

Renewable Heat Incentive quarterly statistical release, September 2014

23 October 2014

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This document is also available from our website at <a href="www.gov.uk/decc">www.gov.uk/decc</a>

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# Key points

## Non-domestic RHI

- As at 30 September 2014, a total of 8,949 full applications to join the scheme had been received since it launched in November 2011, with a combined capacity of 1,473 MW. Of the 8,949 applications, 6,061 have been accredited with a combined capacity of 1,038 MW, with 4,981 of these accreditations receiving a payment for heat generated under the scheme.
- In quarter 3 of 2014 there were a total of 2,036 full applications to join the non-domestic scheme; this was 12 per cent higher than in the second quarter of 2014, and more than double the number of applications seen in quarter 3 in 2013. This increase was largely driven by a high number of applications received for small biomass boilers in September, likely due to August's degression announcement of a reduction to the small biomass tariff of 10 per cent, from 8.4 p/KWh to 7.6 p/KWh, with effect from 1 October 2014.
- Since the launch of the scheme, over 85 per cent of both full applications and accreditations have been for small biomass boilers. Small and medium biomass boilers combined are responsible for 94 per cent of both applications and accreditations.

## **Domestic RHI**

- As at 30 September 2014 there had been 12,301 unique applications to join the scheme (2,297 from new installations installed since 9 April 2014), of which 10,048 had been accredited.
- Of the 10,048 accreditations, 1,755 were from new installations (applicants who had systems installed on or after the domestic RHI scheme launch date 9 April 2014) and 8,293 were from legacy applications (applications for systems installed between 15 July 2009 and launch of the scheme, 9 April 2014).
- As at 30 September 2014, 37 per cent (3,711) of all accreditations were for air source heat pumps, 26 per cent (2,580) were for solar thermal, 22 per cent (2,208) were for biomass boilers, with ground source heat pumps accounting for 15 per cent (1,549) of accreditations.
- Of the 1,755 accreditations from new installations, 31 per cent (540) were for air source heat pumps, 20 per cent (344) were for solar thermal, 44 per cent (778) were for biomass boilers, with ground source heat pumps accounting for 5 per cent (93) of accreditations.

## Introduction

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

Statistics are reported on the number of applications, accredited installations and installed capacity. The amount of heat generated is reported for non-domestic RHI installations and is included for the domestic scheme for the first time. 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.

This statistical release no longer contains information on the Renewable Heat Premium Payment (RHPP) schemes which have now ended. Information and data regarding the RHPP schemes can be found within earlier editions of this publication available at the following web address:

https://www.gov.uk/government/collections/renewable-heat-incentive-renewable-heat-premium-payment-statistics

A specific article on the RHPP scheme will be included in the December edition of Energy Trends

Please direct any comments on the content of the report or suggestions for improvements to:

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# Section 1 - Non-domestic Renewable Heat Incentive scheme

## **Key points**

- As at 30 September 2014, a total of 8,949 full applications to join the scheme had been received since it launched in November 2011, with a combined capacity of 1,473 MW. Of the 8,949 applications, 6,061 have been accredited with a combined capacity of 1,038 MW, with 4,981 of these accreditations receiving a payment for heat generated under the scheme.
- In quarter 3 of 2014 there were a total of 2,036 full applications to join the non-domestic scheme; this was 12 per cent higher than in the second quarter of 2014, and more than double the number of applications seen in quarter 3 in 2013. This increase was largely driven by a high number of applications received for small biomass boilers in September, likely due to August's degression announcement of a reduction to the small biomass tariff of 10 per cent, from 8.4 p/KWh to 7.6 p/KWh, with effect from 1 October 2014.
- Since the launch of the scheme, over 85 per cent of both full applications and accreditations have been for small biomass boilers. Small and medium biomass boilers combined are responsible for 94 per cent of both applications and accreditations.

## 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, who are generating heat from technologies including:

Biomass boilers:

- Heat pumps;
- Solar thermal;
- Biomass: 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) which are included in this release.

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 the 30 September 2014 based on data captured as part of the application process for the scheme. The tables that accompany this statistical release are available at: <a href="https://www.gov.uk/government/collections/renewable-heat-incentive-renewable-heat-premium-payment-statistics">https://www.gov.uk/government/collections/renewable-heat-incentive-renewable-heat-premium-payment-statistics</a>

## 1.2 Applications and accreditations

As at 30 September 2014 8,949 full applications had been received (including both successful and unsuccessful applications) to join the scheme. Of these, 6,061 have been accepted onto the scheme, and of these 4,981 have received one or more payments for heat generated under the scheme. Small biomass boilers continue to dominate the scheme, representing 87 per cent of full applications and 85 per cent of accreditations.

At the end of September 2014 there were 100 preliminary applications – 45 of which were for medium solid biomass boilers, a further 15 were for large solid biomass boilers and 31 for biogas. A preliminary accreditation provides applicants reassurance that once the proposed installation is built and the owner submits a full application, it will be granted so long as the installation is built in line with the submitted plans and all other conditions are met.

Following the introduction of additional technologies to the scheme, at the end of September 2014 there had been five full applications for air source heat pumps and three preliminary applications for combined heat and power units (CHP).

Table 1.1 below sets out the number of applications and accreditations by technology.

Table 1.1 – Number of applications and accreditations by technology, Great Britain, November 2011 to September 2014

Tariff Band <sup>1</sup>	Full <sup>2</sup> appli	cations	Accredited in	stallations	Preliminary <sup>3</sup> and accred		Capacity applica		Capacity of a installa		Capacity of papplication accredite	ons and
	Number	% of total	Number	% of total	Number	% of total	MW	% of total	MW	% of total	MW	% of total
Small Solid Biomass Boiler (< 200 kW)	7,753	87%	5,155	85%	0	0%	921.2	63%	605.4	58%	0.0	0%
Medium Solid Biomass Boiler (200-1000kW)	669	7%	547	9%	45	45%	382.3	26%	315.8	30%	31.1	17%
Large Solid Biomass Boiler (> 1000 kW)	27	0%	19	0%	15	15%	140.5	10%	103.7	10%	100.7	54%
Small Solar Thermal (< 200 kW)	212	2%	151	2%	0	0%	3.5	0%	2.5	0%	0.0	0%
Small water or ground source heat pumps (< 100 kW)	228	3%	166	3%	0	0%	6.5	0%	4.8	0%	0.0	0%
Large water or ground source heat pumps (>100 kW)	30	0%	15	0%	0	0%	13.8	1%	5.2	1%	0.0	0%
Bio-Methane	11	0%	4	0%	6	6%	0.0	0%	-	-	-	-
Biogas	14	0%	4	0%	31	31%	4.7	0%	1.0	0%	14.4	8%
Air Source Heat Pumps	5	0%	0	0%	0	0%	0.2	0%	0.0	0%	0.0	0%
CHP	0	0%	0	0%	3	3%	0.0	0%	0.0	0%	39.1	21%
Deep Geothermal	0	0%	0	0%	0	0%	0.0	0%	0.0	0%	0.0	0%
Total	8,949	100%	6,061	100%	100	100%	1,472.6	100%	1,038.4	100%	185.3	100%

- 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.

#### Source:

## 1.3 Application and accreditation rates

Since the scheme began there has been a steady increase in the number of full applications received per quarter, rising from around 250 full applications per quarter at the beginning of the scheme to over 1,000 in the first quarter of 2014 and over 1,800 in the second quarter of 2014.

The increase seen in June 2014 is partly due to May's degression announcement of a reduction to the small biomass tariff from 8.8p/kWh to 8.4 p/kWh with effect from 1 July 2014. The annoncement of a tariff reduction at the end of May 2014 has the effect of increasing the application rate in June 2014 before the change comes into effect at the start of July 2014.

A similar peak was seen in September 2014 where over 1,600 applications were received, the majority of which were for small biomass This spike was due to Augusts degression announcement of a further reduction to the small biomass tariff from 8.4 p/kWh to 7.6p/kWh with effect from 1 October 2014.

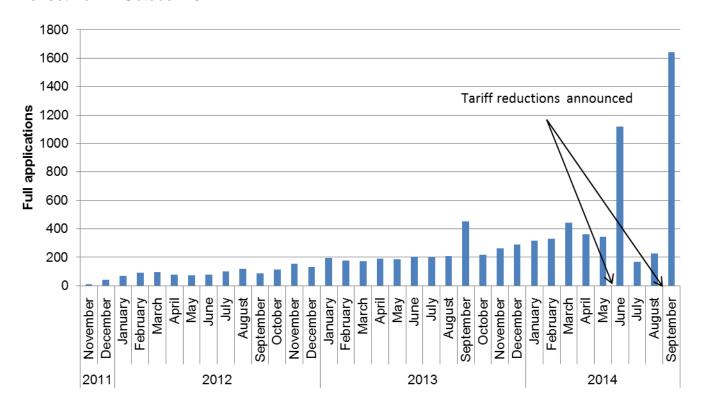


Table 1.2 below shows the number of applications by date of first submission and the number of accreditations by date of first approval. Installations should have started generating heat from the date of first submission. The increase in applications seen between Q2 and Q3 2013 was partly due to changes in air quality requirements that came into effect on the 24 September 2013, and now requires 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 Q3 2014

		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	53	53	2	2	0	0
2012	Q1	254	307	16	18	2	2
	Q2	231	538	94	112	35	38
	Q3	305	843	212	324	40	78
	Q4	399	1,242	394	718	67	145
2013	Q1	548	1,790	476	1,194	100	245
	Q2	581	2,371	538	1,732	110	355
	Q3	859	3,230	636	2,368	132	486
	Q4	768	3,998	525	2,893	91	578
2014	Q1	1,092	5,090	852	3,745	112	690
	Q2	1,823	6,913	1,077	4,822	162	852
	Q3	2,036	8,949	1,239	6,061	186	1,038
Total		8,949		6,061		1,038	

Source: Ofgem

## 1.4 Heat generated

Heat generated is calculated by Ofgem through obtaining the meter readings of accredited scheme participants. Meter readings are collected and processed so that the correct amount of support can be paid.

As at 30 September 2014, installations on the non-domestic RHI scheme had provisionally generated 1,736 GWh of eligible heat, up from 1,448 GWh at the end of June 2014. Biomass boilers dominate heat generation, and at the end of Q3 2014 were responsible for 95 per cent of heat generated and paid for under the scheme – small biomass boilers 37 per cent (638 GWh), medium biomass boilers 38 per cent (663 GWh), and large biomass boilers 20 per cent (346 GWh). Bio-methane was responsible for 4 per cent (74 GWh) of heat generated. Table 1.3 shows total heat generated at the end of September 2014 by technology, these data relate to the period when the payment was received for heat generated not the period in which heat was actually generated.

<sup>1.</sup> The RHI started on the 28 November 2011.

Table 1.3 - Heat generated and number of installations receiving payment by technology type, Great Britain, November 2011 to September 2014

Technology	Heat generated and paid for und	er the scheme	Number of installations receive	ing payment
	MWh	%	Number	%
Small biomass boiler (<200 kW)	637,760	37%	4,168	84%
Medium biomass boiler (200-1000 kW)	662,521	38%	504	10%
Large biomass boiler (>1000 kW)	345,779	20%	17	0%
Solar thermal (<200 kW)	1,063	0%	136	3%
Small water or ground source heat pumps (< 100 kW)	9,647	1%	139	3%
Large water or ground source heat pumps (>100 kW)	5,152	0%	12	0%
Air Source Heat Pumps	0	0%	0	0%
CHP	0	0%	0	0%
Deep Geothermal	0	0%	0	0%
Biogas	810	0%	2	0%
Total (1)	1,662,732	96%	4,978	100%

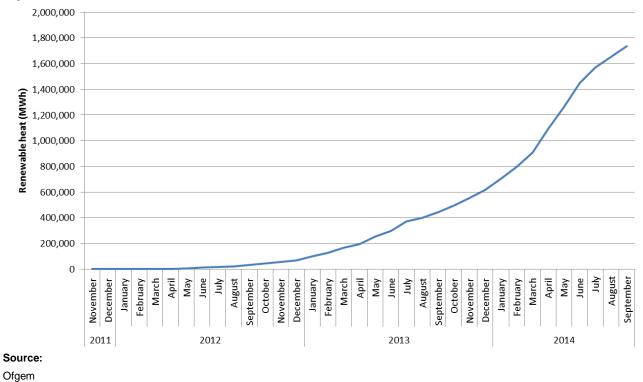
	Equivalent heat genera	ted by gas produced	Number of installation	s receiving payment
	MWh		Number	
Bio-methane	73,561	4%	3	0%
Total (2)	73,561	4%	3	0%
Overall total (1) + (2)	1,736,293	100%	4,981	100%

A distinction has been made between the heat generated and the equivalent energy generated by gas production because biogas can either be fired on site to produce heat or can be cleaned and fed into the gas grid.

#### Source:

Figure 1.1 shows the upward trajectory in heat generated and paid for under the non-domestic RHI scheme, which increased by 288 GWh between Q2 and Q3 2014. This is significantly less than the 539 GWh increase between Q1 and Q2 2014, likely due to Q3 2014 coveirng the summer months, during which time heating installations are often used less intensively.

Figure 1.1 – Cumulative heat generated and paid for, Great Britain, November 2011 to September 2014



## 1.5 Regional breakdown of applications

A large proportion of applicants are located in regions with large rural areas such as the South West (17 per cent) and Scotland (18 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.

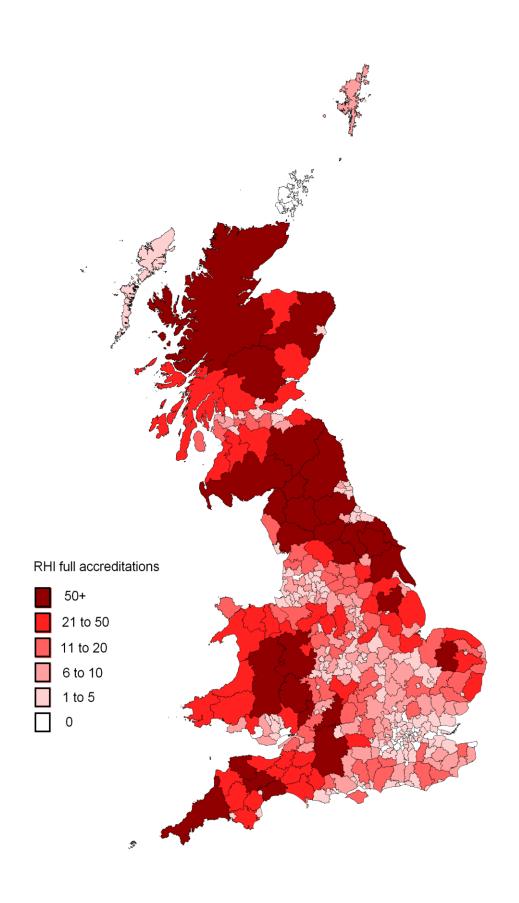
Table 1.4 shows a regional breakdown for the number of applications, accreditations and their capacities.

Table 1.4 - Number of applications and capacity by region, November 2011 to September 2014

Region	Full applic	cations	Accredited in	stallations	Capacity applicat		Capacity of a installa	
_	Number	% of total	Number	% of total	MW	% of total	MW	% of total
England	6,503	73%	4,509	74%	1,067.1	72%	771.4	74%
South West	1,480	17%	1,085	18%	194.2	13%	144.5	14%
West Midlands	901	10%	673	11%	172.4	12%	138.1	13%
Yorkshire and the Humber	939	10%	665	11%	153.2	10%	117.1	11%
North West	826	9%	559	9%	137.1	9%	95.9	9%
South East	604	7%	410	7%	87.9	6%	61.8	6%
East Midlands	762	9%	453	7%	139.1	9%	87.6	8%
East of England	612	7%	395	7%	116.3	8%	78.1	8%
North East	333	4%	235	4%	52.4	4%	36.3	3%
London	46	1%	34	1%	14.6	1%	12.0	1%
Scotland	1,601	18%	1,045	17%	296.3	20%	196.8	19%
Wales	845	9%	507	8%	109.3	7%	70.2	7%
Total	8,949		6,061		1,472.6		1,038.4	

Source:

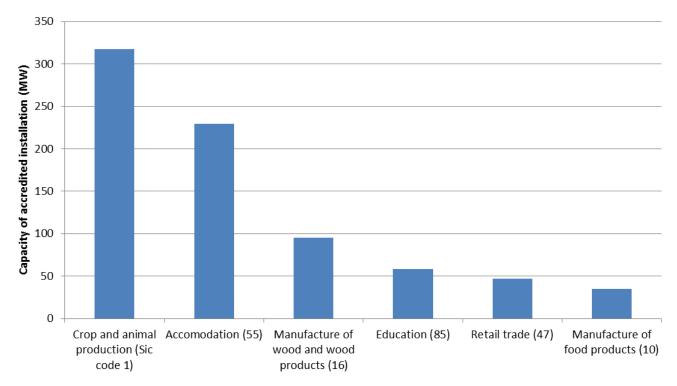
Figure 1.2 - Number of accredited installations by local authority, 30 September 2014



# 1.6 Installed capacity by Standard Industrial Classification (SIC) code

As at 30 September 2014, the combined capacity of all accredited installations was 1,038 MW. Just over 30 per cent of accredited capacity has been installed in the crop and animal production sector (SIC Code 1), and just over 22 per cent has been installed in the accommodation sector (SIC Code 55).

Figure 1.3 - Capacity of accredited installations by Standard Industrial Classification Code (SIC), Great Britain, November 2011 to September 2014



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

## Key points

- As at 30 September 2014 there had been 12,301 unique applications to join the scheme (2,297 from new installations installed since 9 April 2014), of which 10,048 had been accredited.
- Of the 10,048 accreditations, 1,755 were from new installations (applicants who had systems installed on or after the domestic RHI scheme launch date 9 April 2014) and 8,293 were from legacy applications (applications for systems installed between 15 July 2009 and launch of the scheme, 9 April 2014).
- As at 30 September 2014, 37 per cent (3,711) of all accreditations were for air source heat pumps, 26 per cent (2,580) were for solar thermal, 22 per cent (2,208) were for biomass boilers, with ground source heat pumps accounting for 15 per cent (1,549) of accreditations.
- Of the 1,755 accreditations from new installations, 31 per cent (540) were for air source heat pumps, 20 per cent (344) were for solar thermal, 44 per cent (778) were for biomass boilers, with ground source heat pumps accounting for 5 per cent (93) of accreditations.

## 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 departments 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 30 September 2014 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-renewable-heat-premium-payment-statistics

## 2.2 Applications and accreditations

At 30 September 2014 there had been 12,301 applications and 10,048 accreditations of which 19 per cent of applications and 17 per cent of accreditations were from new installations.

#### 2.2.1 New installations

New installations refer to systems installed after the launch of the domestic RHI scheme on 9 April 2014. Such applicants have not received RHPP or any other government funding. As at 30 September 2014 there had been 2,297 applications for new installations to join the domestic RHI scheme. As at 30 September 2014, 1,755 of these had gone through full checks by Ofgem to ensure they comply with the relevant conditions, and had been accredited.

Since scheme launch, 44 per cent of accreditations from new installations were for biomass systems, 31 per cent for ASHP, 20 per cent for solar thermal and 5 per cent for GSHP.

#### 2.2.2 Legacy installations

Legacy applicants are those who installed between 15 July 2009 – when the RHI scheme was first announced – and the launch of the scheme. As at 30 September 2014 12,301 applications to join the domestic RHI scheme had been received, of which 81 per cent (10,004) were from legacy applicants (81 per cent). 8,293 of the 10,004 legacy applications have been accredited, with 38 per cent of accreditations for ASHP, 27 per cent for solar thermal, 17 per cent for biomass systems and 18 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 total capacity by technology type, Great Britain, April 2014 to September  $2014^1$ 

#### New installations<sup>2</sup>

Tariff Band —	Application	ns³	Accreditati	ons
	Number	% of total	Number	% of total
Air source heat pump	779	34%	540	31%
Ground source heat pump	163	7%	93	5%
Biomass systems	911	40%	778	44%
Solar thermal	444	19%	344	20%
Total	2,297	100%	1,755	100%

### Legacy installations<sup>4</sup>

Tariff Band —	Applicatio	ns	Accreditation	ons
Tariii banu —	Number	% of total	Number	% of total
Air source heat pump	3,920	39%	3,171	38%
Ground source heat pump	1,894	19%	1,456	18%
Biomass systems	1,586	16%	1,430	17%
Solar thermal	2,604	26%	2,236	27%
Total	10,004	100%	8,293	100%

#### **Total (New & legacy installations)**

Taviff Dand	Applicatio	ns	Accreditation	ons
Tariff Band —	Number	% of total	Number	% of total
Air source heat pump	4,699	38%	3,711	37%
Ground source heat pump	2,057	17%	1,549	15%
Biomass systems	2,497	20%	2,208	22%
Solar thermal	3,048	25%	2,580	26%
Total	12,301	100%	10,048	100%

#### Notes:

- 1. Data cover the period 9 April 2014 (launch date of the domestic RHI scheme) to 30 September 2014.
- 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.

#### Source:

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

## 2.3 Applications received by application status

As at 30 September 2014, 10,048 applications had received accreditation. There were 1,457 applications under review by Ofgem in order to determine the applicant's eligibility for accreditation onto the scheme (12 per cent of all applications received). A further 779 applications (6 per cent of applications received) either failed to meet the criteria of the online application system or were rejected by Ofgem upon the application being reviewed manually. 17 applications to have gained accreditation have subsequently been cancelled by the applicant.

Table 2.2 below shows applications received by technology and status of application as at 30 September 2014.

Table 2.2 - Application status, Great Britain, April 2014 to September 2014

TW DI				Application	on status		
Tariff Band	Accredited	In review	Rejected <sup>1</sup>	Failed1	Cancelled	Total	
Air source heat pump	Number	3,711	609	348	25	6	4,699
	% of total	79%	13%	7%	1%	0%	
Ground source heat pump	Number	1,549	342	151	9	6	2,057
	% of total	75%	17%	7%	0%	0%	
Biomass systems	Number	2,208	194	85	6	4	2,497
,	% of total	88%	8%	3%	0%	0%	
Solar thermal	Number	2,580	312	143	12	1	3,048
	% of total	85%	10%	5%	0%	0%	
Total	Number	10,048	1,457	727	52	17	12,301
างเลเ	% of total	82%	12%	6%	0%	0%	

#### Notes

Source:

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

## 2.4 Application and accreditation rates

Since the scheme began applications received per month and accreditations granted per month have been increasing, with a peak in July 2014. The July 2014 peak is largely due to Phase 1 RHPP recipients being eligible to apply for the first time from 9 July 2014. Since July 2014 applications rates have been in excess of 2,500 per month, compared to the around 1,000 applications per month experienced previously.

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 2014), 9,251 applications to the domestic RHI scheme were received, and 7,746 applications were granted accreditation. A major reason for the increase in applications between Q2 and Q3 2014 is that a large proportion of RHPP recipients became eligible to join the scheme on 9 July 2014 which increased the legacy application rate.

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

		Number of applications	Cumulative number of applications	Number of accreditations	Cumulative number of accreditations
2014	April	854	854	376	376
	May	1,042	1,896	754	1,130
	June	1,154	3,050	1,172	2,302
	July	3,833	6,883	2,617	4,919
	August	2,779	9,662	2,550	7,469
	September	2,639	12,301	2,579	10,048
2014	Q1	-	<u>-</u>	-	-
	Q2	3,050	3,050	2,302	2,302
	Q3 <sup>1</sup>	9,251	12,301	7,746	10,048
Total		12,301		10,048	

Notes:

1. The figures for Q3 will continue to rise next month.

Source:

## 2.5 Heat generated

As at 30 September 2014 9,838 MWh of heat have been paid for under the domestic RHI scheme. 3,255 MWh heat produced from air source heat pumps (33 per cent), 1,831 MWh from ground source heat pumps (19 per cent), 4,458 MWh from biomass systems (45 per cent) and 294 MWh from solar thermal (3 per cent). This includes both deemed heat, where the applicant receives a set amount each quarter based upon the property's heat demand (determined via green deal assessment), and metered heat where the applicant provides meter readings.

Whilst 45 per cent of heat generated is from biomass systems they account for only 20 per cent of installations to have received one or more payments. This discrepancy is due to biomass systems typically being more powerful and therefore more likely to be installed within larger households. Solar thermal accounts for 25 per cent of the installations receiving payment yet just 3 per cent of the heat paid for. This is because solar thermal is a complimentary heating technology not typically capable of producing heat in the volumes seen from the other technologies.

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

Tariff Band	Heat paid for u domestic sc		Number of insta receiving pay	
	MWh	%	Number	%
Air source heat pump	3,255	33%	1,023	38%
Ground source heat pump	1,831	19%	429	16%
Biomass systems	4,458	45%	551	20%
Solar thermal	294	3%	685	25%
Total	9,838	100%	2,688	100%

Source: Ofgem

The heat figures above are calculated using the data on tariff payments made as at 30 September 2014 to both new and legacy applicants.

## 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 (18 per cent) and Scotland (16 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 received and accredited by region of application.

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

Basis	Applica	tions	Accredited		
Region	Number	% of total	Number	% of total	
England	9,315	76%	7,662	76%	
South West	2,178	18%	1,799	18%	
West Midlands	756	6%	616	6%	
Yorkshire and the Humber	955	8%	783	8%	
North West	723	6%	582	6%	
South East	1,777	14%	1,446	14%	
East Midlands	1,121	9%	926	9%	
East of England	1,334	11%	1,112	11%	
North East	309	3%	262	3%	
London	162	1%	136	1%	
Scotland	1,990	16%	1,587	16%	
Wales	996	8%	799	8%	
Total	12,301		10,048		

Source:

## 2.7 Fuel types displaced

Of the total accreditations (legacy and new installations) as at 30 September 2014, 38 per cent were replacing oil boilers. Oil was the most common system being replaced across all technologies. Solar systems do not follow the same trend as the other technologies as panels are installed alongside other traditional heating systems.

Systems being replaced by air source heat pumps are generally more varied due to smaller size and ease of retrofit.

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

## 2.8 Accreditations by tenure

The majority of heating systems accredited onto the domestic RHI are attributable to Owner Occupiers, 9,287 (92 per cent). A further 510 are from Social Landlords (5 per cent), and 251 are from Private Landlords (2 per cent). Of the 510 accredited heating systems installed by Social Landlords, 443 are for air source heat pumps (87 per cent).

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

Table 2.6 - Accreditations by previous fuel type, Great Britain, April 2014 to September 2014

T : " B . I		Fuel type displaced									
Tariff Band		Oil	Biomass	LPG	Coal	Electricity	Gas	Other / NA <sup>1</sup>	Total		
Air source heat pump	Number	1,407	5	212	167	540	540	840	3,711		
	% of total	38%	0%	6%	5%	15%	15%	23%	100%		
Ground source heat pump	Number	519	1	79	38	103	62	747	1,549		
	% of total	34%	0%	5%	2%	7%	4%	48%	100%		
Biomass systems	Number	1,301	30	178	119	267	106	207	2,208		
·	% of total	59%	1%	8%	5%	12%	5%	9%	100%		
Solar thermal <sup>2</sup>	MW	618	8	98	56	179	1,238	383	2,580		
00.2 0.00	% of total	24%	0%	4%	2%	7%	48%	15%	100%		
Total	MW	3,845	44	567	380	1,089	1,946	2,177	10,048		
	% of total	38%	0%	6%	4%	11%	19%	22%	100%		

#### Source:

<sup>1.</sup> 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.

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

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

Tariff Band -	Private la	Private landlord		Social Landlord		Owner Occupier		Total	
	Number	% of total	Number	% of total	Number	% of total	Number	% of total	
Air source heat pump	84	33%	443	87%	3,184	34%	3,711	37%	
Ground source heat pump	37	15%	6	1%	1,506	16%	1,549	15%	
Biomass systems	101	40%	8	2%	2,099	23%	2,208	22%	
Solar thermal	29	12%	53	10%	2,498	27%	2,580	26%	
Total	251		510		9,287		10,048		

#### Source:

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

## 2.9 Accreditations by property type

As at 30 September 2014 the majority of installations to have gained accreditation onto the domestic RHI schemes are situated within detached houses, 5,932 (59 per cent). A further 1,215 installations are situated within a Semi-detached house (12 per cent), 2,358 are situated within a bungalow (23 per cent), 468 are situated within a Terraced house (5 per cent), and 75 are situated within a Flat or Maisonette (1 per cent).

Air source heat pumps are popular across all property types, accounting for between 31 per cent and 69 per cent of installations when analysed by property type. Ground source heat pumps are far more likely to be installed within a detached house than any other property type – 1,183 accredited GSHPs are situated within detached houses which accounts for 76 per cent of all GSHP installed, and 20 per cent of all installations situated within detached houses. This is likely due to the space typically required to install a GSHP. Biomass boilers are more likely to be installed in a detached or semi-detached house, accounting for 24 per cent of installations in such properties compared with 17 per cent of installations across the other property types.

Table 2.8 shows a breakdown of accredited installations by property type and technology.

## 2.10 On/off gas split of accredited installations

The majority of accredited RHI installations on the domestic scheme are within households located off the gas grid (57 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 73 per cent are situated within households located off gas grid.

Table 2.9 shows a breakdown of the number of applications received from households on and off the grid, by country. The split is more pronounced in Scotland and Wales than England, where 70 per cent and 72 per cent of applications received respectively are from households located off the gas grid, compared with 53 per cent in England.

Solar thermal is the only technology to be installed in more on gas grid than off gas grid households (65 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 household, as opposed to being installed to replace them.

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

Tariff Band	Detached house		Semi-detached house		Terraced house <sup>1</sup>		Bungalow <sup>2</sup>		Flat or Maisonette <sup>3</sup>		Total	
Tarin Bana	Number	% of total	Number	% of total	Number	% of total	Number	% of total	Number	% of total	Number	% of total
Air source heat pump	1,839	31%	500	41%	225	48%	1,095	46%	52	69%	3,711	37%
Ground source heat pump	1,183	20%	98	8%	17	4%	249	11%	2	3%	1,549	15%
Biomass systems	1,469	25%	254	21%	81	17%	397	17%	7	9%	2,208	22%
Solar thermal	1,441	24%	363	30%	145	31%	617	26%	14	19%	2,580	26%
Total	5,932		1,215		468		2,358		75		10,048	

#### Source:

<sup>1.</sup> Terraced house includes: Enclosed-end-terrace house, Enclosed-mid-terrace house, Mid-terrace house, End-terrace house

<sup>2.</sup> Bungalow includes: Mid-terrace bungalow, Detached bungalow, End-terrace bungalow, Semi-detached bungalow

<sup>3.</sup> Flat or Maisonette includes: Basement flat, Basement maisonette, Ground-floor flat, Mid-floor flat, Top-floor flat, Top-floor maisonette

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

Tariff Band -		England		Scotland		Wales		Great Britain	
		On grid	Offgrid	On grid	Offgrid	On grid	Off grid	On grid	Off grid
Air source heat pump		1,320	1,738	133	270	74	178	1,527	2,184
Ground source heat pump		430	772	58	188	28	95	516	1,033
Biomess systems		390	954	159	504	43	158	592	1,616
Solar thermal		1,487	571	121	178	81	144	1,689	891
Total (excluding solar thermal)	Number	2,140	3,484	350	940	145	429	2,635	4,833
	% of total	38%	62%	27%	73%	25%	75%	35%	65%
Total	Number	3,627	4,035	471	1,118	228	573	4,324	5,724
	% of total	47%	53%	30%	70%	28%	72%	43%	57%

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

http://www.xaserve.com/wp-content/uploads/Of-Gas-Postcodes.xisx

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)
Capacity	The capacity of the system is the maximum power output. It depends on the installations size and technical capability.
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.
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
Energy Savings Trust (EST)	The Energy Saving Trust Foundation gives impartial advice to communities and households on how to reduce carbon emissions.  Their main activities include testing low carbon technologies, providing certificates and assurances to businesses and consumer goods and collecting and energy data. EST are responsible for the delivery of the RHPP scheme on behalf of the department.
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	The Microgeneration Certification Scheme (MCS) is an industry-led and internationally recognised quality assurance scheme,

(MCS)	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.
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. 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 are taking a phased approach to those who installed their system between 15 July 2009 and 9 April 2014 (legacy applicants).

#### The approach is as follows:

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

## Further information and feedback

Any enquiries or comments in relation to this statistical release should be sent to Andrew Wilson in DECC's Heat Statistics Team at the following email address: andrew.a.wilson@decc.gsi.gov.uk

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The statistician responsible for this publication is William Rose.

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

## 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 20 November 2014. The next quarterly publication will be at 9:30 on 22 January 2015.

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