



Department
of Energy &
Climate Change

Renewable Heat Incentive

New technologies: process towards eligibility

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Introduction

This document sets out guidance on the criteria DECC would expect to consider when deciding whether to extend either the domestic Renewable Heat Incentive (RHI) scheme (after it comes into force) or the non-domestic scheme in order to give support to an additional technology. The document also summarises some of the key evidence that DECC would expect to see in order to consider such an extension. It is intended to provide an indication as to the criteria which will apply, and evidence which is likely to be required, but should not be viewed as exhaustive or absolutely fixed. This document should therefore be seen as a basis on which dialogue can begin.

In addition, this document explains that, even if it is considered that there is a case for supporting a new technology, further procedural steps need to be taken and requirements need to be met, including economic and affordability assessments, in order to develop and introduce RHI support. Introduction of support for new technologies will only normally be considered as part of planned formal reviews of the domestic and non-domestic schemes because of the work and timescales involved in introducing such support.

Criteria

The key driver of both RHI schemes¹ is to help the UK meet its 2020 renewable energy target set out in the EU Renewable Energy Directive (2009/28/EC)² (RED).

There are some core criteria that apply to both the domestic and non-domestic schemes and other criteria that are scheme-specific. These are listed below.

To be considered for support under the RHI, a technology will need to:

Core criteria

1. Fit within the types of energy sources which can be supported under Section 100 of the Energy Act 2008³ and derive energy from a renewable source as defined in the RED that can be counted towards meeting the UK's 2020 renewable energy target.
2. Be consistent with the wider government position and policies where relevant, including (but not limited to):
 - a. The Carbon Plan and Heat Strategy – consistent with government's long term goals for the transformation of domestic or non-domestic heating
 - b. Sustainable use of bioenergy – as set out in the Bioenergy Strategy, supporting bioenergy at a level that avoids significant diversion from other key sectors such as transport and within the limits of sustainable supply

¹ <https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi>

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

³ <http://www.legislation.gov.uk/ukpga/2008/32/contents>

- c. Air quality – meet the emissions limits on particulate matter (PM) and oxides of nitrogen (NO_x) that will be set out in the RHI legislation
 - d. Ecodesign – comply with the minimum standards and product information, where applicable
 - e. Measurement and audit – capable of measurement at individual installation level to determine renewable energy obtained in practice.
3. Be distinguishable in a practical way from technologies or products that do not meet requirements of the scheme or are at odds with wider government position.
 4. Require Government support – Given the value for money/budgetary limits of the scheme, if the technology is already achieving effective and sustainable market penetration and growth without assistance, RHI support will not be provided.
 5. Have scope for technology cost reductions over time so that it will be capable of competing in the market without Government support in the longer term.

Scheme-specific criteria

Domestic

6. Be suitable for providing domestic space heating and/or water heating in individual dwellings in Great Britain
7. Be fully proven, commercially available and able to make a significant contribution to the deployment of renewable heat at cost effective levels at a domestic scale.
8. Be subject to quality assurance product standards by a recognised scheme such as the Microgeneration Certification Scheme (MCS)⁴.
9. Be covered by a recognised quality assurance and control scheme for system design and installation standards such as MCS.

Non-domestic

10. Be suitable for providing space, water or industrial process heating in non-domestic properties or space and/or water heating for multiple domestic premises in Great Britain.
11. Be commercially available and able to make a significant contribution to the deployment of renewable heat at cost effective levels.
12. Be a fully proven technology and subject to independent product standards.

⁴ <http://www.microgenerationcertification.org/>

Evidence requirements

Core criteria

1. Fit within the types of energy sources which can be supported under Section 100 of the Energy Act 2008 and derive energy from renewable sources that can be counted towards meeting the 2020 target

The power to provide RHI support comes from section 100 of the Energy Act 2008. Under that Act, support can only be given to the owner of a plant used or intended to be used for the renewable generation of heat, a producer of biogas or biomethane, or a producer of biofuel for generating heat. The term “renewable generation of heat” is defined as heat generated by means of the following sources of energy or technology: biomass, biofuels, fuel cells, water (including waves and tidal), solar power, geothermal sources, heat from air, water or the ground, combined heat and power systems (with certain restrictions) and biogas.⁵

In addition, the RED explains what energy can and cannot be counted towards meeting the 2020 renewable energy target that it sets out. It includes the provision of approved methodologies for how to count contributions and is supplemented by specific European Commission guidance on calculating renewable energy from heat pumps such as those driven by thermal energy. If, therefore, a technology fits within the types of energy sources set out in section 100 of the Energy Act 2008, but the heat it generates cannot be counted towards the UK’s target it is unlikely that we would give it financial support under the RHI. In very limited circumstances, we may be able to consider a technology where it can be demonstrated that it gives other benefits which contribute to the UK’s wider strategic goals, provided it still meets the requirements of the Energy Act.

The RED states that:

“energy from renewable sources’ means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases” (Art 2 (a))

The RED sets additional requirements that must be complied with. These include sustainability criteria for biofuels/bioliquids and certain restrictions on authorisation, certification and licensing.

⁵ Section 100(3) and (4) of the Energy Act 2008.

Evidence required for the RHI

Explanation of the technology and evidence of how it fits within the definition in Section 100 of the Energy Act 2008, how it derives its energy from renewable sources as defined by the RED that can be counted towards meeting the 2020 target (in accordance with any methodologies set out by the European Commission) and how it meets the other requirements in that Directive.

It should be demonstrated that the heat produced by the technology is predominantly renewable. For heat pumps for example, this should include how the technology also meets the requirements of Article 5.4 and Annex VII of the RED.

2. Be consistent with the wider Government position and policies

The RHI exists within the wider Government position and policies framework. In particular, it needs to be seen within the context of the Government's longer term plans for transforming domestic heating as set out in the '[Carbon Plan](#)' and latest '[Heat Strategy](#)' work regarding low carbon energy, as well as the principles within the '[Bioenergy Strategy](#)' regarding the sustainable and most appropriate uses of bioenergy. Issues relating to air and water quality also have to be taken into account.

Other legislative frameworks may also need to be considered, such as the EU's Ecodesign Directive (2009/125/EC)⁶ and its supplementary legislation which looks to improve the environmental performance of energy related products. For example, manufacturers of heat pump space heaters and heat pump combination heaters will need to be aware of new requirements soon to be added to the ecodesign framework. For new technologies involving Combined Heat and Power, the requirements of the Renewables Obligation should be consulted⁷.

The issues and range of policies that need to be considered will depend on the nature of the new technology and timing. DECC will provide further advice on a case by case basis, working with other Government departments.

Evidence required for the RHI:

Evidence required for the RHI:

In discussion with DECC and other relevant Government departments, evidence that the new technology is consistent with the wider Government position and policies at the time. For example, evidence that the technology/fuel results in net carbon savings compared with fossil fuel alternatives.

3. Be distinguishable in a practical way from technologies or products that do not meet requirements of the scheme or are at odds with wider government position.

⁶ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:285:0010:0035:EN:PDF>

⁷ <https://www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/the-renewables-obligation-ro>

The product/technology must be able to fit within the RHI structure, including being capable of being metered to determine payments (where applicable) and for it to be possible to set rules and regulations to ensure that only technologies or fuels that we want to support would be included.

If a product is being produced that ostensibly meets the requirements of renewability and sustainability without adverse impacts on other policy areas such as transport, it must be possible to distinguish this product from other products that could benefit from support but do not meet these standards.

Evidence required for the RHI

Evidence of how the technology/fuel differs from similar products for which there would be sustainability or other concerns. Evidence that, for example, feedstocks are sustainably sourced and that fuels are not being diverted away from transport.

4. Require Government support – is the technology already achieving effective and sustainable market penetration and growth without support?

The RHI has been designed to tackle the financial and non-financial barriers that are preventing widespread uptake of renewable heating among households and in the non-domestic sector. If a technology is already achieving effective and sustainable market penetration and growth without Government intervention, this suggests that support through the RHI is likely to be poor value for money and so will not be considered for inclusion.

Even where support is shown to be required, it will need to be assessed in light of any limits on tariffs that exist at the time in order to ascertain whether such support would be value for money from a scheme perspective.

Evidence required for the RHI:

Market and commercial information to indicate that the technology could achieve a viable market share and contribute to meeting our 2020 and future targets and requires RHI support (within existing value for money/economic constraints) to achieve a sustainable footing in the heating sector.

5. Have scope for technology cost reductions over time so that it will be capable of competing in the market without Government support in the longer term

The RHI is only intended to be in place for a fixed period. The technology should therefore be able to achieve a sufficient level of cost reductions during that time to ensure that it will be able to continue as a viable renewable heating option after the RHI has finished and thereby continue to contribute to the UK's mass rollout of renewable heat from the 2020s onwards.

Evidence required for the RHI:

Evidence of scope for cost reductions to a sufficient level to enable the technology to continue being a viable renewable heating option after the RHI has ended.

Scheme-specific criteria

Domestic

6. Be suitable for providing domestic space heating and/or water heating in individual dwellings in Great Britain

The technology or fuel should provide a solution to a real heating need in this sector which would otherwise be met with fossil fuels. The RHI should not form the basis of a market where heat would not normally be used, but encourage the use of renewable sources of heat over fossil fuels.

The product should therefore provide a suitable fit for one of the eligible uses in the domestic RHI of space heating and/or water heating within Great Britain.

Evidence required for the RHI:

Evidence that the technology can be used as an alternative to fossil fuel for domestic heating needs. Possible examples include case studies of the technology being used to replace or offset fossil fuels. Evidence that the technology is effective within Great Britain (e.g. it is not effective only in warmer or sunnier climates).

7. Be fully proven, commercially available and able to contribute to renewable heat deployment in the domestic sector

A technology would need to be available in the open market and be proven since the domestic RHI scheme is not intended to support technologies in development. It would also need to be able to be deployed at scale within the domestic market given the long-term aims of the scheme.

The domestic RHI is intended to contribute towards the UK's 2020 renewable energy target and to prepare the country for the mass rollout of renewable heating across the sector from the 2020s onwards. The mass rollout will help us reduce carbon emissions from heating in homes by 2050 to almost zero in order to meet our goal of reducing emissions across the economy by 80%.

Evidence required for the RHI:

Evidence from independent testing, analytical studies and technical data related to the technology. Quantified assessment of savings of primary energy and CO₂ relative to other heating technologies and fuels commonly used for domestic heating. Details of number of suppliers, the share of market currently held, where the technology is currently deployed, how available it already is to consumers.

8. Be subject to quality assurance product standards by a recognised scheme such as the Microgeneration Certification Scheme (MCS)

A product must be certified by a product certification scheme which is recognised by DECC for the purposes of the RHI, such as MCS. In order to be recognised, the scheme must have standards in line with European and international product standards (where available at the

time). In addition to laboratory testing, the product manufacturers must be subject to a suitable independent product surveillance scheme that meets conformity assessment ISO/IEC 17065 (formerly referred to as EN 45011). Independent certification seeks to demonstrate that products coming off a production line can be repeatedly produced to meet the required standards and quality as those that are tested.

Product certificates and the carrying out of assessments must be done by independent certification bodies. A product manufacturer will need to get a certification body to assess the product against the relevant technical standard and visit the factory to ensure the production environment and processes meet the product standard requirements. Information on the MCS approach to this process is available on the MCS website.⁸

If a new technology or sub-group of an existing technology comes to the market, the manufacturer will need to approach an approved scheme such as MCS in order to get a new product standard created. In the case of MCS, the most appropriate technical working group will consider testing and certification requirements for the new technology, working with the manufacturer, other interested parties and the wider industry.

We recognise Solar Keymark⁹ as a product certification scheme equivalent to MCS in relation to solar thermal products.

Evidence required for the RHI:

MCS or equivalent product certification.

9. Be covered by a recognised quality assurance and control scheme for system design and installation standards such as MCS

There must be technology specific system design and installation standards that businesses have to meet to become a certified installer of the technology under a certification scheme recognised by DECC for the purposes of the RHI. To get such recognition, the scheme would need to meet standards such as European standard EN 45011 (which sets out general requirements for bodies operating third party certification schemes) or ISO/IEC 17065 that has replaced EN 45011. The Microgeneration Certification Scheme (MCS) meets this requirement and other requirements such as having consumer protection measures. Under the MCS framework, an installation business is examined to determine the technical competence of that business to carry out work in accordance with the relevant standard(s).

If a new technology or sub-group of an existing technology comes into the market, the manufacturer will need to approach a recognised scheme such as MCS in order to develop a new system design and installer standard. In the case of MCS, the process for getting this done is set out on the MCS website.

Evidence required for the RHI:

Evidence that an applicable MCS or equivalent standard exists for the technology.

⁸ <http://www.microgenerationcertification.org/>

⁹ <http://www.estif.org/solarkeymarknew/index.php>

Non-domestic

10. Be suitable for providing space, water or industrial process heating in non-domestic properties or space and/or water heating for multiple domestic premises in Great Britain.

The technology or fuel should provide a solution to a real heating need in these sectors that would otherwise be met with fossil fuels. The RHI should not form the basis of a market where heat would not normally be used, but encourage the use of renewable sources of heat over fossil fuels.

The product should therefore provide a suitable fit for one of the eligible uses in the non-domestic RHI of space heating, water heating or carrying out an industrial process.

Evidence required for the RHI:

Evidence that the technology can be used as an alternative to fossil fuel for non-domestic heating needs. Possible examples include case studies of the technology being used to replace or offset fossil fuels. Evidence that the technology is effective within Great Britain (e.g. it is not effective only in warmer or sunnier climates).

11. Be commercially available and able to make a significant contribution to the deployment of renewable heat at cost effective levels.

A renewable heating product would need to be available in the open market and have significant market potential. The primary goal of the non-domestic RHI is to help meet the UK's 2020 renewable energy targets under the RED. To be supported in the non-domestic RHI and to warrant the resource required to bring a new technology or fuel into the RHI, it would need to be capable of making a significant contribution to the targets. A secondary goal of the RHI is to help towards the 2050 target of decarbonising heat and so the potential for growth of the market and longer term potential should also be borne in mind.

Evidence required for the RHI:

Evidence of market size and deployment potential for the technology/product. Independent market intelligence and evidence of longer term potential.
Details of current deployment levels and market costs and performance compared with fossil fuel alternative.

12. Be a fully proven technology and subject to independent product standards.

The non-domestic RHI scheme is not designed to support technologies in development and support should only be given to those technologies that are proven and can provide useful heat to the commercial sector and/or multiple domestic premises.

There should be independent product standards to verify the product. Except for heating systems with a capacity of less than 45kW, the non-domestic scheme does not have a

requirement for products to be certified by MCS or an equivalent scheme. In order to introduce support for a new type of product we would therefore require there to be some form of independent verification.

Evidence required for the RHI:

Evidence from independent testing, analytical studies and technical data related to the technology. Quantified assessment of savings of primary energy and CO₂ relative to other heating technologies and fuels used for the same purpose as the product.

Timetable for introduction of RHI support for a new technology

Scheme reviews

The running of the domestic RHI scheme will include formal reviews in 2015 and 2017, with the aim of bringing in any changes identified in 2016 and 2018 respectively. Reviews of the non-domestic scheme are scheduled for 2014 and 2017 with the aim of bringing in any changes in 2015 and 2018. The introduction of support for new technologies will only normally be considered as part of those reviews because of the work and timescales involved in introducing such support.

Further explanation of the steps involved is provided below.

Process and timescale for including a new technology within the domestic RHI

If the Government feels there is a case for including support for a new technology within the RHI, there are then several stages that need to be successfully completed before the scheme can be extended in order to make that technology eligible. The length of time for each stage can depend on external factors and the complexity of the issues involved, so there is no fixed timescale for the entire process. However, as a guide, we would expect it to take around 12-18 months to the point when support is available.

The steps in the process will include the following:

Initial analysis and public consultation

- Review existing evidence base
- Commission and evaluate new evidence and assumptions on cost and performance of technology
- Develop a tariff and forecast uptake, including assessment of affordability and resulting potential impacts on other supported technologies
- Develop policy around the new technology such as any specific eligibility criteria
- Preparation of public consultation on the introduction of RHI support for the new technology and the proposed tariff
- Preparation of consultation impact assessment
- Peer review of consultation proposals
- Preparation of internal outline business case
- Cross-Whitehall and Devolved Administration agreement to consultation proposals

- Public consultation – up to 12 weeks

Post consultation process

- DECC consideration of responses to consultation
- Preparation of final impact assessment
- Peer review of proposals
- Preparation of internal full business case
- Cross-Whitehall and Devolved Administration agreement to proposals

Regulations

- Drafting of regulations amending the current legislative framework to incorporate the new technology

Parliamentary process

- Laying of draft regulations before Parliament
- Parliamentary debate of the draft regulations
- Regulations come into force

Alongside this, we will also need to consider:

- Whether State Aid approval from the European Commission is required – if so, it can take 6-9 months from the point at which the policy is finalised; and
- Whether a technical standards notification to the Commission is necessary – this takes at least 3 months (although this can run in parallel with State Aid notification).

The point at which the new technology becomes eligible will be set out in the regulations. It could be the date that the regulations come into force, or a later date.

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