Non-domestic Renewable Heat Incentive

Introduction

This one-off article provides a statistical summary of take-up of renewable heating installations incentivised under the non-domestic Renewable Heat Incentive (RHI) scheme. Its focus is on the industrial sectors associated with the recipient's use of the heat and also their geographic location.

This analysis uses administrative data relating to the non-domestic RHI scheme accurate as at 31 January 2015. The data used within this article are available at: www.gov.uk/government/collections/renewable-heat-incentive-renewable-heat-premium-payment-statistics.

More up-to-date data will continue to be published at this location.

Background to the non-domestic RHI

The non-domestic 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[1] including:

- Biomass boilers;
- Heat pumps;
- Solar thermal;
- Biogas[2]; and
- Biomethane[3].

Further information on the non-domestic RHI scheme can be found at: www.gov.uk/government/policies/increasing-the-use-of-low-carbon-technologies/supporting-pages/renewable-heat-incentive-rhi

Overview of deployment under the non-domestic RHI

As at 31 January 2014, 11,563 full applications[4] had been received (including both successful and unsuccessful applications) to join the non-domestic scheme. Of these, 7,675 have gone through full checks by Ofgem E-serve to make sure that they comply with the relevant conditions and have consequently have been accepted onto the scheme (accredited).

Biomass installations dominate deployment, in particular small biomass boilers which constitute 88 per cent of full applications and 87 per cent of accreditations since the launch of the scheme in November 2011. Medium biomass boilers have contributed a further 7 per cent of full applications and 8 per cent of accreditations.

Currently there are 6,844 installations which have received one or more payments for heat generated under the scheme, and as at 31 January 2015, installations on the non-domestic RHI scheme had generated 2.3 TWh of eligible heat.

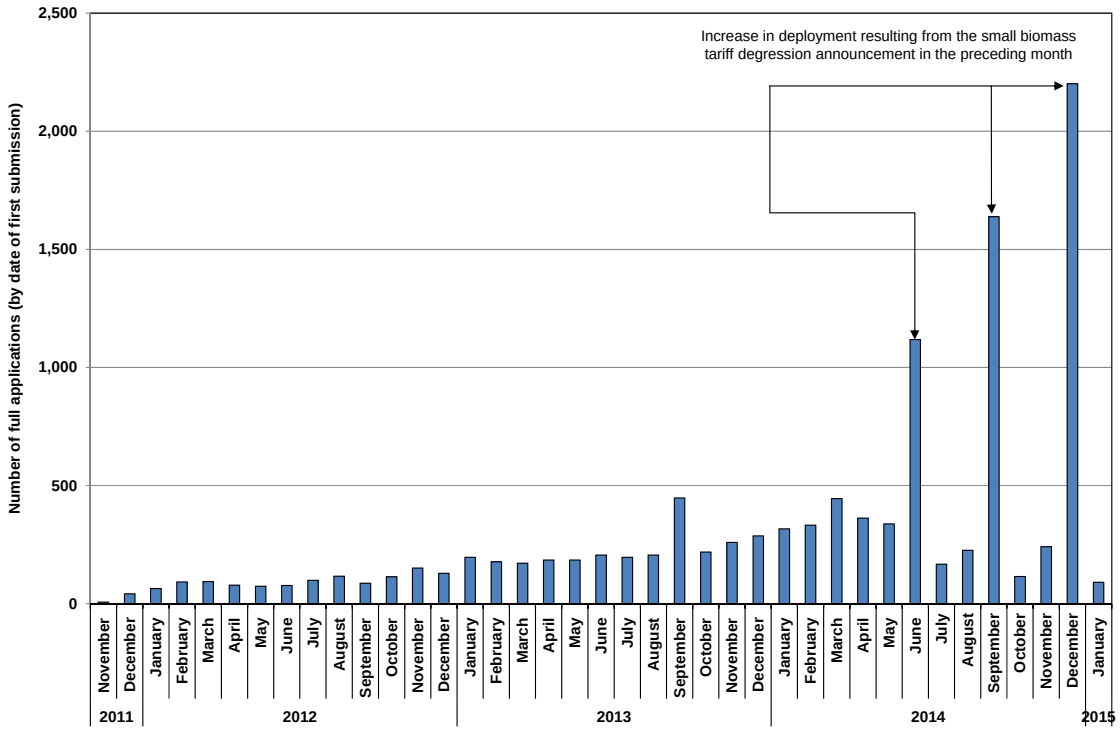
[1] Further information on eligible systems can be found at: www.legislation.gov.uk/all?title=renewable heat incentive.
[2] Generation of heat from the combustion of biogas in boilers or engines. Biogas is a mixture of combustible gases produced by biological feedstock/ fuel.
[3] An alternative to burning biogas involves removing the carbon dioxide and other impurities from biogas in a process known as scrubbing, and ensuring that the calorific value, or energy content, closely matches that of the natural gas in the network.
[4] Full applications are completed applications submitted to Ofgem E-serve with a relevant system already installed.

The popularity of small biomass boilers on the scheme has led to the tariff being reduced 3 times to date – see Table 1. Prior to any tariff reduction taking effect applicants have a one month grace period after the announcement is made, during which they can apply to the scheme and receive the non-reduced tariff. It is likely that the spikes in applications seen in June, September and December 2014 were caused by tariff reductions taking effect in the following months (Figure 1).

Table 1 – Degression announcements

Announcement month	Effective month	Tariff reduced	Percentage	Old tariff	New tariff
May-2013	Jul-2013	Medium Biomass	5%	Tier 1: 5.3p/kWh Tier 2: 2.2p/kWh	5.0p/kWh 2.1p/kWh
May-2014	Jul-2014	Small biomass	5%	8.8p/kWh 2.3p/KWh	8.4p/Kwh 2.2p/Kwh
Aug-2014	Oct-14	Small biomass	10%	8.4p/kWh 2.2p/kWh	7.6p/kWh 2.0p/kWh
Nov-14	Jan-15	Small biomass	10%	7.6p/kWh 2.0p/kWh	6.8p/kWh 1.8p/kWh
Nov-14	Jan-15	Biomethane	10%	7.5p/kWh	6.8p/kWh
Feb-15	Apr-15	Small biomass	15%	6.8p/kWh 1.8p/kWh	5.87p/kWh 1.56p/kWh

Figure 1 - Number of full applications, Great Britain, November 2011 to January 2015



Source: RHI Official Statistics, DECC

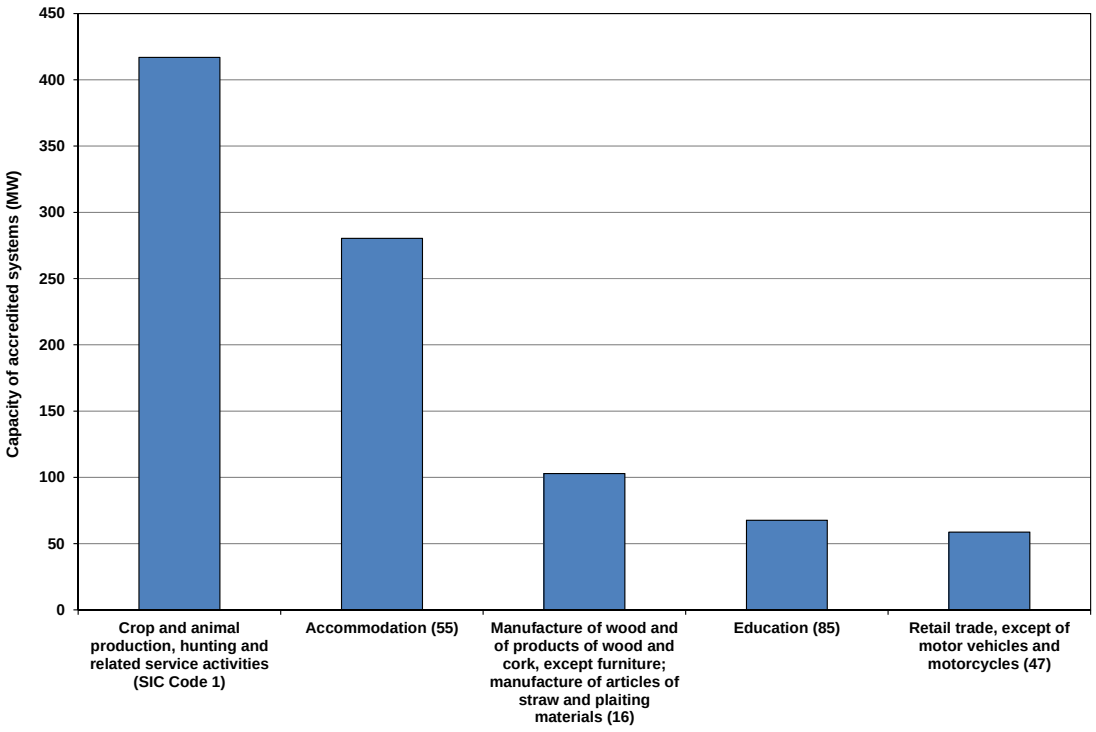
Applicants can also apply for preliminary accreditation to the scheme. Preliminary accreditation provides applicants with reassurance that once the proposed installation is built and the owner submits a full application, accreditation will be granted as long as the installation is built in line with the submitted plans and all other conditions are met. At the end of January 2015, there were 97 preliminary applications, 34 per cent of which were for medium solid biomass boilers, a further 12 per cent of which were for large solid biomass boilers and 48 per cent for biogas.

Uptake by Standard Industrial Classification code

Standard Industrial Classification (SIC)[5] codes are used to identify between different industry areas. Every applications for accreditation onto the non-domestic RHI has an associated SIC code which relates to the sector for which the heat generated is being used for. Using the SIC code and through aggregation by this characteristic, uptake and scheme performance can be monitored across the different sectors.

As at 31 January 2015, the combined capacity of the 7,675 installations accredited onto the non-domestic RHI scheme was 1,273 MW. Thirty-three per cent (417 MW) of accredited capacity has been installed in the crop and animal production sector (SIC Code 1), and 22 per cent (280 MW) has been installed in the accommodation sector (SIC Code 55). Figure 2 shows capacity by SIC code for the five major users of the RHI by this measure.

Figure 2 – Capacity of accredited systems by SIC code, Great Britain, as at 31 January 2015



Source: RHI Official Statistics, DECC

[5] Further information on SIC codes are available at: www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html

Figure 3 shows the composition of renewable technology installed for each of the five major sectors. For each of the sectors biomass boilers are the dominant technology installed, this is in line with what has so far been seen across the scheme as a whole, with 99% of capacity from accredited installation attributable to biomass installations. Note that biomethane installations injecting directly into the grid do not have a capacity directly comparable to the other technologies eligible for the RHI and therefore do not contribute towards capacity figures here.

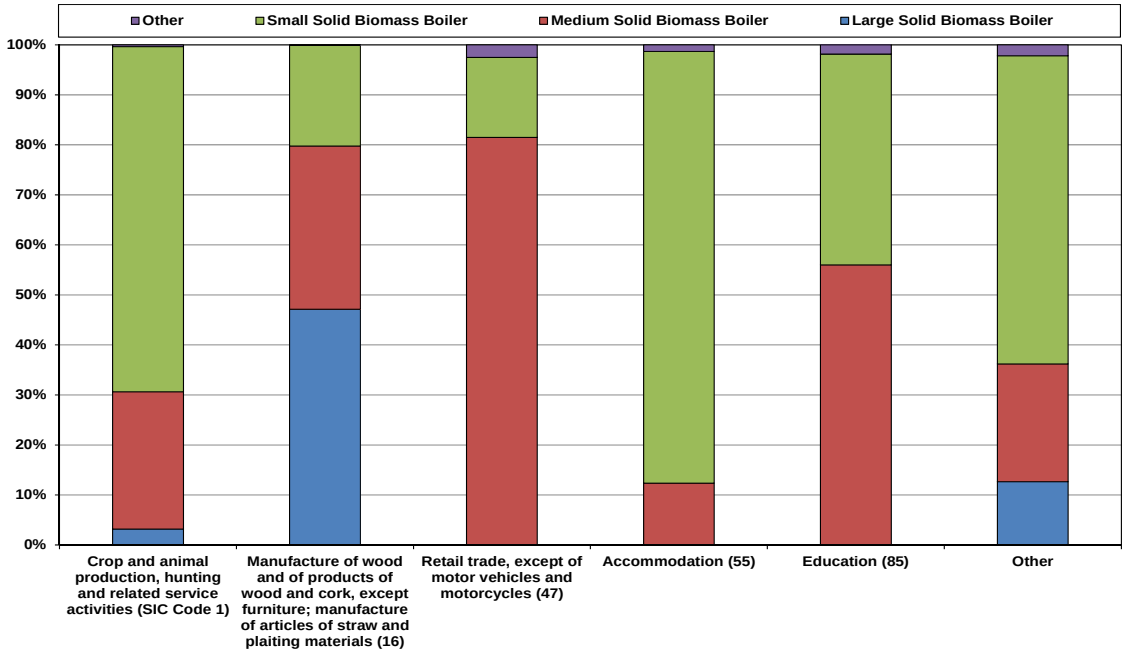
The crop and animal production (SIC Code 1) and accommodation (SIC Code 55) sectors combined account for 697 MW (54.8 per cent) of accredited installation capacity. Within the crop and animal production sector small biomass was responsible for 69 per cent of accredited capacity (287.3 MW of 416.9 MW), and 86 per cent (241.9 MW of 280 MW) of accredited capacity in the accommodation sector.

Although the crop and animal production sector account for a considerably larger portion of accredited capacity than the accommodation sector, the accommodation sector accounts for 2,580 individual installations, a third of all installations accredited onto the scheme, compared to 2,142 in the crop and animal production sector.

The retail sector (SIC Code 47) heavily favours the use of medium biomass boilers which account for 81 per cent of accredited capacity. Medium biomass is also favoured, though to a somewhat lesser extent, within the education sector (SIC Code 85) where it accounts for 56 per cent of accredited capacity.

Within the manufacture of wood and cork products sector (SIC Code 16) large biomass constitutes nearly half of accredited capacity, accounting for 47 per cent. The reason large biomass forms such a large proportion of accredited capacity in this sector is because large biomass boilers are well suited to process heating, which constitutes a significant portion of heat demand within this sector, whilst heat demand from other sectors is mainly for space and water heating.

Figure 3 – Composition of installation type by Standard Industrial Classification Code, Great Britain, as at 31 January 2015



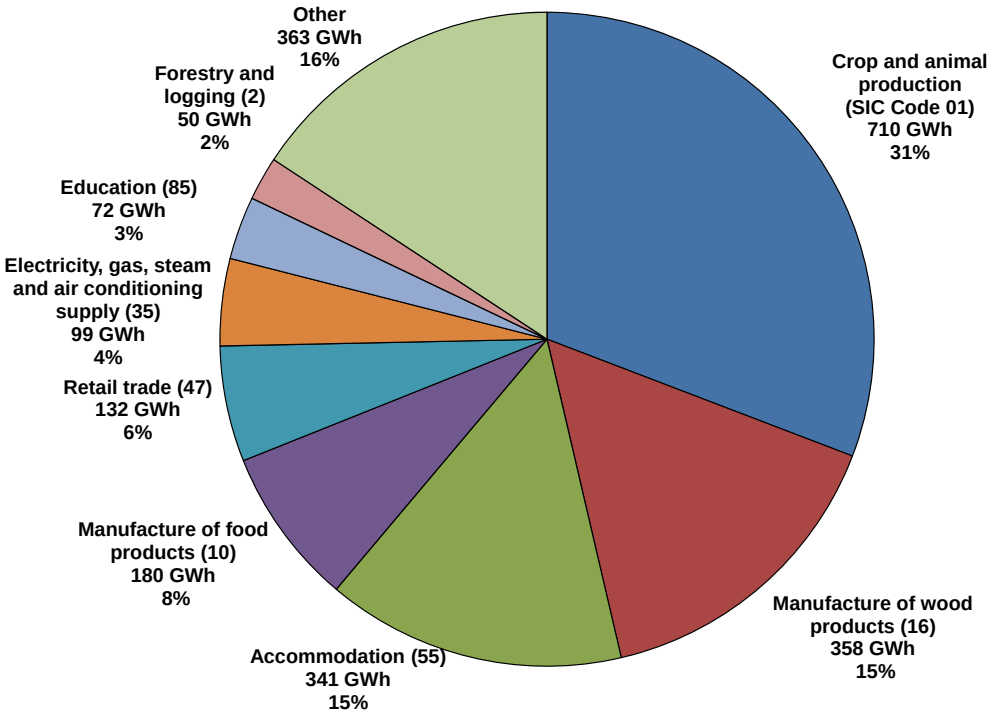
Source: RHI Official Statistics, DECC
Note: Other includes all heat pumps, biogas, deep geothermal, CHP and solar thermal. Biomethane is not included.

Heat generated based on payments by SIC code

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. These data relate to the period when the payment was received for heat generated not the period in which heat was actually generated. Consequently, there is heat generated under the scheme which is not included in these data.

As at 31 January 2015, 2,305 GWh of renewable heat had been generated and paid for under the non-domestic RHI, of which 31 per cent (710 GW) was from the crop and animal production sector (SIC Code 1). A further 16 per cent (358 GW) has been generated by the manufacture of wood and cork products sector, and 15 per cent (341 GW) from the accommodation sector. No other single sector has more than 10 per cent of heat generated and paid attributed to it.

Figure 4 – Heat generated and paid for by SIC code, as at 31 January 2015, Great Britain



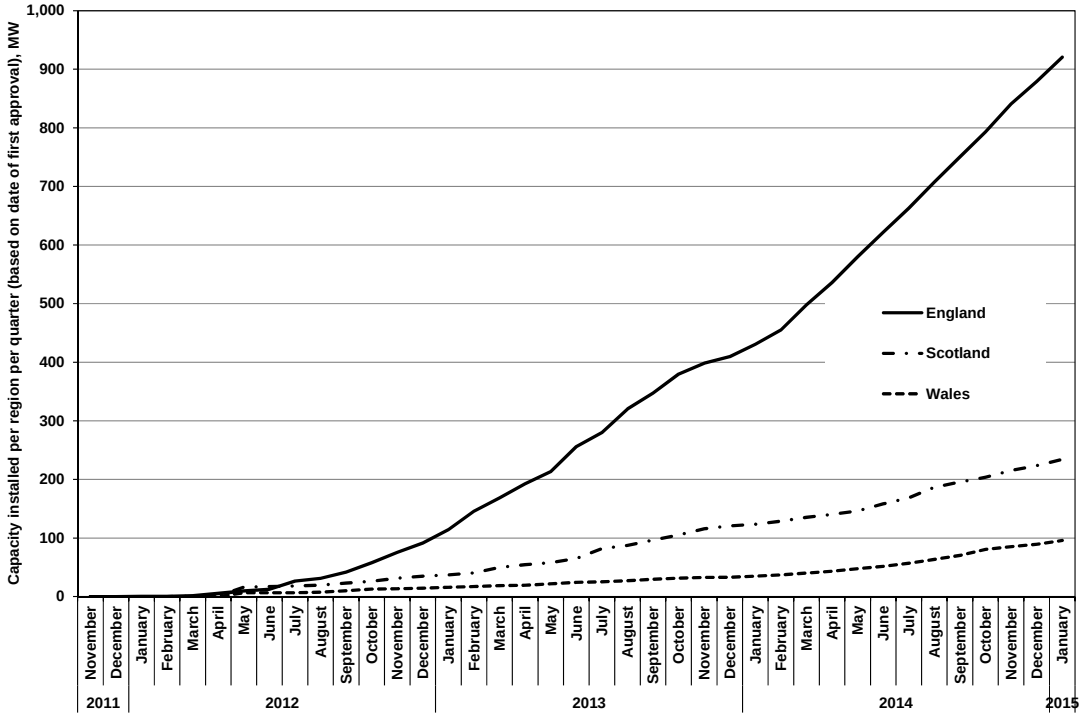
Source: RHI Official Statistics, DECC

Uptake by region

As at 31 January 2015, 74 per cent (941.5 MW) of accredited capacity was attributed to installations located within England, compared to 19 per cent (235.8 MW) from installations located within Scotland and 8 per (95.8 MW) from installations located within Wales. Figure 5 shows how capacity has increased over time by country.

The South West is the region within England with most installed capacity, 14 per cent of the scheme total (172.6 MW), followed by the West Midlands with 12 per cent (158.2 MW). In general take-up of the non-domestic RHI is higher in rural areas, probably because these are areas where a greater proportion of properties are not on the gas grid. In such cases applicants are likely replacing a solid fuel or oil burning system which may be costlier than using mains gas, thereby making the tariffs offered under the RHI appear particularly attractive due to the more expensive counterfactual. Table 2 shows a regional breakdown for the number of applications, accreditations and their capacities.

Figure 5 – Cumulative installed capacity by country, November 2011 to January 2015



Source: RHI Official Statistics, DECC

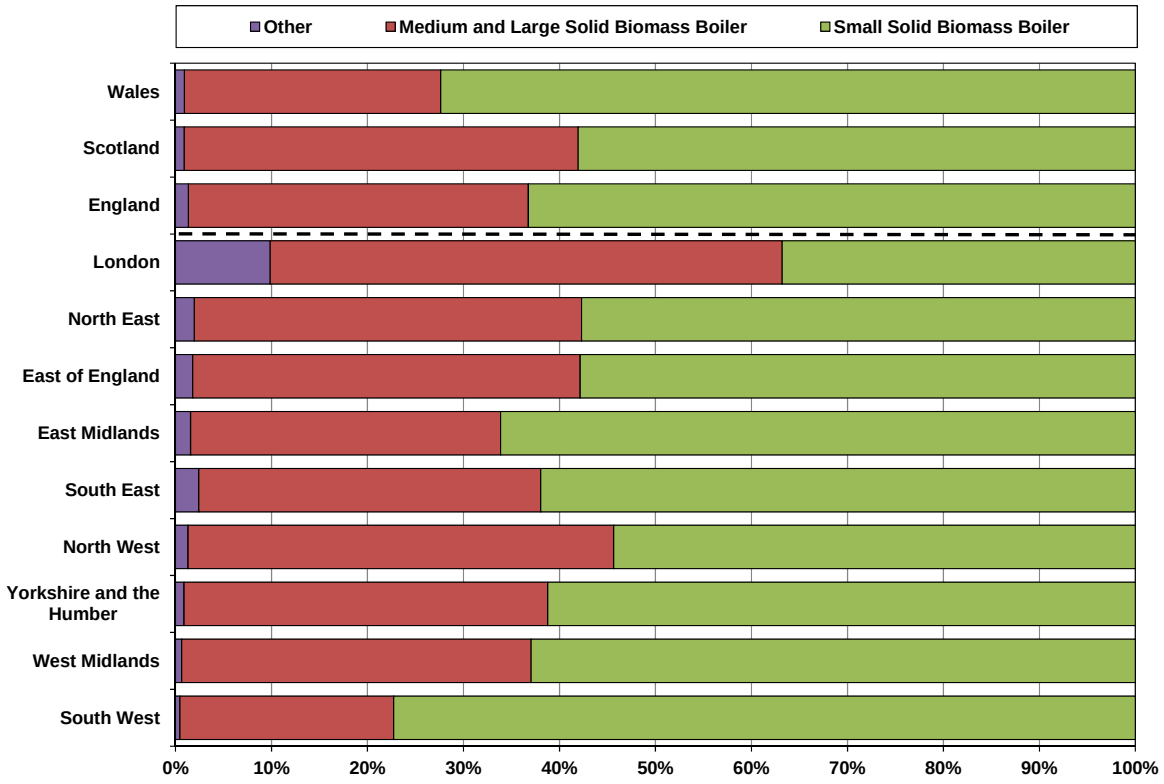
Table 2 – Number of applications and capacity by region, as at 31 January 2015

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	8,292	72%	5,632	73%	1,351.0	71%	941.5	74%
South West	1,830	16%	1,293	17%	239.8	13%	172.6	14%
West Midlands	1,130	10%	792	10%	207.8	11%	158.2	12%
Yorkshire and the Humber	1,183	10%	815	11%	189.4	10%	136.6	11%
North West	1,071	9%	709	9%	172.1	9%	118.5	9%
South East	772	7%	492	6%	122.1	6%	73.4	6%
East Midlands	1,033	9%	662	9%	188.8	10%	122.0	10%
East of England	814	7%	567	7%	155.1	8%	105.6	8%
North East	402	3%	264	3%	58.9	3%	41.8	3%
London	57	0%	38	0%	17.0	1%	12.8	1%
Scotland	2,139	18%	1,341	17%	400.1	21%	235.8	19%
Wales	1,132	10%	702	9%	162.3	8%	95.8	8%
Total	11,563		7,675		1,913.4		1,273.1	

Source: RHI Official Statistics, DECC

Figure 6 shows the composition of renewable technology installed for each region.

Figure 6 – Cumulative capacity by technology and region, as at 31 January 2015

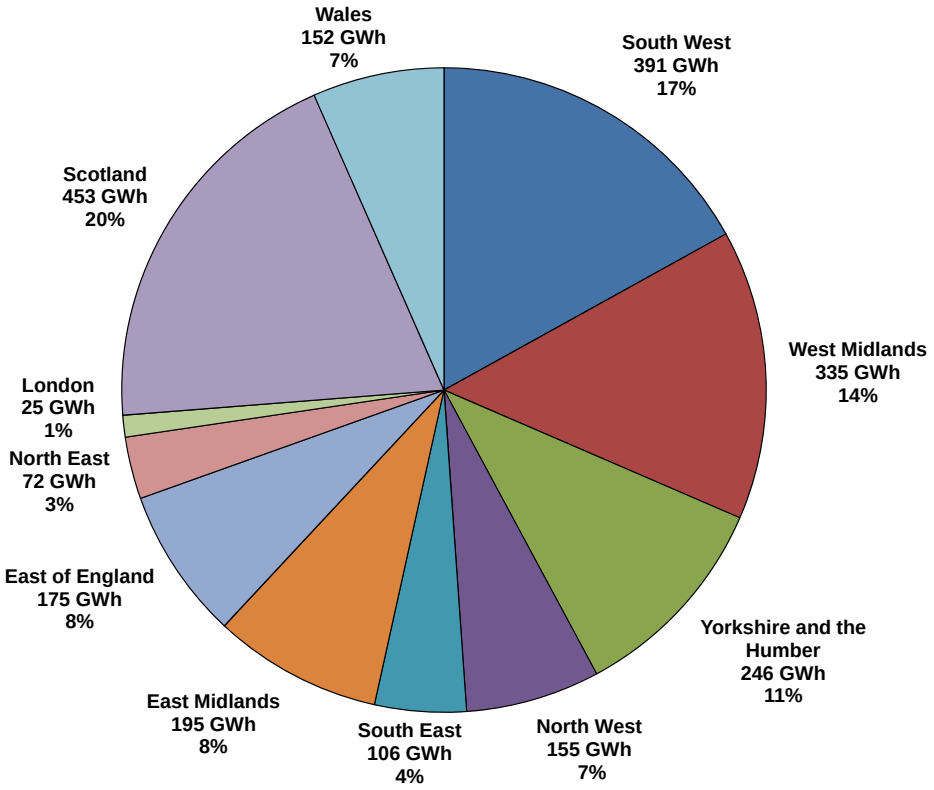


Source: RHI Official Statistics, DECC
Note: Due to small numbers medium and large biomass have been combined.
Other includes all heat pumps, biogas, deep geothermal, CHP and solar thermal. Biomethane is not included.

Heat generated based on payments by region

Figure 7 shows the regional distribution of total heat generated and paid for up. As at 31 January 2015 installations on the non-domestic scheme had generated 2,305 GWh of eligible heat. Of this, 20 per cent was generated in Scotland, 17 per cent in the South West and a further 14 per cent in the West Midlands.

Figure 7 – Total heat generated and paid for by region, as at 31 January 2015



Source: RHI Official Statistics, DECC

User feedback

Please send any comments or queries regarding these statistics to the contact details below:

William Rose
Heat Statistics
Tel: 0300 068 2838
E-mail: William.Rose@decc.gsi.gov.uk

Max Enoch
Heat Statistics
Tel: 0300 068 8027
E-mail: Max.Enoch@decc.gsi.gov.uk