



Department
of Energy &
Climate Change

Renewable Heat Incentive quarterly statistical release, deployment to December 2015

21 January 2016

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We welcome feedback on the frequency, content and format of these statistics. Any enquiries regarding this publication should be sent to James White (james.white@decc.gsi.gov.uk) in DECC's Heat Statistics Team.

This document is also available from our website at www.gov.uk/decc

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Key points

Non-domestic RHI

- As at 31 December 2015, a total of 15,134 full applications to join the scheme had been received since it launched in November 2011, with a combined capacity of 2.6 GW. Of the applications, 13,580 have been accredited with a combined capacity of 2.2 GW, with 12,498 of these accreditations having received a payment for heat generated under the scheme.
- In quarter 4 of 2015 there were a total of 739 full applications to join the non-domestic scheme. This was 36 per cent more than in the third quarter of 2015. In the first 3 quarters of 2015 there were successive decreases in the total number of applications received, driven by falls in small biomass applications. This could be evidence that the reductions to this tariff are reducing the uptake of this type of system. Tariff reduction is a means of keeping the scheme within budget over time (for more information, refer to *Degression* in the glossary). In quarter 4 the level of applications for small biomass was broadly consistent with quarter 3, but applications from other technologies (medium biomass, air-source heat pumps and biogas) have increased.
- Since the launch of the scheme, 83 per cent of full applications and 87 per cent of accreditations have been for small biomass boilers. Small and medium biomass boilers combined are responsible for 92 per cent of full applications and 94 per cent of accreditations.
- In total, 5,825 GWh of heat has been generated and paid for under the non-domestic RHI scheme, 86 per cent of which has come from biomass installations and 12 per cent from biomethane injected into the grid.

Domestic RHI

- As at 31 December 2015 there had been 48,605 unique applications to join the scheme (20,096 from new installations installed since 9 April 2014), of which 45,111 had been accredited.
- At the end of December 2015, 44 per cent (19,921) of all accreditations were for air source heat pumps, 25 per cent (11,223) were for biomass boilers, 17 per cent (7,445) were for solar thermal, with ground source heat pumps accounting for 14 per cent (6,552) of accreditations.
- Of the 45,111 accreditations, 18,843 were from new installations (applicants who had systems installed on or after the domestic RHI scheme launch date of 9 April 2014) and 26,628 were from legacy applications (applications for systems installed between 15 July 2009 and launch of the scheme, on 9 April 2014).

- Of the accreditations from new installations, 43 per cent (7,924) were for biomass boilers, 38 per cent (6,978) were for air source heat pumps, 12 per cent (2,129) were for solar thermal, with ground source heat pumps accounting for 8 per cent (1,452) of accreditations.
- A 20% reduction to the biomass tariff (from 6.43p/KWh to 5.14p/KWh) came into force from 1 January 2016 which may have prompted an increase in new biomass applications throughout December (460). The spike in biomass applications during December was not as pronounced as those experienced before previous reductions, in September (549) and June (1,056). This could be evidence that the tariff reductions are causing a decline in demand.

Introduction

This quarterly publication provides a summary of the deployment of renewable heat technologies under the non-domestic Renewable Heat Incentive (RHI), which was launched in November 2011, and the domestic RHI, which was launched in April 2014.

This release provides statistics on the number of applications and accreditations from the launch of the non-domestic and domestic RHI schemes to 31 December 2015 (referred to as 'end December') based on data captured as part of the application process for the scheme.

Statistics are reported on the number of applications, accredited installations, installed capacity and heat generation. Breakdowns are provided by region, quarter and technology where appropriate.

The statistics are based on data collected as part of the application process for each scheme. Some RHI applications have not been through all checks within the application process so applicants may not meet all eligibility requirements of each scheme and as such figures are subject to change.

This statistical release contains two sections:

- Section 1 provides deployment data on the non-domestic RHI scheme;
- Section 2 provides deployment data on the domestic RHI scheme.

Feedback

We welcome feedback from users of the frequency, content and format of this statistical release and our monthly RHI deployment statistics.

Please direct any comments on the content of the report or suggestions for improvements to:
James White – james.white@decc.gsi.gov.uk

Section 1 - Non-domestic Renewable Heat Incentive scheme

1.1 Background to the scheme

The non-domestic Renewable Heat Incentive (RHI) is a long-term financial incentive scheme introduced in Great Britain in November 2011 to support the uptake of renewable heat in the non-domestic sector.

The scheme provides payments to industrial, commercial, public sector and not-for-profit organisations, as well as district heating schemes for domestic properties, which are generating heat from technologies including:

- Biomass boilers;
- Heat pumps;
- Solar thermal;
- Biogas; and
- Biomethane.

As of 28 May 2014 a change in the non-domestic scheme regulations came into effect. These new regulations introduced additional eligible technologies, for example air source heat pumps.

Further information on the non-domestic RHI scheme can be found at:

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

This section provides statistics on the number of applications and accreditations from the 28 November 2011 (launch date) to 31 December 2015 based on data captured as part of the application process for the scheme.

The tables that accompany this statistical release are available at:

<https://www.gov.uk/government/collections/renewable-heat-incentive-statistics>

1.2 Applications and accreditations

Table 1.1 below sets out the number of applications and accreditations by technology. As at 31 December 2015, 15,134 full applications had been received to join the scheme. Of these, 13,580 have been accepted onto the scheme, and of these 12,498 have received one or more payments for heat generated under the scheme. Small biomass boilers continue to dominate the scheme. Small biomass boilers represent 83 per cent of full applications and 87 per cent of accreditations to date.

At the end of December 2015, 138 preliminary applications had been received, 54 per cent of which were for biogas, 20 per cent of which were for medium solid biomass boilers, 16 per cent of which were for large solid biomass boilers and 12 per cent of which were for for CHP. A preliminary accreditation provides applicants with reassurance that once the proposed installation is built and the owner submits a full application, the system will be accredited provided the installation is built in line with the submitted plans and all other conditions are met.

Table 1.1 – Number of applications and accreditations by technology, Great Britain, November 2011 to December 2015

Tariff Band ¹	Full ² applications		Accredited installations		Preliminary ³ applications and accreditations		Capacity of full applications		Capacity of accredited installations		Capacity of preliminary applications and accreditations	
	Number	% of total	Number	% of total	Number	% of total	MW	% of total	MW	% of total	MW	% of total
Small Solid Biomass Boiler (< 200 kW) ⁷	12,631	83%	11,755	87%	0	0%	1,495.2	58%	1,412.2	64%	0.0	0%
Medium Solid Biomass Boiler (200-1000 kW)	1,231	8%	992	7%	28	20%	681.6	27%	572.5	26%	18.0	5%
Large Solid Biomass Boiler (> 1000 kW)	41	0%	29	0%	16	12%	218.2	9%	166.8	8%	200.3	52%
Small Solar Thermal (< 200 kW)	276	2%	203	1%	0	0%	4.2	0%	3.0	0%	0.0	0%
Small Water or Ground Source Heat Pumps (< 100 kW)	472	3%	355	3%	0	0%	13.0	1%	9.4	0%	0.0	0%
Large Water or Ground Source Heat Pumps (>100 kW)	103	1%	54	0%	0	0%	60.1	2%	23.1	1%	0.0	0%
Biomethane ⁵	53	0%	38	0%	3	2%	0.0	0%	0.0	0%	0.0	0%
Biogas	147	1%	37	0%	75	54%	80.6	3%	20.4	1%	31.5	8%
Air Source Heat Pumps	178	1%	117	1%	0	0%	3.9	0%	2.3	0%	0.0	0%
CHP	2	0%	0	0%	16	12%	6.3	0%	0.0	0%	136.3	35%
Deep Geothermal	0	0%	0	0%	0	0%	0.0	0%	0.0	0%	0.0	0%
Total⁴	15,134	100%	13,580	100%	138	100%	2,563.1	100%	2,209.7	100%	386.2	100%

Notes:

1. A change to the non-domestic regulations came into effect on 28 May 2014. These changes allow more technologies onto the scheme and adjust how some of the tariff bands are structured.
2. A full application and an accredited installation are not mutually exclusive i.e. once a system has become accredited, it is counted as both a full application and an accredited installation.
3. A preliminary application can become accredited but is removed from this column if subsequently a full application is made.
4. Duplicate, withdrawn and cancelled applications are not included in this or any other table.
5. Biomethane plants do not generate power and therefore do not have an associated capacity.
6. Heat pumps, solar thermal and small biomass boilers are not eligible to submit preliminary applications.

Source:

Ofgem

1.3 Application and accreditation rates

In the first 3 quarters of 2015 there were successive decreases in the total number of applications received, driven by falls in small biomass applications, driven by a fall in small biomass applications. This could be evidence that the reductions to this tariff are reducing the uptake of this type of system.

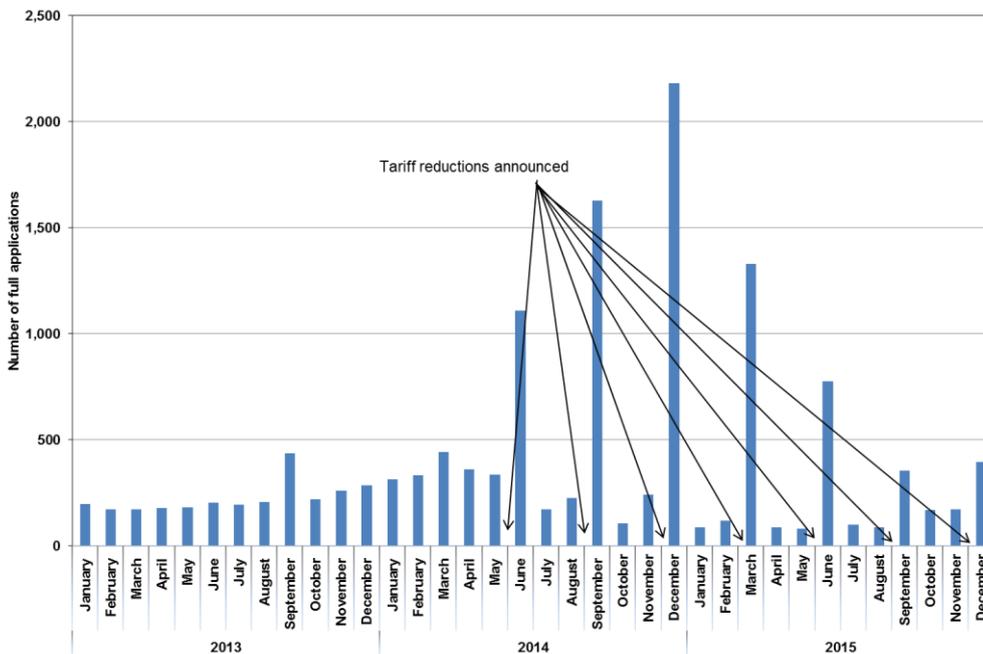
In the final quarter of 2015, applications were slightly higher than quarter 3. Whilst the level of applications for small biomass were broadly consistent with the preceding quarter, applications from other technologies (medium biomass, air-source heat pumps and biogas) have increased.

The peaks in applications seen in June, September and December 2014, and March, June, September and December 2015, are due to announcements in their respective previous months of reductions to the small biomass tariff. These announcements prompt applicants who may be planning on submitting an application in the coming months to act earlier to ensure they received the tariff rate prior to its reduction. These peaks are visible on Figure 1.1 (below), depicting applications per month. The application peaks have become less pronounced in the last two quarters. Whilst December 2015 represents a peak compared to November and October 2015, it is smaller than previous peak following tariff reductions.

Tariffs are automatically reduced if forecast expenditure to a particular technology, or the scheme as a whole, exceeds pre-determined levels. Further information is available at:

<https://www.gov.uk/government/statistical-data-sets/rhi-mechanism-for-budget-management-estimated-commitments>

Figure 1.1 – Number of non-domestic full applications per month, Great Britain, Jan 2013- Dec 2015



Source:
Ofgem

Table 1.2 below shows the number of applications by date of first submission and the number of accreditations by date of first approval. The increase in applications seen between Q2 and Q3 2013 was partly due to changes in air quality requirements that came into effect on the 24 September 2013, and which require applicants who install biomass boilers to submit an RHI emission certificate or an environmental permit with their application. Further details of the air quality regulations can be found on the government website at:

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

Table 1.2 - Number of applications per quarter, Great Britain, Q4 2011 to Q4 2015

		Number of full applications (by date of first submission)	Cumulative number of full applications	Number of full accreditations (by date first approval)	Cumulative number of full accreditations	Total installed capacity (MW) (by date of first approval)	Cumulative installed capacity
2011	Q4	49	49	2	2	0.0	0.0
2012	Q1	247	296	16	18	2.0	2.4
	Q2	225	521	93	111	35.0	37.7
	Q3	296	817	210	321	40.0	77.5
	Q4	391	1,208	392	713	67.0	144.2
2013	Q1	541	1,749	471	1,184	99.0	243.4
	Q2	566	2,315	532	1,716	108.0	351.4
	Q3	838	3,153	633	2,349	132.0	483.1
	Q4	763	3,916	519	2,868	91.0	573.7
2014	Q1	1,090	5,006	850	3,718	112.0	686.1
	Q2	1,809	6,815	1,075	4,793	162.0	848.1
	Q3	2,026	8,841	1,237	6,030	186.0	1,034.1
	Q4	2,529	11,370	1,198	7,228	177.0	1,211.6
2015	Q1	1,539	12,909	1,668	8,896	266.0	1,477.2
	Q2	943	13,852	1,992	10,888	271.0	1,748.5
	Q3	543	14,395	1,701	12,589	272.0	2,020.1
	Q4	739	15,134	991	13,580	190.0	2,209.7
Total		15,134		13,580		2,210.0	

Notes:

1. The RHI started on the 28 November 2011. Please note figures may change between monthly publications as applicants provide additional information and installation dates may change.

Source:

Ofgem

1.4 Heat generated

Heat generated is calculated by Ofgem from the meter readings of accredited scheme participants. Meter readings are collected and processed to ensure that the correct amount of support can be paid. Statistics on heat generation in this publication relate to the period when the payment was made for heat generated, not the period in which heat was actually generated.

At the end of December 2015, installations on the non-domestic RHI scheme had provisionally generated 5.8 TWh of eligible heat, up from 4.8 TWh at the end of September 2015. Biomass boilers dominate heat generation with 11,865 systems responsible for 86 per cent of heat generated and paid for under the scheme – small biomass boilers 42 per cent (2,460 GWh), medium biomass boilers 27 per cent (1,572 GWh) and large biomass boilers 17 per cent (999 GWh). Bio-methane is also significant, generating 12 per cent (709 GWh) of heat. Table 1.3 shows total heat generated at the end of December 2015 by technology.

Table 1.3 - Heat generated and number of installations receiving payment by technology type, Great Britain, November 2011 to December 2015

Technology	Heat generated and paid for under the scheme		Number of installations receiving payment	
	GWh	%	Number	%
Small biomass boiler (<200 kW)	2,460	42%	11,046	88%
Medium biomass boiler (200-1000 kW)	1,572	27%	795	6%
Large biomass boiler (>1000 kW)	999	17%	24	0%
Solar thermal (<200 kW)	2	0%	190	2%
Small water or ground source heat pumps (< 100 kW)	24	0%	291	2%
Large water or ground source heat pumps (>100 kW)	29	1%	50	0%
Air Source Heat Pumps	2	0%	45	0%
CHP	0	0%	0	0%
Deep Geothermal	0	0%	0	0%
Biogas	28	0%	27	0%
Total (1)	5,117	88%	12,468	100%

	Equivalent heat generated by gas produced		Number of installations receiving payment	
	GWh	%	Number	%
Biomethane (2)	709	12%	30	0%
Overall total (1) + (2)	5,825		12,498	

Notes:

A distinction has been made between metered heat, generated on site and the equivalent energy of biomethane injected into the gas grid.

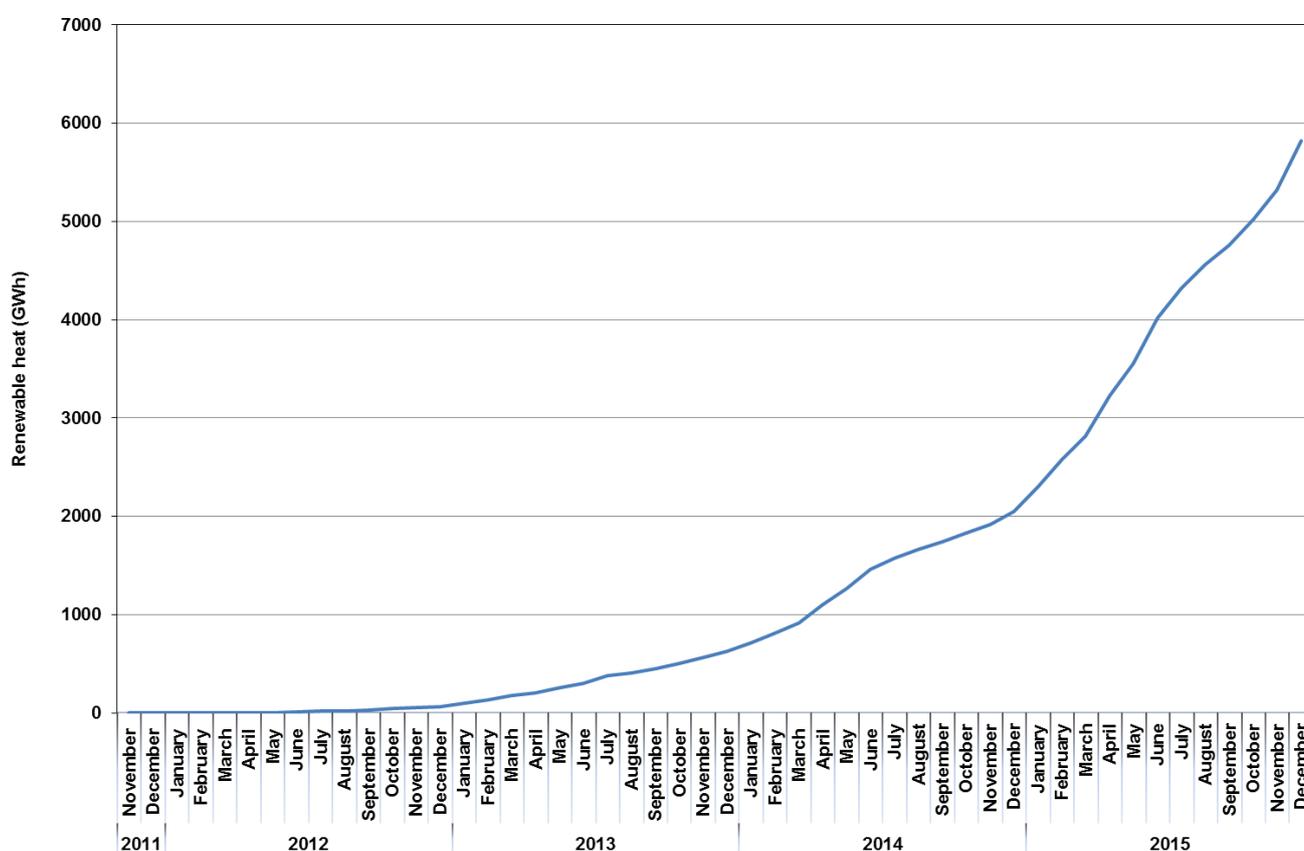
Source:

Ofgem

Figure 1.2 (below) shows heat generated and paid for under the non-domestic RHI scheme. The amount of heat paid for in the fourth quarter of 2015 (1,066 GWh) was 45 per cent higher than the third quarter of 2015 (736 GWh).

This increase is partly due to seasonal factors. There is higher heat demand during the autumn and winter months compared to June-September. Recently commissioned biomethane plants commissioned will also have contributed to this increase. Biomethane plants inject progressively larger amounts of gas into the grid over time (up to a maximum), therefore plants commissioned earlier in the year will have contributed more in recent months than close to their commissioning date.

Figure 1.2 – Cumulative heat generated and paid for, Great Britain



Notes:

These data relate to the period when the payment was made for heat generated not the period in which heat was actually generated.

Source:

Ofgem

1.5 Regional breakdown of applications

A large proportion of applicants are located in regions with large rural areas such as the South West (15 per cent) and Scotland (19 per cent). It is likely this is because many rural areas are not on the gas grid and applicants will be replacing solid fuel or oil burning systems with renewable systems.

Table 1.4 shows a regional breakdown for the number of applications, accreditations and their capacities.

Table 1.4 - Number of applications and capacity by region, November 2011 to December 2015

Region	Full applications		Accredited installations		Capacity of full applications		Capacity of accredited installations	
	Number	% of total	Number	% of total	MW	% of total	MW	% of total
England	10,826	72%	9,725	72%	1,849.6	72%	1,598.2	72%
South West	2,242	15%	2,071	15%	293.3	11%	267.5	12%
West Midlands	1,537	10%	1,357	10%	285.5	11%	249.5	11%
Yorkshire and the Humber	1,574	10%	1,398	10%	275.9	11%	241.0	11%
North West	1,406	9%	1,256	9%	235.0	9%	201.6	9%
South East	983	6%	866	6%	168.1	7%	143.3	6%
East Midlands	1,381	9%	1,240	9%	266.4	10%	219.7	10%
East of England	1,075	7%	980	7%	220.9	9%	184.7	8%
North East	548	4%	491	4%	80.3	3%	70.4	3%
London	80	1%	66	0%	24.3	1%	20.5	1%
Scotland	2,818	19%	2,519	19%	506.5	20%	421.3	19%
Wales	1,490	10%	1,336	10%	207.0	8%	190.2	9%
Total	15,134		13,580		2,563.1		2,209.7	

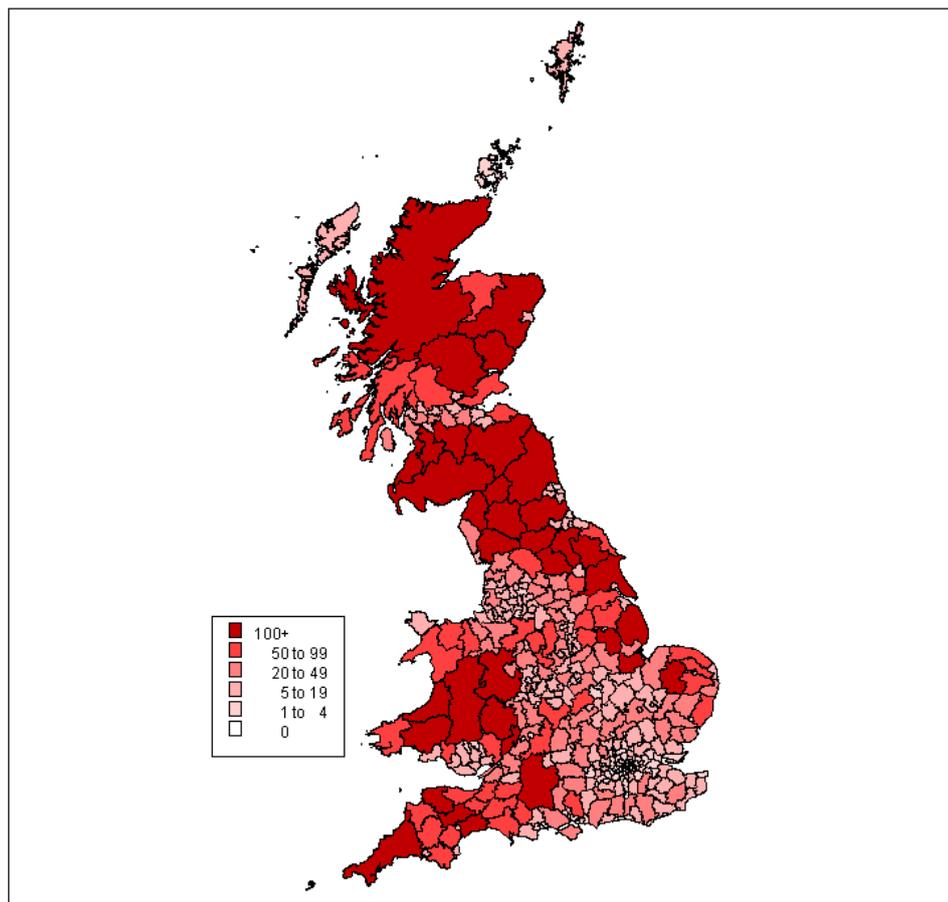
Source:

Ofgem

Notes:

The number of applications in a region may occasionally reduce in a month as applicants withdraw or are rejected from the scheme.

Figure 1.3 - Number of non-domestic accredited installations by local authority, 31 December 2015



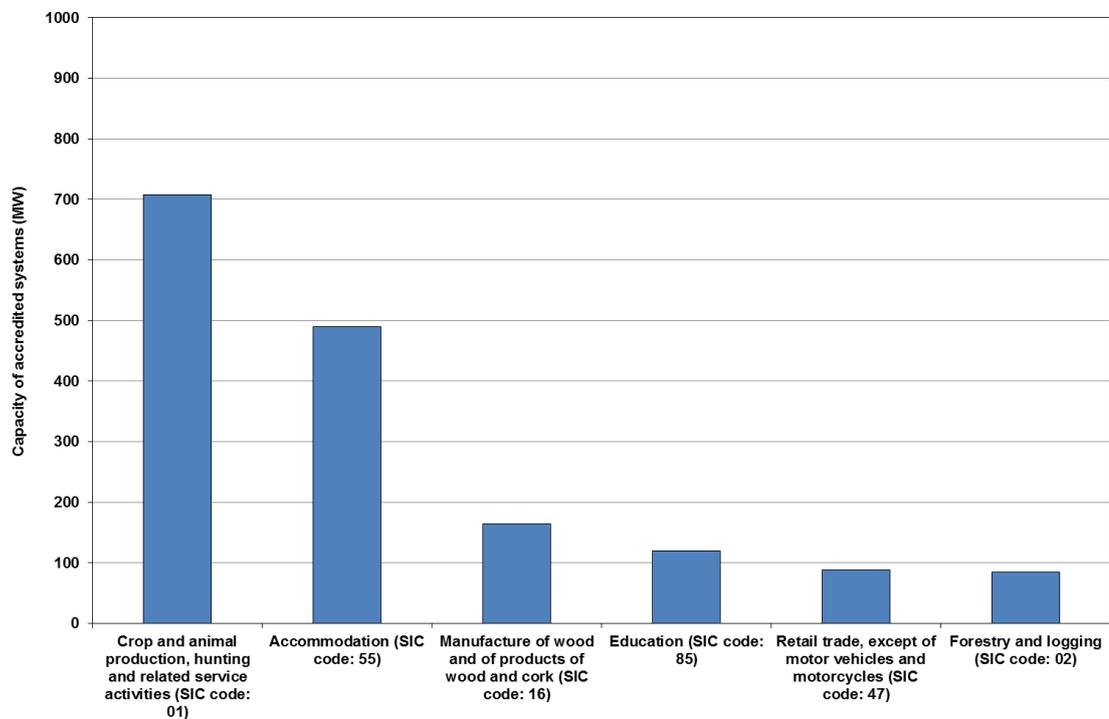
Source:
Ofgem

1.6 Installed capacity by Standard Industrial Classification (SIC) code

At the end of December 2015, the combined capacity of all accredited installations was 2,210 MW. Thirty-two per cent of accredited capacity has been installed in the crop and animal

production sector (SIC Code 1), and 22 per cent has been installed in the accommodation sector (SIC Code 55).

Figure 1.4 - Capacity of accredited installations by Standard Industrial Classification Code (SIC), Great Britain, November 2011 to December 2015



Source:
Ofgem

Further information on SIC codes is available at:

<http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html>

Section 2 - Domestic Renewable Heat Incentive scheme

2.1 Background to the scheme

The domestic Renewable Heat Incentive (RHI) is a financial incentive scheme introduced to encourage a switch to renewable heating systems in the domestic sector. This scheme is replacing the renewable heat premium payment (RHPP) schemes as the department's main programme of support for domestic renewable heat. Launched on 9 April 2014 in Great Britain, participants of the scheme receive tariff payments for the heat generated from an eligible renewable heating system which is heating a single dwelling. The scheme covers single domestic dwellings and is open to owner-occupiers, private landlords, social landlords and self-builders. There are four renewable heating technologies covered by the scheme:

- Air-source heat pumps (ASHP);
- Ground and water-source heat pumps (GSHP);
- Biomass-only boilers and biomass pellet stoves with integrated boilers; and
- Solar thermal panels.

Further information on the domestic RHI scheme can be found at:

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

This section provides statistics on the number of applications and accreditations from 9 April 2014 (launch date) to 31 December 2015 (end-December) based on data captured as part of the application process for the scheme.

The tables that accompany this statistical release are available at:

<https://www.gov.uk/government/collections/renewable-heat-incentive-statistics>

2.2 Applications and accreditations

At 30 September 2015 there had been 48,605 applications and 45,111 accreditations of which 41 per cent (applications and accreditations) were from new installations.

2.2.1 New installations

New installations refer to systems installed on or after the launch of the domestic RHI scheme on 9 April 2014. Such applicants have not received RHPP or any other government funding.

At the end of December 2015 there had been 20,096 applications for new installations to join the domestic RHI scheme and 18,483 of these had gone through full checks by Ofgem to ensure they comply with the relevant conditions, and had been accredited.

Since scheme launch, 43 per cent of accreditations from new installations were for biomass systems, 38 per cent for ASHPs, 12 per cent for solar thermal and 8 per cent for GSHPs.

2.2.2 Legacy installations

Legacy applicants are those who installed between 15 July 2009, when the scheme was first announced, and 9 April 2014 when the RHI scheme was first launched. The deadline for legacy applicants to apply was 8 April 2015, after which time only applicants with mitigating circumstances may apply.

At the end of December 2015, of the 45,869 applications to join the domestic RHI scheme, 59 per cent (28,509) were from legacy applicants.

26,544 (93 per cent) of the legacy applications have been accredited. Nearly half of the accredited legacy installations had previously received a grant from the renewable heat premium payment scheme. Of the legacy accreditations, 49 per cent were for ASHP, 19 per cent for solar thermal, 12 per cent for biomass systems and 19 per cent for GSHP.

Table 2.1 below details the number of applications and accreditations by technology and by legacy and new installations.

Table 2.1 - Number of applications and accreditations by technology type, Great Britain, April 2014 to December 2015

Tariff Band	Applications ³		Accreditations	
	Number	% of total	Number	% of total
Air source heat pump	7,669	38%	6,978	38%
Ground source heat pump	1,642	8%	1,452	8%
Biomass systems	8,411	42%	7,924	43%
Solar thermal	2,374	12%	2,129	12%
Total	20,096	100%	18,483	100%

Legacy installations⁴

Tariff Band	Applications		Accreditations	
	Number	% of total	Number	% of total
Air source heat pump	13,990	49%	12,943	49%
Ground source heat pump	5,312	19%	5,070	19%
Biomass systems	3,421	12%	3,299	12%
Solar thermal	5,786	20%	5,316	20%
Total	28,509	100%	26,628	100%

Total (New & legacy installations)

Tariff Band	Applications		Accreditations	
	Number	% of total	Number	% of total
Air source heat pump	21,659	45%	19,921	44%
Ground source heat pump	6,954	14%	6,522	14%
Biomass systems	11,832	24%	11,223	25%
Solar thermal	8,160	17%	7,445	17%
Total	48,605	100%	45,111	100%

Notes:

1. Data cover the period 9 April 2014 (launch date of the domestic RHI scheme) to 31 December 2015.
2. New installations refers to applications for systems installed after the launch of the domestic RHI scheme on 9 April 2014.
3. An application and an accredited installation are not mutually exclusive i.e. once a system has become accredited, it is counted as both a full application and an accredited installation.
4. Legacy refers to all applications for systems installed before the launch of the domestic RHI scheme on 9 April 2014, whether they claimed a RHPP voucher or not.
5. The deadline for the submission of legacy applications was 08/04/2015. Applicants installing certain products have been granted an extension to this deadline and some participants have been granted extensions due to extenuating circumstances.

Source:

Ofgem

Analysis from this point forward is based on new and legacy installations combined – unless specified.

2.3 Applications received by application status

At the end of December 2015, 45,111 applications had received accreditation (93 per cent of all applications). There were 976 applications under review by Ofgem in order to determine the applicant's eligibility for accreditation onto the scheme (2 per cent of all applications). A further 2,130 applications (4 per cent of applications) either failed to meet the criteria of the online application system or were rejected by Ofgem upon the application being reviewed manually. There are 343 applications which gained accreditation and have subsequently been cancelled by the applicant.

Table 2.2 below shows applications received by technology and status of application at the end of December 2015.

Table 2.2 - Application status, Great Britain, April 2014 to December 2015

Tariff Band		Application status					Total
		Accredited	In review ²	Rejected ^{1,3}	Failed ^{1,3}	Cancelled ³	
Air source heat pump	Number	19,921	309	1,286	16	127	21,659
	% of total	92%	1%	6%	0%	1%	100%
Ground source heat pump	Number	6,522	127	251	8	46	6,954
	% of total	94%	2%	4%	0%	1%	100%
Biomass systems	Number	11,223	386	154	9	60	11,832
	% of total	95%	3%	1%	0%	1%	100%
Solar thermal	Number	7,445	154	439	12	110	8,160
	% of total	91%	2%	5%	0%	1%	100%
Total	Number	45,111	976	2,130	45	343	48,605
	% of total	93%	2%	4%	0%	1%	100%

Notes:

1. Rejected applicants have been manually reviewed by Ofgem whereas failed application did not progress past the online application system.
2. The number in review will fluctuate over time as applications are processed and the status changes to one of the other categories in the table.
3. Where subsequent applications are received in place of a previously rejected, failed or cancelled application only the later is counted for our figures, as such the numbers in these categories will fluctuate over time.

Source:

Ofgem

2.4 Application and accreditation rates

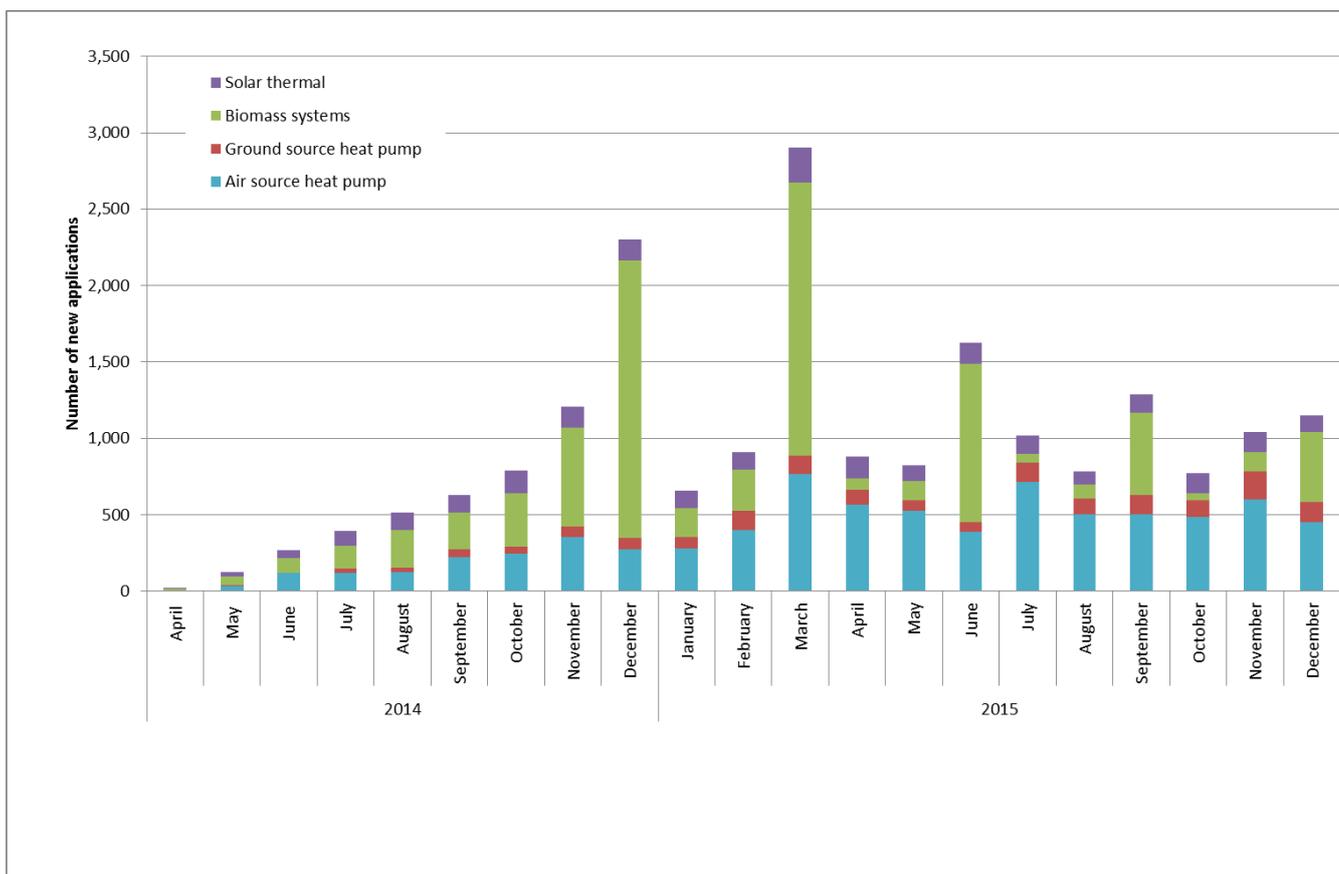
Since the scheme began there have been fluctuations in the number of applications received per month. There were specific increases in application rates during July, October and December 2014 and March, June and September 2015.

The July and October 2014 peaks are largely due to two groups of RHPP recipients being eligible to apply; the first group became eligible on 9 July 2014 and the second on 9 October 2014. The large spike in applications in March 2015 was predominantly due to legacy applicants joining the scheme before the deadline for participation arrived on 8 April 2015. There was also an increase in new biomass applicants due to a 20% reduction to the biomass

tariff affecting new participants applying after 1 April 2015. Out of these two contributing factors, legacy applicants had the greater impact, accounting for 66 per cent of applications in March.

There was an increase in applications in December 2015, relative to October and November 2015. A 20% reduction to the biomass tariff (from 6.43p/KWh to 5.14p/KWh) came into force from 1 January 2016, which may have prompted an increase in new biomass applications throughout December. However, the increase in new biomass applications in December was not as pronounced as the previous spikes caused by tariff reductions in March and June 2015. This could be evidence that the reduction in tariffs is decreasing the demand previously seen for this technology.

Figure 2.1 – New applications per month by technology, Great Britain, April 2014 to December 2015



Source:
Ofgem

Table 2.3 below shows the number of applications by date received and the number of accreditations onto the scheme by date accredited. In the last quarter (Q3 2015), 3,433 applications to the domestic RHI scheme were received, and 5,011 applications were granted accreditation. The third quarter of 2015 is a decrease from the previous quarter. The decrease is because the deadline for legacy participants to apply to the domestic RHI was 8 April 2015 – the only legacy applicants allowed to apply after this date are those with mitigating circumstances. During the first year of the domestic RHI, legacy applicants have accounted for 66 per cent of participants.

Table 2.3 - Number of applications and accreditations per month, Great Britain, April 2014 to December 2015

		Number of applications	Cumulative number of applications	Number of accreditations	Cumulative number of accreditations	
2014	April	759	759	362	362	
	May	971	1,730	725	1,087	
	June	1,049	2,779	1,116	2,203	
	July	3,566	6,345	2,508	4,711	
	August	2,541	8,886	2,483	7,194	
	September	2,325	11,211	2,505	9,699	
	October	4,067	15,278	3,242	12,941	
	November	2,854	18,132	2,715	15,656	
	December	3,644	21,776	3,192	18,848	
	2015	January	2,017	23,793	2,492	21,340
		February	3,296	27,089	2,840	24,180
		March	8,695	35,784	5,988	30,168
April		3,895	39,679	2,438	32,606	
May		846	40,525	1,688	34,294	
June		1,741	42,266	2,840	37,134	
July		1,169	43,435	2,374	39,508	
August		822	44,257	1,275	40,783	
September		1,336	45,593	1,345	42,128	
October		794	46,387	955	43,083	
November		1,061	47,448	1,049	44,132	
December		1,157	48,605	979	45,111	
2014	Q1	-	-	-	-	
	Q2	2,779	2,779	2,203	2,203	
	Q3	8,432	11,211	7,496	9,699	
	Q4	10,565	21,776	9,149	18,848	
2015	Q1	14,008	35,784	11,320	30,168	
	Q2	6,482	42,266	6,966	37,134	
	Q3	3,327	45,593	4,994	42,128	
	Q4	3,012	48,605	2,983	45,111	
Total		48,605		45,111		

Note:

Monthly application figures may change due to participants cancelling and re-submitting applications in order to change certain details of the application.

Source:

Ofgem

2.5 Heat generated

At the end of December 2015, 598 GWh of heat had been paid for under the domestic RHI scheme (see Table 2.4 below).

Payments are calculated using either estimates of annual heat demand (determined via Green Deal assessment) or meter readings provided by the applicant. Accredited applicants will not receive their first payment until at least 3 months after they originally applied to the scheme. This is the reason for the discrepancy between the number of accredited applications and the number receiving payment.

Table 2.4 - Heat generated and number of installations receiving payment by technology, Great Britain, April 2014 to December 2015

Tariff Band	Heat paid for under the domestic scheme		Number of installations receiving payment	
	MWh	%	Number	%
Air source heat pump	163,276	27%	18,509	43%
Ground source heat pump	91,582	15%	6,237	15%
Biomass systems	332,348	56%	10,811	25%
Solar thermal	10,705	2%	7,243	17%
Total	597,909	100%	42,800	100%

Note:

Figures may not add up due to rounding.

The heat figures above are calculated using the data on tariff payments made as at 31 December 2015 to both new and legacy applicants.

Source:

Ofgem

Figure 2.2 and 2.3 below breaks down heat paid for under the domestic scheme and the number of installations receiving payment by technology. Whilst 56 per cent of heat generated to date is from biomass systems, they account for only 25 per cent of installations to have received one or more payments. This discrepancy is partly due to biomass systems typically being more powerful and therefore more likely to be installed within larger households. Conversely, solar thermal accounts for 17 per cent of the installations receiving payment yet just 2 per cent of the heat generated. This is because solar thermal is a complimentary heating technology not typically capable of producing heat in the volumes seen from the other technologies.

Figure 2.2 – Number of installations receiving payment under the domestic scheme by technology (%), April 2014 to December 2015

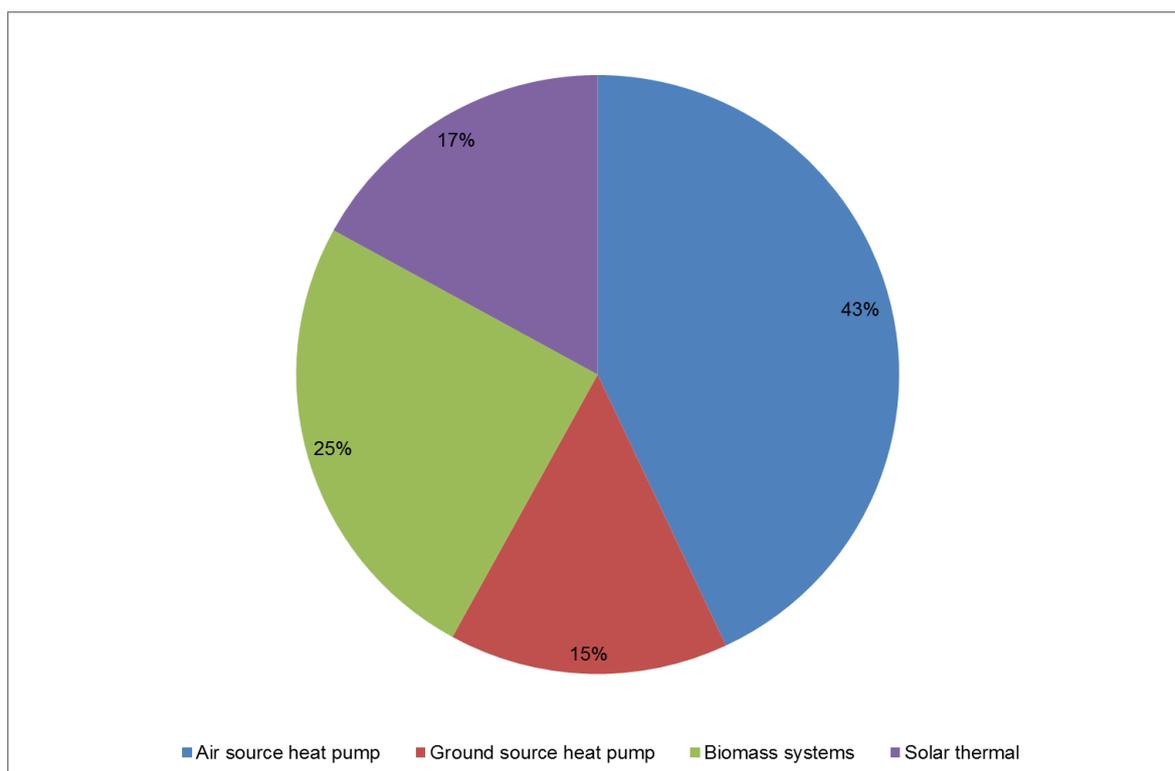
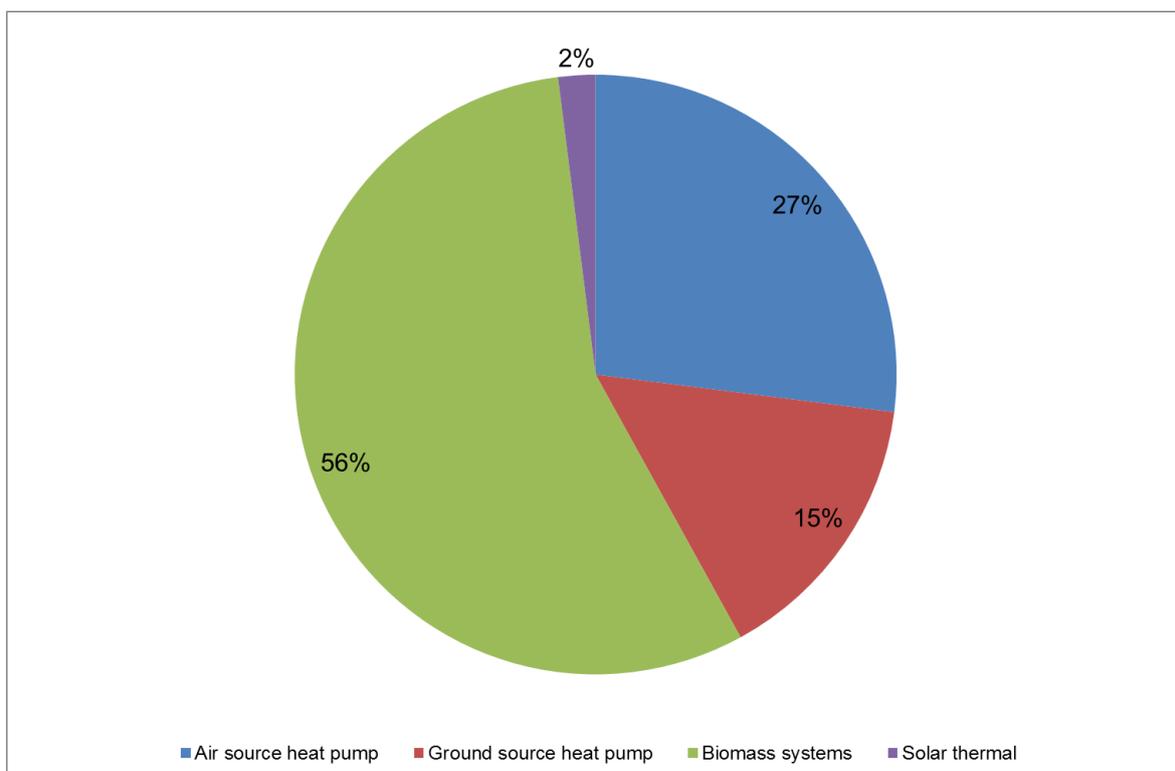


Figure 2.3 - Heat paid for under the domestic scheme by technology (MWh, %), April 2014 to December 2015



2.6 Regional breakdown of applications and accreditations

A large proportion of applicants are located in regions with large rural areas such as the South West (16 per cent) and Scotland (20 per cent). It is likely this is because many rural areas are not on the gas grid and will be replacing solid fuel or oil burning systems with renewable systems.

Table 2.5 below shows applications and accreditation by region.

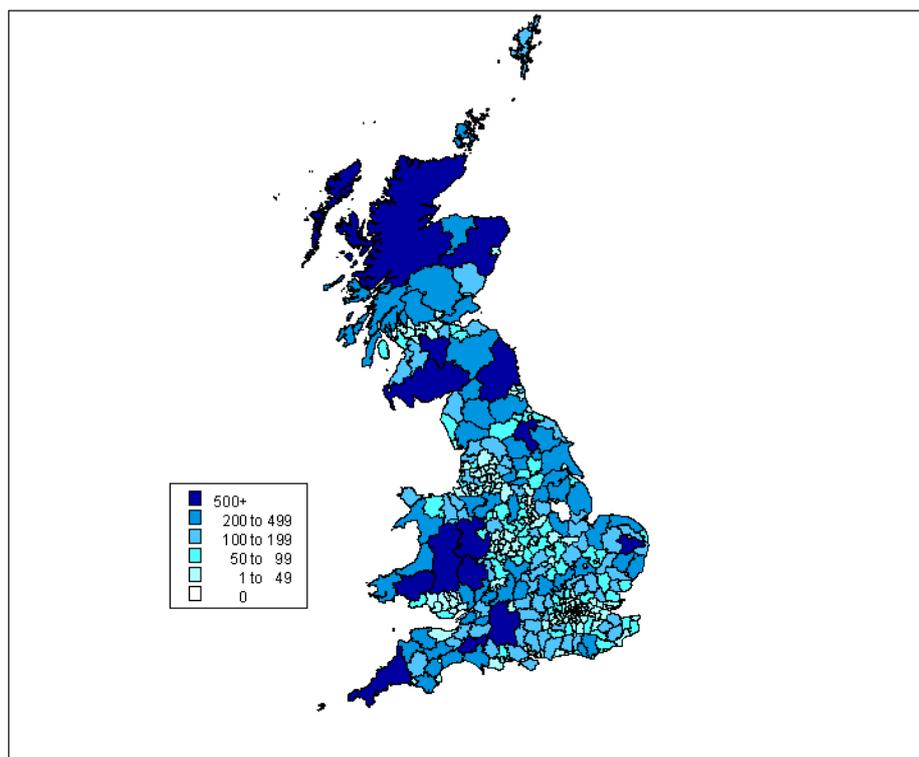
Table 2.5 - Number of applications and accreditations by region, April 2014 to December 2015

Regions	Total			
	Applications		Accreditations	
	Number	% of total	Number	% of total
England	35,572	73%	32,953	73%
South West	7,972	16%	7,318	16%
West Midlands	3,132	6%	2,820	6%
Yorkshire and the Humber	4,271	9%	4,030	9%
North West	2,986	6%	2,803	6%
South East	6,008	12%	5,515	12%
East Midlands	3,817	8%	3,596	8%
East of England	5,495	11%	5,138	11%
North East	1,451	3%	1,357	3%
London	440	1%	376	1%
Scotland	9,675	20%	9,030	20%
Wales	3,358	7%	3,128	7%
Total	48,605	100%	45,111	100%

Source:

Ofgem

Figure 2.4 - Number of domestic accredited installations by local authority, 31 December 2015



Source:
Ofgem

2.7 Fuel types displaced

Table 2.6 provides a breakdown of fuel type displaced by technology for accredited installations.

As part of the application process, applicants are asked what fuel type they have replaced with their renewable system. Of the total accreditations, Oil was the most common system being replaced, however across the different technologies there are different factors effecting which fuels are likely to be being replaced.

58 per cent of biomass systems have replaced oil boilers. This is likely to be because biomass systems are easily retro-fitted to work with conventional central heating systems. Nearly half (45 per cent) of GSHP installations fall into the other/NA category. It is anticipated that the majority of GSHP are being installed in self built properties so are not replacing a previous system. GSHPs are probably more likely to be installed in self built properties because of the difficulties associated with retrofitting. ASHPs are replacing a mix of oil (25 per cent), electricity (30 per cent) and other/NA (26 per cent). Unlike the other technologies, solar thermal panels are complimentary heating systems and will be installed alongside another conventional or renewable heating system. Because of this, a high proportion are displacing heat previously generated by mains gas.

Table 2.6 – Accreditations by previous fuel type, April 2014 to December 2015

Tariff Band		Fuel type displaced							Total
		Oil	Biomass	LPG	Coal	Electricity	Gas	Other / NA ¹	
Air source heat pump	Number	5,075	29	640	1,269	5,999	1,746	5,163	19,921
	% of total	25%	0%	3%	6%	30%	9%	26%	100%
Ground source heat pump	Number	1,757	11	248	172	1,052	321	2,961	6,522
	% of total	27%	0%	4%	3%	16%	5%	45%	100%
Biomass systems	Number	6,514	189	902	705	1,459	525	929	11,223
	% of total	58%	2%	8%	6%	13%	5%	8%	100%
Solar thermal ²	Number	1,692	47	235	173	829	3,164	1,305	7,445
	% of total	23%	1%	3%	2%	11%	42%	18%	100%
Total	Number	15,038	276	2,025	2,319	9,339	5,756	10,358	45,111
	% of total	33%	1%	4%	5%	21%	13%	23%	100%

Notes:

1. The 'Other / NA' category covers any application that is replacing a fuel type which is not covered by one of the six fuels in the table. It also covers accredited systems installed in new properties so no previous system was replaced.

2. Solar thermal panels are a complimentary technology that will be used in conjunction with another heating system.

Source:

Ofgem

2.8 Accreditations by tenure

At the end of December 2015, 74 per cent of systems accredited onto the domestic RHI were attributable to Owner Occupiers. A further 23 per cent were from Social Landlords, and 3 per cent from Private Landlords.

Air source heat pumps are by far the most popular technology for social landlords, accounting for 82 per cent of systems installed by this demographic.

Table 2.7 provides a breakdown of tenure by technology for accredited installations.

Table 2.7 - Accreditations by tenure, Great Britain, April 2014 to December 2015

Tariff Band	Private Landlord		Social Landlord		Owner Occupier		Total	
	Number	% of total	Number	% of total	Number	% of total	Number	% of total
Air source heat pump	535	45%	8,430	82%	10,956	33%	19,921	44%
Ground source heat pump	212	18%	934	9%	5,376	16%	6,522	14%
Biomass systems	327	28%	281	3%	10,615	32%	11,223	25%
Solar thermal	110	9%	682	7%	6,653	20%	7,445	17%
Total	1,184	100%	10,327	100%	33,600	100%	45,111	100%

Notes:

1. Rejected applicants have been manually reviewed by Ofgem whereas failed application did not progress past the online application system.

Source:

Ofgem

2.9 Accreditations by property type

Table 2.8 shows the breakdown of domestic accreditations by property type and technology. At the end of December 2015, 49 per cent of installations to have gained accreditation onto the domestic RHI scheme are situated within detached houses. A further 24 per cent of installations are situated within bungalows, 16 per cent are installed in semi-detached houses, 8 per cent are situated within Terraced houses. Only 3 per cent of domestic RHI installations are used to heat either a Flat or Maisonette despite such properties accounting for approximately a fifth of households in Great Britain.

Air source heat pumps are popular across all property types as their requirements and variety of size mean they are suitable for most types of dwelling. Ground source heat pumps are far more likely to be installed within a detached house than any other property type as they often need outside space for the installation of ground loops or drilling of bore holes. Two thirds of accredited GSHPs have been installed within detached houses and 19 per cent are installed in bungalows.

Biomass boilers are more likely to be installed in a detached or semi-detached house as these systems are more economical for larger properties with higher heat demands and often also require outside space to store fuel.

2.10 On/off gas split of accredited installations

Table 2.9 shows a breakdown of the number of applications received from households on and off the grid, by country. The majority of accredited RHI installations on the domestic scheme are within households located off the gas grid (73 per cent). This is likely due to the financial incentive appealing more to off-gas recipients where installations will be replacing typically more expensive heating sources such as solid fuel or oil burning systems.

The split is most pronounced for biomass systems, where 84 per cent are situated within households located off gas grid. Solar thermal is the only technology to be installed in more on-gas-grid than off-gas-grid households (58 per cent within on-gas-grid households). This is likely due to solar thermal being installed to run in tandem with the primary heating units being used within households, as opposed to being installed to replace them.

The split is more pronounced in Scotland and Wales than England, where 87 per cent and 85 per cent respectively of applications received are from households located off the gas grid, compared with 68 per cent in England.

Table 2.8 - Accreditations by property type, Great Britain, April 2014 to December 2015

Tariff Band	Detached house		Semi-detached house		Terraced house ¹		Bungalow ²		Flat or Maisonette ³		Total	
	Number	% of total	Number	% of total	Number	% of total	Number	% of total	Number	% of total	Number	% of total
Air source heat pump	6,501	30%	3,958	54%	2,382	64%	5,954	55%	1,126	88%	19,921	44%
Ground source heat pump	4,288	20%	769	11%	225	6%	1,185	11%	55	4%	6,522	14%
Biomass systems	7,310	33%	1,401	19%	539	14%	1,942	18%	31	2%	11,223	25%
Solar thermal	3,888	18%	1,158	16%	598	16%	1,727	16%	74	6%	7,445	17%
Total	21,987	100%	7,286	100%	3,744	100%	10,808	100%	1,286	100%	45,111	100%

Notes:

1. Terraced house includes: Enclosed-end-terrace house, Enclosed-mid-terrace house, Mid-terrace house, End-terrace house.
2. Bungalow includes: Mid-terrace bungalow, Detached bungalow, End-terrace bungalow, Semi-detached bungalow and park homes.
3. Flat or Maisonette includes: Basement flat, Basement maisonette, Ground-floor flat, Mid-floor flat, Top-floor flat, Top-floor maisonette.

Source:

Ofgem

Table 2.9 - Number of accredited installations on/off the gas grid by country, Great Britain, April 2014 to December 2015

Tariff Band	England		Scotland		Wales		Great Britain		
	On grid	Off grid	On grid	Off grid	On grid	Off grid	On grid	Off grid	
Air source heat pump	4,293	10,537	366	3,773	141	811	4,800	15,121	
Ground source heat pump	1,216	3,916	96	724	64	506	1,376	5,146	
Biomass systems	1,289	5,830	353	2,784	109	858	1,751	9,472	
Solar thermal	3,757	2,115	367	567	162	477	4,286	3,159	
Total (excluding solar thermal)	Number	6,798	20,283	815	7,281	314	2,175	7,927	29,739
	% of total	25%	75%	10%	90%	13%	87%	21%	79%
Total	Number	10,555	22,398	1,182	7,848	476	2,652	12,213	32,898
	% of total	32%	68%	13%	87%	15%	85%	27%	73%

Notes:

This table was created using a list of off-gas postcodes generated by xoserve:

<http://www.xoserve.com/wp-content/uploads/Off-Gas-Postcodes.xlsx>

Source:

Ofgem

xoserve

Glossary

Accreditation (domestic and non-domestic)	A system that has submitted an application and has gone through full checks by Ofgem E-serve to make sure that it complies with the relevant conditions.
Air source heat pump	An air source heat pump (ASHP) is a central heating system which uses refrigerants, compressors and condensers to absorb heat from the outside air and transfer it to heat the inside of a building
Application (domestic)	All attempted online applications, including both successful and unsuccessful submissions.
Application effective date	The date from which an applicant can claim RHI payments for the renewable heat generated by their system.
Biomass system	Is a central heating boiler system fuelled by biomass (wood pellets, chips or logs)
Biogas	Biogas is a mixture of combustible gases produced by biological feedstock/ fuel which are burnt to generate heat.
Biomethane	Instead of burning biogas to generate heat on site, it can be processed to bring the calorific value of the gas to the same as that of natural gas and then injected into the gas network to be used elsewhere.
Capacity	The capacity of the system is the maximum power output. It depends on the installations size and technical capability.
Combined heat and power (CHP)	A system which generates electricity whilst also capturing usable heat generated in the process
Date of approval	The date on which Ofgem approved the eligibility of the application and accredited the installation.
Date of first submission	When the application was first registered with Ofgem.
Deep geothermal	Refers to the heat generated through radioactive decay below the surface of the earth.
Degression	The reduction of a tariff offered to new applicants to the scheme due to high demand. Existing recipients of the scheme retain their original tariff. Further information is available at: https://www.gov.uk/government/statistics/domestic-rhi-mechanism-for-budget-management-estimated-commitments
Failed (domestic)	One or more of the fields on the online application were invalid or did not meet the eligibility criteria meaning that the application could not be submitted to Ofgem.
Full application (non-domestic)	A completed application submitted to Ofgem E-serve with a relevant system already installed.
Ground source heat pump	A ground source heat pump (GSHP) is a central heating system which uses a ground heat exchanger to absorb heat from the ground and transfer it to heat the inside of a building
Heat Pumps	A heat pump is a device that transfers thermal energy from a heat source to a heat sink (e.g. the ground to a house). There are many varieties of heat pump but for the purposes of the policies they fall into 3 categories: air, ground and water source heat pumps. The first word in the title refers to the heat source from which the pump draws heat. The pumps run on electricity, however less energy is required for their operation than they

	generate in heat, hence their status as a renewable technology.
Legacy	Refers to all applications for systems installed before the launch of the domestic RHI scheme on 9 April 2014, whether they claimed and RHPP voucher or not.
Microgeneration Certification Scheme (MCS)	The Microgeneration Certification Scheme (MCS) is an industry-led and internationally recognised quality assurance scheme, which demonstrates compliance to industry standards.
MW	MW stands for megawatt. A watt is a unit of power and a megawatt is a million watts.
MWh	MWh stands for a megawatt hour and is a unit of energy. It is equal to the amount of energy a system will generate in an hour whilst running at a megawatt power output.
New installations (non-Legacy)	Refers to applications for systems installed after the launch of the domestic RHI scheme on 9 April 2014.
Ofgem (Office of the Gas and Electricity Markets)	Ofgem is the regulator of the gas and electricity industries in Great Britain. Ofgem E-Serve is Ofgem's delivery arm that administers the RHI scheme.
Rejected (domestic)	An application which has not met one or more of the eligibility criteria after being manually reviewed by Ofgem.
Renewable Heat	Heat energy that comes from a natural source.
Solar thermal	Solar thermal panels use heat from the sun to provide hot water.
Seasonal performance factor (SPF)	A seasonal performance factor (SPF) is a seasonally adjusted coefficient of performance (COP). A COP is a measure of efficiency based on the proportion of useful energy given out compared with the amount taken to run the system. Therefore a system with a COP of 2 will produce twice the amount of thermal energy than electrical energy that it takes to run. Because the COP is calculated under laboratory conditions, seasonal adjustments are made to give its average performance across all times of the year to give us the SPF.
Tariff band	The different rates paid per kWh of heat produced or bio-methane injected depending on the size and type of installation.
Under review	An application that is currently being considered for accreditation.

Scheme background

Non Domestic RHI

RHI payments are made to the owner of the heat installation, or producer of bio-methane for injection to the gas grid, over a 20 year period and tariff levels have been calculated to bridge the financial gap between the cost of conventional and renewable heat systems. The non-domestic phase of the RHI opened in November 2011.

Currently applicants may apply to receive payments on systems installed and commissioned any time after 15 July 2009 and for heat generated for a prescribed purpose such as space, water or process heating (not for electricity production). Producers of bio-methane for injection can also apply for registration. Installations below 45kW capacity must be certified under the Microgeneration Certification Scheme (MCS).

All heat generating systems must be fitted with a meter which measures the eligible heat output of the installation. Payment is calculated by multiplying the metered heat output (kWh) by the tariff rate (pence per kWh).

Change to Non-Domestic Regulations

Amendments to the Non-domestic RHI regulations came into force on the 28th April 2014. The changes to the regulations include, but are not limited to: alterations to some tariff rates, changes to some tariff banding structures and the addition of several other technologies to the scheme.

Domestic RHI

The domestic RHI is an incentive scheme where participants receive tariff payments for the heat generated from an eligible renewable heating system which is heating a single dwelling. Payments are made over a 7 year period and tariff levels for each eligible technology have been calculated to bridge the financial gap between the cost of renewable and off-gas heating systems.

The eligible technologies are air source heat pumps, ground source heat pumps, biomass boilers and biomass stoves with integrated boilers and solar thermal panels. All systems must be installed under the Microgeneration Certification Scheme (MCS) or an equivalent scheme. MCS is an independent mark of quality assurance for microgeneration products and their proper installation.

In most cases, the amount of renewable heat generated will be estimated ('deemed'). However, in some cases involving heat pumps and biomass systems, it will be assessed on meter readings, for example, where there is a secondary heating system in place. For heat pumps

and biomass systems, the deemed heat generation is estimated using values from the Energy Performance Certificate (EPC) of the relevant residence. An EPC contains values for the space heating and hot water demands of the property which have been calculated based on the physical characteristics of the dwelling. For solar thermal systems, the deemed amount is based on a calculation done by the MCS installer. In cases where metering is required, readings are used as the basis for working out RHI payments, capped at the deemed amount for that dwelling. In all cases, payment is calculated by multiplying the heat demand for the property by the tariff rate (pence per kWh).

Before applying for the RHI, applicants must have a Green Deal Assessment done on their property, with the exception of social landlords. They must also install loft and cavity wall insulation where these measures are recommended by their EPC, unless there are valid reasons not to. An updated EPC will be needed as evidence of their installation.

The scheme opened on 9 April 2014 and applicants may claim for eligible systems which were installed after 15 July 2009. Anyone who installs their heating system after 9 April 2014 can apply at any point, provided it is within 12 months of that installation. In order to control the flow of applications being received, Ofgem took a phased approach to those who installed their system between 15 July 2009 and 9 April 2014 (legacy applicants).

The approach was as follows:

- if the heating system was commissioned before 9 April 2014, but did not receive Renewable Heat Premium Payment (RHPP) funding, an application could submit from any time
- if RHPP funding was applied for before 20 May 2013 applicants were permitted to apply three months after scheme launch, i.e. from 9 July 2014
- if RHPP funding was applied for on or after 20 May 2013 applicants were be permitted to apply six months after scheme launch, i.e. from 9 October 2014
- legacy applicants had to apply before 9 April 2015. Recipients of public grants (including RHPP) will have their RHI payments adjusted accordingly.

Further information and feedback

We welcome feedback from users of this statistical release and our monthly RHI deployment statistics. We would like to understand our usership better, so if you do use RHI statistics we would be pleased to hear how and for what purpose.

Any enquiries or comments on the statistics should be sent to James White, the statistician responsible for this publication, at the following email address:
james.white @decc.gsi.gov.uk

Contact telephone: 0300 068 8185

Further information on energy statistics is available at
<https://www.gov.uk/government/organisations/department-of-energy-climate-change/about/statistics>

Next release

The data contained in this publication are updated on a monthly basis, with the next data scheduled for web release at 9:30am on 18 February 2015. The next quarterly publication will be at 9:30am on 21 April 2016.

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