should we accept for each methodology?

See answer to question 39. The various code levels for domestic and non-domestic buildings should drive the continuous improvement.