



Department
of Energy &
Climate Change

Renewable Heat Incentive

New technologies: Further information
on the process towards eligibility

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Introduction

This document is an accompaniment to the “*Renewable Heat Incentive New Technologies: process towards eligibility*” document¹, which was published in July 2013. It sets out further guidance on the evidence DECC would expect to consider when deciding whether or not to extend either of the RHI schemes to include technologies that are currently ineligible for the RHI.

The July 2013 document is focussed on strategic suitability requirements and the evidence which will help to demonstrate consistency with them. This document provides guidance on the detailed evidence, which will help to demonstrate the case for including technologies on one of the schemes, particularly with regards to assessing the level of support that they would require and the benefits that they would deliver.

This document also provides further advice on the procedural steps and requirements for including a new technology on the scheme and how this may vary in different cases. In particular this document seeks to clarify the distinction between technologies that are new to the RHI (a new technology), and innovations to technologies that are already eligible for the scheme. Whether a product is a new technology or an innovation will have an impact on the evidence that is required to decide whether or not it should be included, and the procedure that is followed.

Finally, this document provides information on other funding providers. The RHI seeks to encourage innovation broadly, including by providing financial support through including technologies on the scheme where appropriate. However not all technologies are suitable for inclusion on the RHI, and where this is the case we would encourage stakeholders to seek other means of funding.

¹ [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212009/RHI -
_New_technologies_process_towards_eligibility_-_publication_version.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212009/RHI_-_New_technologies_process_towards_eligibility_-_publication_version.pdf)

Evidence requirements

The key driver of both RHI schemes² is to help the UK meet its 2020 renewable energy target set out in the EU Renewable Energy Directive (2009/28/EC)³ (RED). The schemes also aim to contribute to the UK's Carbon Budgets and to prepare the country for the mass rollout of renewable heating technologies from the 2020's onwards.

A technology will need to meet both the core and scheme-specific criteria set out in the July 2013 document in order to be considered for support under the RHI.

If a technology is consistent with these criteria and the decision is taken to consider whether it should receive support under the RHI, we will seek further evidence to help us to assess:

- How much it costs to install and operate
- The current and potential size of its market
- Its technical quality, including reliability and renewable heat generated

Following this assessment it is possible that we will decide to include the technology on the scheme.

For further details of the types of evidence that will be sought, see the table below:

Cost	Performance	Market	Variances
Definition of costs	Efficiency	Commercial availability	Environmental
Capital and operating costs	Typical capacity	Current level of deployment	Across the housing stock
Key components of costs	Lifespan	Future deployment potential	Across non-domestic applications
Potential for future cost reductions	Reliability	Supply chain development	Definition of the technology
	Sustainability	Barriers	Likely usage
		User views and consumer research	Suitability for different applications

² [Renewable Heat Incentive \(RHI\) - Increasing the use of low-carbon technologies - Policies - GOV.UK](https://www.gov.uk/government/policies/renewable-heat-incentive-rhi)

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>

The more robust, detailed and objective evidence is, the more likely DECC will be able to confidently assess a technology's suitability for inclusion on the scheme.

Ideally, technical evidence should be based on the in situ observation and testing of a significant number of installations. Also, if possible, we would want to understand which sources of heating a technology might be likely or suitable to replace; comparative information on counterfactual fuel sources would help us to assess the level of support a technology requires in order for uptake to be increased.

Any market facing evidence should be based on a representative sample of the sector.

Cost:

Capital and operating costs

In order to assess what level of support a technology requires for uptake to be incentivised, we need to understand how much it costs to install and run. These costs will need to be offset against the benefits that incentivisation could deliver, and the level of support provided would need to offer taxpayers value for money.

Definition of costs

To ensure that our understanding of costs is accurate, the cost drivers should be clearly defined. For example, the constituent parts of capital and operating costs should be identified and defined where possible so that we can make like for like comparisons across installations and manufacturers. This includes considerations such as breaking down the installation costs so that it is clear which costs relate to the technology itself, and which costs are related to the wider system, such as replacement radiators.

Key components of costs

It is beneficial if we can give in-depth consideration to any key components of costs. A component might be key for a variety of reasons, including accounting for a high proportion of the total cost, having a high chance of significant cost changes, applicability to multiple technologies, or specific costs which can vary significantly depending on circumstances

Potential for cost reduction in the future

Evidence on potential for cost reduction in the future should help us to assess whether or not a technology is likely to develop a self-sustaining market.

Performance:

Efficiency

In order to determine what level of support a technology should receive, we need to understand how efficient it is, including what level of greenhouse gas emissions are likely to be saved compared to a counterfactual fossil fuel source.

Typical capacity

An understanding of a technology's typical capacity will help us to assess where and how it is most likely to be used.

Lifespan

Tariffs are based on technologies with a 20 year lifespan. Where available, evidence on the likely costs and performance of a technology over this period will help to provide us with confidence when making decisions.

Reliability

Eligible technologies must be capable of meeting the heating requirements of consumers, including offering sufficient levels of reliability.

Market:

Commercial availability

Eligible technologies must already be proven and commercially available. If there is not an existing market for a technology already then it is less likely that it will be suitable for support under the RHI, particularly the domestic RHI. The scheme aims to support technologies where there is a market, but one where there are challenges which mean that the market is not yet self-sustaining.

Current level of deployment

We need to understand what level of existing deployment a technology has achieved, including installation level details such as location and size. This enables us to understand the strength of the existing market, and future market growth.

Future deployment potential

Evidence that demonstrates that a technology is likely to see further deployment following the provision of support will provide us with confidence when taking the decision to extend the scheme.

Supply chain development

We need to assess the existing supply chain to determine if it is capable of supporting increased uptake of a technology, and to identify any particular failures which might need to be addressed. Understanding the supply chain also helps us understand how the technology will be deployed and to what extent the supply chain can help drive deployment.

User views and consumer research

The attitudes of users throughout the supply chain can be used as evidence across most of the evidence types, but is particularly important to understanding any barriers to uptake and future deployment potential.

Barriers

We need to understand any financial or non-financial factors that are preventing the uptake of a technology in order to determine what support, if any, it requires.

Variance

Technologies perform differently depending on environmental factors such as the characteristics of the building in which they are installed, how they are used and what they are used for. Evidence that demonstrates a technology's performance, costs, load factors and other characteristics across a variety of different situations, rather than in a fixed environment, will best contribute to the decision making process.

Summary

The evidence requirements set out above are indicative and intended to give an insight into the type of evidence that will be required in order to take a decision on whether or not to include a new technology on the RHI. The precise requirements will be determined on a case-by-case basis. It is impossible to specify these exact requirements without an initial assessment of a technology and any existing evidence. Where industry think that a technology is suitable for support under the RHI, then providing evidence in line with the requirements set out above will facilitate the decision making process and set a strong foundation for opening a dialogue on the technology.

Other sources of funding:

The RHI is intended to incentivise the uptake of technologies which are fully proven and commercially available; for the domestic scheme in particular this requires that a technology already has significant levels of deployment. This demonstrates that the technology is viable and has the potential to develop, with additional government support, a self-sustaining market. Furthermore, those technologies which have already achieved strong deployment will be best placed to provide us with strong evidence to support their inclusion on the scheme.

Technologies for which there is not an existing market are unlikely to be sufficiently deployed to support the level of evidence that we need to decide whether or not to include a technology on the scheme.

There are, however, numerous other private and public funding offers to support the development of innovative technologies; the RHI's role in this landscape is towards the end of the journey from concept to commercialisation. If evidence sufficient to meet our requirements is not yet available, we would encourage manufacturers to seek other sources of funding which can help to drive the development of their technology, including supporting deployment which will help to generate the evidence that is required before a technology can be considered for inclusion under the RHI.

The table below sets out details of some other providers of innovation funding:

Provider	About	Offerings	Technologies supported
Innovate UK (formerly the Technology Strategy Board) www.innovateuk.org support@innovateuk.org 01793 442 700	<p>Innovate UK is the UK's Innovation Agency sponsored by the Department of Business, Industry and Skills.</p> <p>Its main aim is to accelerate economic growth by stimulating and supporting business-led innovation. Its funding is spread across a wide range of thematic priority areas, including energy.</p>	<p>Innovate UK has a wide range of funding and support mechanisms. Currently the most relevant for Heat is the “Energy Catalyst”, a scheme, co-funded by EPSRC and DECC, which is always open for proposals and could offer funding for the development of innovative renewable heat technologies.</p>	<p>Under the Energy Catalyst, Innovate UK offers funding to a range of energy technologies which includes renewable heat and industrial energy efficiency.</p> <p>It supports projects ranging in total size from £300k for feasibility studies (Technological Readiness Level 1-2) up to £10m for pre-commercial, technology validation projects (TRL 6-7)</p>
Energy Technologies Institute www.eti.co.uk info@eti.co.uk 0121 203 3700	<p>ETI is a public-private funding partnership between global engineering companies and the UK Government.</p> <p>Its funding is spread across nine technology programmes, including “Smart Systems and Heat”</p>	<p>The Smart Systems and Heat programme offers support through numerous competitions as part of a multi-phase demonstration and verification programme.</p>	<p>A range of renewable heat technologies could receive support from ETI, with most funding aimed at feasibility studies right through to commercialisation (TRLs 4-10).</p> <p>There is particular focus on demonstrating the integration of more developed technologies.</p>
DECC Innovation Programme www.decc.gov.uk correspondence@decc.gsi.gov.uk 0300 060 4000	<p>The DECC Innovation Programme is the main vehicle for the Department of Energy and Climate Change’s innovation funding.</p>	<p>DECC innovation funding is provided either through technology agnostic competitions such as the Energy Entrepreneurs Fund or competitions focussed on one of a number of technology workstreams.</p> <p>Areas for intervention are based on policy advice such as TINAs (Technology Innovation Needs Assessments).</p>	<p>The DECC Innovation Programme can provide support to a range of low carbon technologies and is generally aimed at technology validation projects (TRLs 6-9).</p>
Horizon 2020 www.euenergyfocus.co.uk mail@euenergyfocus.co.uk 0845 6000 430	<p>Horizon 2020 is the European Union’s innovation and research funding programme.</p> <p>Of all of the providers listed in this document, it has by far the biggest low carbon budget at €6bn for 2014-2020.</p>	<p>The programme has a vast range of funding offerings – for more information on Horizon 2020 it is recommended that contact is made via the Horizon 2020 UK national contact point for Energy - EU Energy Focus</p>	<p>Horizon 2020 can provide funding for a range of renewable heat technologies across TRLs.</p>

New Technologies and Innovations to existing technologies:

In future on the RHI we will look to distinguish between new technologies, and innovations to existing technologies. New technologies are those technologies which:

- Do not currently receive support under the RHI;
- Are unlikely to be included on the same grounds as any currently supported technology; and
- Require a unique, tailored tariff.

Innovations to existing technologies, in the context of the RHI are those technologies which:

- Do not currently receive support under the RHI;
- Are very similar to a technology which is currently supported;
- Could be included on the same grounds as the currently supported technology; and,
- With the same tariff as the currently supported technology.

Due to the long term nature of RHI support, decisions to include new technologies on the scheme should be based on a clear and well-evidenced rationale, in order to maximise the value for money that is offered to taxpayers. As such the process for including new technologies on the scheme can be lengthy.

However we are committed to supporting innovation and incentivising the uptake of renewable heat and recognise that a degree of flexibility is necessary to achieve our goals. By identifying those technologies which could potentially be included on the scheme on a faster timetable, such as innovations to existing technologies, we hope to demonstrate that flexibility.

Where a technology is similar to a currently supported technology, or is already supported but is capable of new, currently unsupported, applications it is possible that the evidence required to decide whether or not to include it (or the new application) on the RHI would be less extensive than the evidence required to decide whether or not to include a new technology.

For new technologies a rationale for inclusion and supporting evidence must be built up, whereas for an innovation to an existing technology it is only necessary to decide whether or not it can be included based on the same rationale as the currently supported technology. Therefore the evidence requirements will only need to be sufficient to test that assumption.

New technologies will almost always require their own unique tariff whereas innovations to existing technologies on the other hand should be suitable for support with the same tariff as the currently supported technology. This reflects that innovations to existing technologies should have similar qualities to the currently supported technology, and should be supported based on the same rationale.

Process for including new technologies and innovations to existing technologies within the RHI

In the July 2013 document we set out details of the process for including a new technology within the domestic RHI, which could equally apply to the non-domestic scheme.

The following detail will set out the high-level categories within the process and provide more strategic information on their importance, and how they can vary across decisions, to complement the detail provided in the July 2013 document.

Initial analysis and public consultation

In order to include a new technology on the scheme it is necessary to establish a well-evidenced rationale for doing so, including developing policy and setting a tariff as well as testing proposals with the public. The timescales for conducting this work can vary depending on how much evidence is immediately available, how long it takes to gather any further evidence that is required and how difficult it is to develop the policy and tariff. The timescales for consultations are more fixed, although the scale of the consultation will have an impact on how long it takes to complete.

For innovations to existing technologies this should be more streamlined. The rationale for including an innovation on the scheme should be the same as the rationale for including the existing technology and we will look for evidence that supports that assumption. Similarly the innovation should be suitable for an existing tariff, and rather than requiring evidence to set a new tariff, we will seek evidence that demonstrates that an existing tariff is appropriate. We expect that only minor policy changes would be required to include an innovation, and where this is true it may be possible to proceed without full consultation.

In future we are considering introducing annual calls for evidence on new technologies or innovations which have potential for being included in the RHI schemes. This will provide greater transparency and confidence for stakeholders.

Regulations and parliamentary process

The RHI regulations set out which technologies are eligible and so are likely to need amending to include a new technology or innovation to an existing technology. The timescales for amending the regulations are dependent on the complexity of the change; including a new technology is likely to be more complicated than including an innovation. The timescales for parliamentary processes are not influenced by the substance of the change being made.

State aid and technical standards notification

The RHI is a form of state aid and approval is required from the European Commission to ensure that the support is compatible with EU criteria on state aid. Due to the significance of any changes to include new technologies on the scheme it is possible that new state aid clearance would be required to make the change. This can take up to nine months.

When the parts of the RHI regulations relating to MCS standards are amended, a technical standards notification is required by the EU. This can take at least three months regardless of the change being made.

Tariffs and Budget

The fact that new technologies will usually require a new tariff whereas innovations to existing technologies should be appropriate for support under the relevant existing tariff is a critical distinction in the context of timescales. Firstly setting a new tariff requires more robust and extensive evidence than assessing whether or not an existing tariff is appropriate for an innovation. Secondly the creation of a new tariff is likely to require the agreement of further budget for the RHI or reprioritisation of existing budget. The negotiation of significant changes to our budget would need to take place as part of a Spending Review. The next Spending Review is in 2015 and it will not be possible to include any new technologies on the scheme until after it has concluded.

Summary

Overall, the timescale for including a new technology on the scheme, to the point where support is available, is likely to be 18 months from when the work is initiated, although this does assume a straightforward evidence gathering journey.

Since including an innovation to an existing technology does not require a new rationale or tariff and the functional changes are likely to be simpler, the timescale is likely to be shorter, taking a year from commencing work to the point where support is available.

It is important to bear in mind though that the work to include a new technology or innovation on the scheme is a significant undertaking which must be adequately resourced. It will not be possible to take the work forward on an ad hoc basis and it will need to be built into the team's annual work plans.

Similarly, as we move towards conducting annual calls for evidence on new technologies and innovations, we would encourage stakeholders outside of these periods to focus on developing their evidence in line with this guidance and the guidance provided in the July 2013 publication. This will enable work to progress as quickly as possible when a call for evidence is issued.

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