



Census of Owner-Occupier applicants to the Domestic RHI: Waves 1 to 12

A research project commissioned as part of the Renewable Heat Incentive
Evaluation

October 2015

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KEY FINDINGS (1)

Number of domestic Renewable Heat Incentive applications

Between May 2014 and April 2015, 25,568 successful applications were received by the Renewable Heat Incentive (RHI) scheme from owner-occupiers, of which 17,181 (67%) were 'legacy' applications and 8,387 (33%) were 'new' applications.¹ Except where stated otherwise, all figures in this report refer to new applications.

Sources of information for applicants

Installers were by far the most common source of information for owner-occupier applicants about renewable heat technologies (73%) and also about the RHI (59%).

Installers were also rated the most trusted (where applicants accessed more than one source) and most useful source of information for applicants about renewable heat technologies and the RHI.

Triggers for investing in a new heating system

Applicants were asked what triggered their decision to install a new heating system (note that applicants could select multiple reasons).

The availability of a grant or other funding was the most common reason for owner-occupier applicants to decide to install a new heating system (41%), along with the need to replace a heating system (35%) and upgrading or refurbishing a home (34%).

A grant or funding becoming available was particularly important for applicants who installed biomass systems (52%).

Reasons for choosing a renewable heat technology

Having explained why they invested in a new heating system, owner-occupier applicants were asked to choose the one main reason for specifically choosing a *renewable* heat technology. Across the main reasons given, 45% were financial (e.g. saving money or claiming the RHI), 21% were attitudinal (e.g. liking the technology or hearing recommendations from others), 17% related to self-sufficiency and 10% reflected environmental concerns.

The importance of financial reasons has declined gradually from 51% in survey waves 1-3 to 40% in survey waves 10-12.

Being able to claim the RHI was the single main reason for choosing a renewable technology mentioned by the most applicants (15%).

Installation of renewable heating systems

The most common way in which owner-occupier new applicants found an installer was via word of mouth or a recommendation (39%). Most (80%) reported that it was easy to find an installer they believed would install the technology correctly.

Eight in ten (80%) owner-occupier applicants were satisfied overall with their renewable heat technology installation. Satisfaction increased the more experience that applicants had of their renewable heat technology installation.

¹ 'Legacy' applications were received before 9 April 2014. 'New' applications were received on or after this date.

KEY FINDINGS (2)

Most (59%) owner-occupier new applicants did not face any difficulties during installation. Of those who did encounter problems with the installation, the issues cited most often were to do with disruption caused by the installation (14% of all new applicants), unclear information or advice (12%) and a lack of trusted installers (11%).

Influence of the Renewable Heat Incentive on decisions

The RHI is an important lever in promoting the decision to install renewable heating technologies. Almost half of all owner-occupier new applicants said that, without the RHI, they would either not have replaced their heating system at all (42%) or would have installed a non-renewable technology (7%).

The RHI tariff influenced the technology choice of 72% of applicants, especially for those installing biomass systems (85% of whom said their choice was influenced by the tariff).

Three-quarters (72%) of applicants were aware that the value of the RHI tariff may reduce (degress) over time. Among these applicants, degression was a spur to 63% who reported installing their technology quickly to avoid reduced tariffs.

How applicants funded their renewable heat technology

Three-quarters (77%) of RHI scheme owner-occupier applicants funded the installation of their renewable heating system using their own savings.

Almost half (48%) of those financing their installations through a loan also said that the scheme made it easier to secure finance for their renewable heat technology installation.

Difficulties and satisfaction with the Renewable Heat Incentive application process

Two-thirds (67%) of owner-occupier applicants did not face any difficulties in meeting the initial requirements of the RHI scheme. For those encountering a problem, the main issue cited was an unclear RHI application process (15% of all new applicants).

Three-quarters of applicants (72%) did not have any problems with the RHI application. For those reporting having had a problem, the most commonly cited difficulty was their application was initially rejected (13% of all new applicants), though this has been falling over time.

Overall levels of satisfaction with the ease of applying for the RHI were very high (82%).

INTRODUCTION TO THE EVALUATION AND THIS RESEARCH PROJECT

The **evaluation** of the **Renewable Heat Incentive (RHI)** was commissioned by the Department of Energy and Climate Change (DECC). The aim of the evaluation was to understand the administration, delivery and performance of the RHI and explore its effects on the renewable heat supply chain.

The census of domestic RHI applicants was conducted by NatCen Social Research and the Centre for Sustainable Energy.

A census of all successful **owner-occupier** applicants to the domestic RHI was carried out, surveying applicants who submitted their application between May 2014 and April 2015¹.

25,568 successful applications were received by Ofgem in that time from 24,015 owner-occupier applicants (applicants who submitted more than one application were invited to take part only once).

RHI applications consist of two groups: **legacy applications** (67% of the total²) for installations that either received the now discontinued Renewable Heat Premium Payment or were commissioned before the RHI scheme opened on 9 April 2014; and **new applications** (33%) that were commissioned on or after 9 April 2014. Unless otherwise stated, **figures reported refer to new applications only**.

The census was carried out as an online survey and had an overall response rate of 45%. Responding to a decrease in response rate, the survey was substantially shortened after wave 9. As a result, information for some questions is reported only for waves 1-9 or waves 10-12.

More information on the methodology is available in the accompanying [technical annex](#)³.

¹ The survey took place between July 2014 and June 2015, with a pilot in June 2014.

² According to Ofgem administrative data.

³ Available from <https://www.gov.uk/government/collections/renewable-heat-incentive-evaluation>.

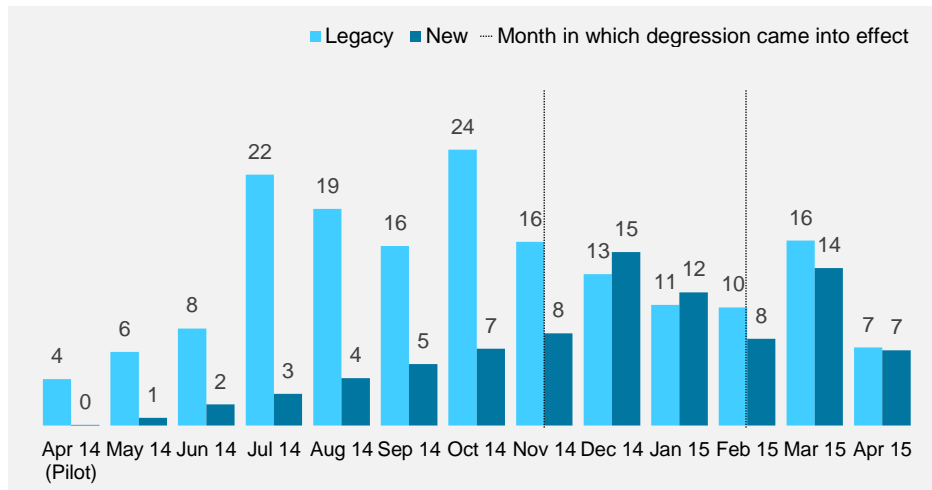
Research Aims

The census focused on the following themes:

- applicants and installations
- hearing about renewable heat technologies and the RHI
- investment in renewable heat technologies
- influence of the RHI
- financing renewable heat technologies
- applicants' experiences of the RHI scheme
- experiences of installing renewable heat technologies
- satisfaction with renewable heat technologies

[Separate research projects](#) explored the impact of the domestic RHI on social housing providers and installers.

Successful applications made to the RHI by owner-occupiers (%), by application date



Source: Ofgem administrative data (n = 25,568)

OWNER-OCCUPIER APPLICATIONS TO THE DOMESTIC RHI: UPTAKE PROFILE AND MOTIVATIONS TO INSTALL A RENEWABLE HEATING SYSTEM

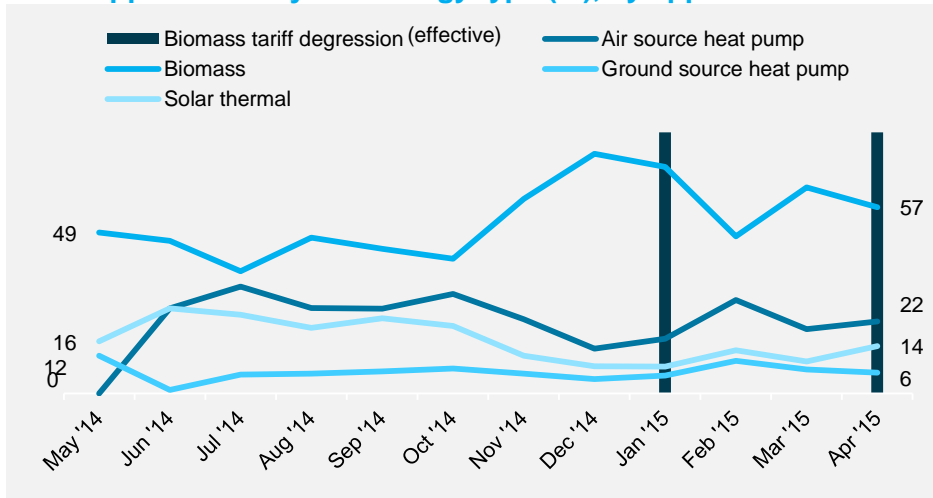
In its first year, across both new and legacy applications by owner-occupiers, the domestic Renewable Heat Incentive (RHI) saw the following uptake for the four technologies supported (according to Ofgem scheme data): air source heat pumps (32% of all applications), biomass (31%), solar thermal installations (22%) and ground source heat pumps (15%).

Among **legacy applications**, air source heat pumps were most common (37%), followed by solar thermal (26%), ground source heat pumps (20%) and biomass boilers (17%).

Nearly six in ten (59%) **new applications** in the first 12 months of the RHI scheme were for biomass boilers. Over time that proportion has increased, from 42% in waves 1-3 to 61% in waves 10-12.

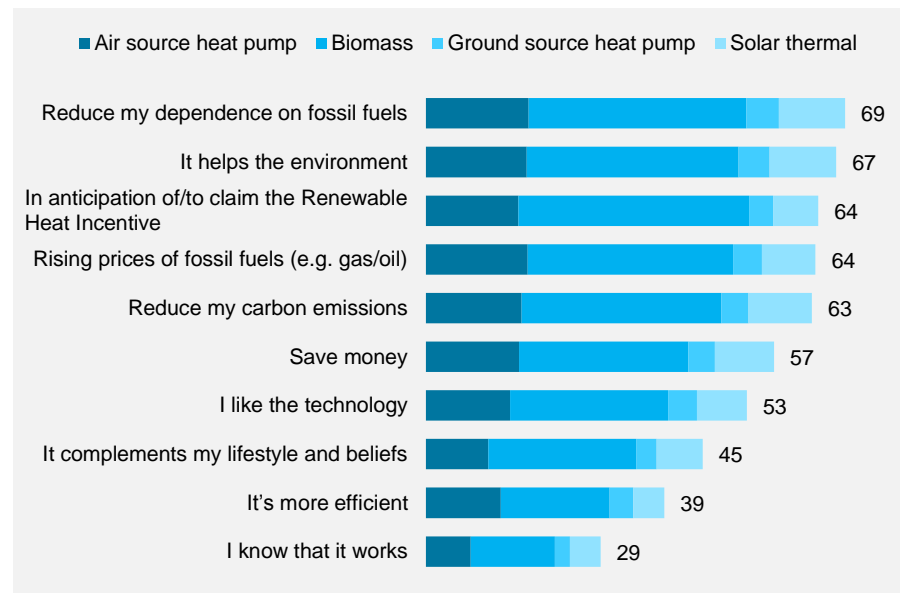
More than a fifth of applications (22%) have been for air source heat pumps, over a tenth (13%) for solar thermal installations and six per cent for ground source heat pumps.

'New' applications by technology type (%), by application date



Source: Ofgem scheme data, new applications only (n = 8,387)

Top ten motivations to install a renewable rather than a conventional heating system (% of new applicant responses)



Base: 3,128, new applications, except refusals, Question MO1. Multiple selections possible.

The most important reasons applicants gave for installing renewable rather than conventional heating were a desire to reduce fossil fuel dependence (69%), to help the environment (67%), and in anticipation of the RHI funding (64%) (note that applicants could select multiple responses).

The RHI has been most important to biomass applicants, with around three quarters (73%) citing it as a motivation, and least to solar thermal applicants, where less than half (49%) were motivated by it. For air source heat pump applicants, the importance of the RHI has been falling over time (falling from 70% in waves 1-3 to 54% in waves 10-12).

OWNER-OCCUPIER APPLICATIONS TO THE DOMESTIC RHI: CIRCUMSTANCES IN WHICH RENEWABLE HEAT TECHNOLOGIES WERE INSTALLED

The four eligible technologies tend to be installed in different circumstances.

Biomass boilers and **ground source heat pumps** were most likely to be installed **off the gas grid**, to heat both space and water. **Ground source heat pumps** were more frequently installed in **self-built** and **larger properties**, often as part of building or upgrading a home. Ground source heat pump applicants reported a **median cost** of £19,000 for buying the technology and getting it installed. Biomass applicants reported a figure of £16,000.

Air source heat pump applicants tended to be **older**, live in **smaller homes** and have **lower incomes**. The median cost of technology and installation was £11,000. A third of applications were for properties on the gas grid.

Characteristics of owner-occupier installations within the domestic RHI (%), by technology type

Technology type	Per cent of applications that are legacy, by technology ¹	Per cent of properties on the gas grid, by technology ¹	Per cent of properties that are self built, by technology ¹	Per cent of installations that heat both space and water, by technology ¹	Average (mean) installed capacity (kWh) ¹	Average (mean) floor space (m ³) ¹	Median cost of technology and installation (£ '000) ²	Average (mean) household income (£'000) ²	Average (mean) no. of occupants ²	Per cent of households in which youngest person is aged 55+, by technology ²
Air source heat pump	78%	30%	21%	91%	13	181	11	53	2.6	54%
Biomass	37%	16%	4%	98%	26	222	16	60	3.1	34%
Ground source heat pump	86%	22%	43%	94%	13	264	19	71	3.0	40%
Solar thermal	80%	60%	12%	1%	4	179	6	53	2.8	51%
Average across technologies	67%	31%	17%	74%	17	206	13	58	2.9	45%

Solar thermal installations **only heat water** and correspondingly had a much **lower capacity** (on average 4kWh, compared to 13kWh for air and ground source heat pumps and 26kWh for biomass). Solar thermal applicants reported a **median cost** of around £6,000 for the technology and installation. Six in ten solar thermal installations were made in properties **on the gas grid**, often as part of a wider upgrade. Solar thermal differs from the other technology types as it does not heat space and is a complementary system installed alongside other technologies, hence the lower costs. A degree of caution should therefore be used in interpreting any differences between solar thermal and other technologies.

Among new owner-occupier applicants in Great Britain, air source heat pumps were installed much more in the East and South of England, while in Northern England and Scotland, biomass boilers were predominant. Solar thermal applications were more likely to be installed in Southern England and Wales.

Source: (1) Ofgem scheme data, new and legacy applications (n=25,568) and (2) RHI applicant survey, new and legacy applications (n=10,341).

SOURCES OF INFORMATION ON RENEWABLE HEAT TECHNOLOGIES

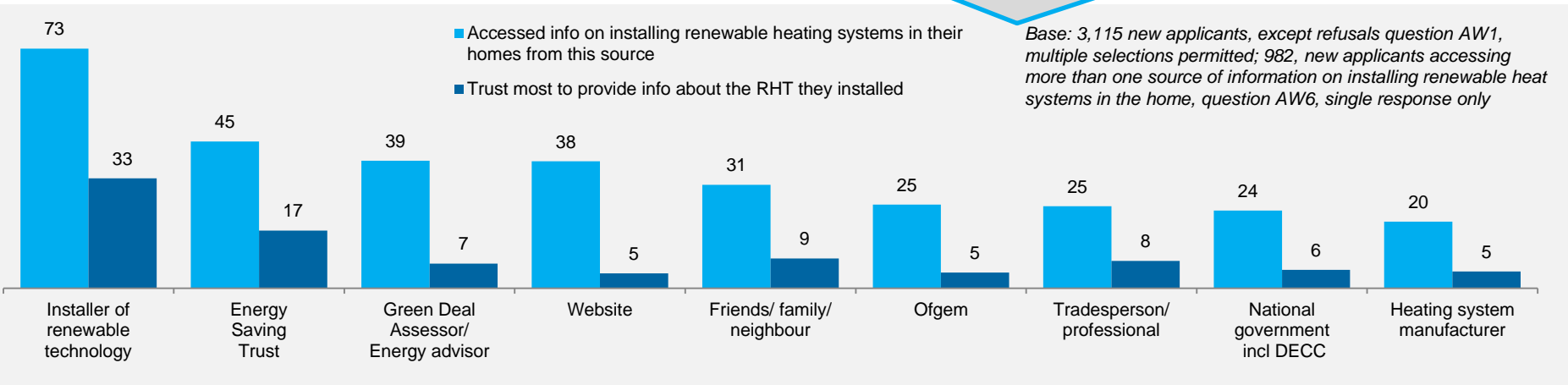
Almost three-quarters (73%) of new applicants accessed information about installing renewable heating systems in the home from installers, far more than from any other source. Installers were the most frequently mentioned source for all technology types.

Where applicants had accessed information from more than one source, installers of renewable heating systems were also the source that applicants trusted most to provide information about their renewable heat technology (one third - 33% - of applicants who accessed more than one information source chose installers as the most trusted).

The next most frequently accessed source of information about installing domestic renewable heat systems was the Energy Saving Trust (45%). This was the most trusted source for 17% of applicants who accessed more than one source.

Sources of information accessed by applicants (% of new applicants) and the sources trusted most (% of new applicants who accessed multiple sources of information)

- While installers have been by far the most accessed source of information about installing renewable heating systems, applicants were relying less on them over time – in waves 1-3 of the census, 80% of applicants accessed information from installers; by waves 10-12 this figure had fallen to 69%.
- There was no corresponding significant increase in figures for other sources of information. Respondents could select multiple sources. It appears that many consumers have been accessing multiple sources, with installers playing a proportionally smaller role over time while remaining by far the most frequently used source.
- As for all technology types, people who installed biomass systems in the home most commonly accessed information about renewable heating systems from installers (75%). However, those installing biomass heating systems were more likely than those installing other systems to have accessed information from a Green Deal Assessor (48% vs. 22%-31% for other technologies) or from the Energy Saving Trust (47% vs. 40%-42%).
- Those building their own homes were less likely than others to access information from an installer (64% compared to 73% for those with a retrofit property) or a Green Deal Assessor (13% vs. 41%).
- Self-builders were, however, much more likely to access information from a tradesperson or professional (46% compared to 23%) or a trade show (36% vs. 14%).



HEARING ABOUT THE RENEWABLE HEAT INCENTIVE SCHEME

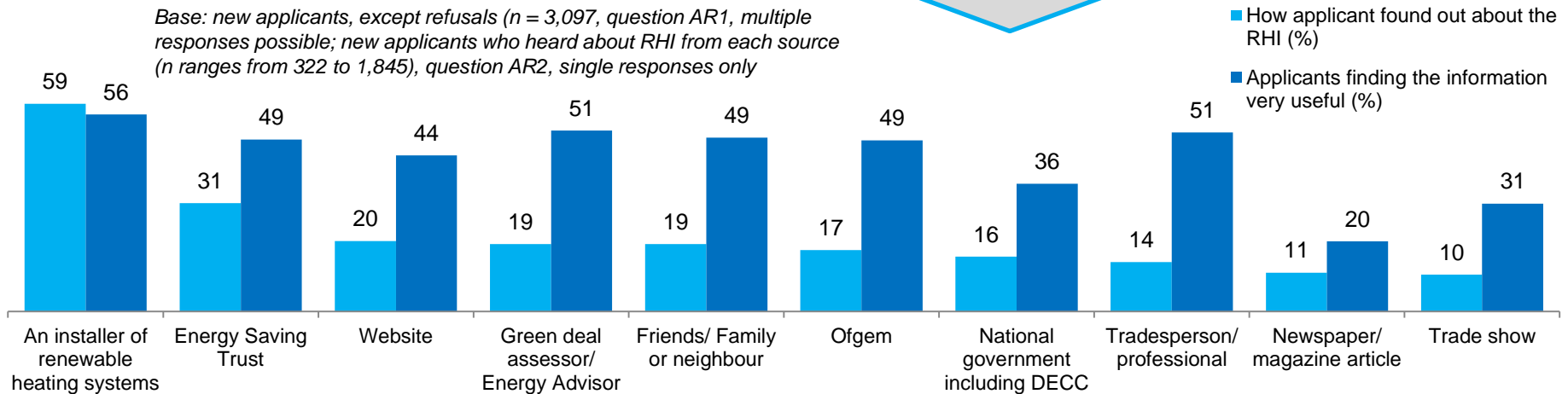
As with finding out about renewable heating technologies, installers of renewable heating systems were the main route via which applicants heard about the Renewable Heat Incentive (RHI). Over half (59%) of new applicants heard of the RHI through installers. The Energy Saving Trust was the second most frequently cited information source (31%).

Installers were the best-rated source of information on the RHI – 56% of those who got information about the RHI from installers said that the information was very useful. Many sources were rated very useful by around half of respondents who had used them: for example, Green Deal Assessors/ energy advisors (51%), tradespersons/ professionals (51%), the Energy Saving Trust (49%), friends, family and neighbours (49%) and Ofgem (49%).

All named sources were rated as very useful or quite useful by between 89% and 97% of applicants who used them.

Where applicants heard about the Renewable Heat Incentive (%) and percentage of those receiving information from each source that reported it was 'very useful'

Base: new applicants, except refusals (n = 3,097, question AR1, multiple responses possible; new applicants who heard about RHI from each source (n ranges from 322 to 1,845), question AR2, single responses only



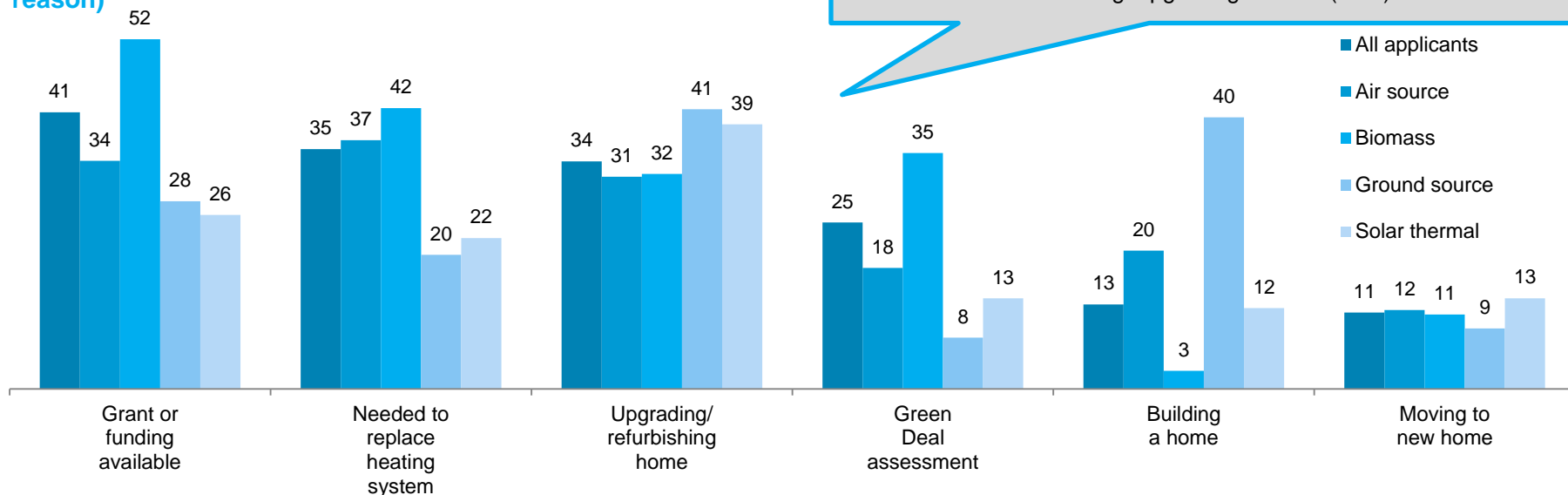
- Installers were the most frequently cited source of information about the RHI for all technology types.
- Again, the importance of installers of heating systems as a source of information for applicants, while very high, has declined over time. In survey waves 1-3, 66% of applicants heard about the RHI from installers, falling to 55% in waves 10-12. The use of websites as an information source also declined from 25% to 14% over the same period.
- There were no significant increases in the proportion of applicants accessing information through other sources. However, as with sources of information about renewable heat technologies, applicants could choose multiple sources and it appears that within these sources, consumers were using installers and websites less over time.
- Biomass applicants were more likely than others to have heard about the RHI from Green Deal Assessors (24% vs 9-16% for others) or friends, family or a neighbour (23% vs. 12-17%).
- Self-builders, while primarily relying on installers, were more likely than others to hear about the RHI from tradespersons or professionals (27% vs. 13%) or a trade show (20% vs. 10%) and much less likely to hear from a Green Deal Assessor (3% vs. 20%).

TRIGGERS FOR INVESTING IN A NEW HEATING SYSTEM

The availability of a grant or funding was the most common reason cited by new applicants as a trigger to install a new heating system (41%).

Around a third of people mentioned needing to replace a heating system (35%) and refurbishing a home (34%) as triggers for installing a new heating system (note that the wording of this question changed after survey wave 9; the data presented therefore relate to survey waves 10-12 only). However, these overall figures mask a number of significant differences between applicants who subsequently installed different technology types.

Did any of the following prompt your decision to install a new heating system? (% of new applicants mentioning each reason)



- For applicants who eventually installed biomass systems, grants or other funding becoming available was a trigger to install a new heating system for 52%, compared to 26%-34% for other technologies.
- Those installing biomass systems were also much more likely than those who installed other technologies to mention a Green Deal Assessment as a trigger for investing in a new heating system (35% compared to 8%-18% for other technologies).
- For those installing ground source heat pumps, the main prompts were building a home (40%) or upgrading/refurbishing a home (41%). This probably reflects the more extensive building works involved in installing ground source heat pumps.
- For applicants opting for air source technology, the need to replace an existing heating system was the most common reason (37%).
- Among those installing solar thermal heating, the most common reason was refurbishing/ upgrading a home (39%).

Base: New applicants except refusals, waves 10-12 (1,233). Question MO3 - respondents were able to select multiple answers to this question

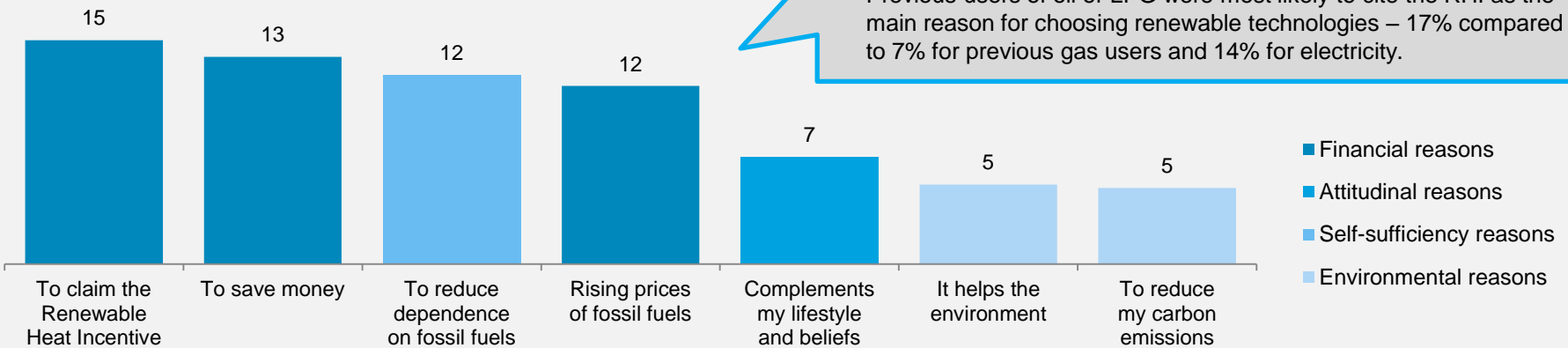
MAIN REASONS FOR CHOOSING RENEWABLE HEAT TECHNOLOGIES

Having decided to invest in a new heating system, applicants' main reasons for choosing to install *renewable* heat technologies specifically, rather than conventional systems, were dominated by financial considerations and, to a lesser degree, reasons to do with personal or environmental attitudes and self-sufficiency.

Note that, unlike the data shown on slide 5, applicants could select only one main reason for choosing a renewable heat technology. Across the main reasons cited by new applicants, 45% were financial (e.g. to save money), 21% were attitudinal (e.g. liking the technology or hearing recommendations from others), 17% related to self-sufficiency (e.g. being able to generate one's own energy), 10% to environmental concerns (e.g. to reduce carbon emissions) and 7% were technical reasons (e.g. ease of use).

Three of the four most frequently cited reasons for choosing renewable heat technologies were financial: in anticipation of/to claim the Renewable Heat Incentive (RHI - 15%); to save money (13%) and because of the rising cost of fossil fuels (12%).

What was the main reason you decided to install a renewable heat technology rather than a conventional heating system in your home? (%)



The importance of financial considerations in deciding to install renewable heat technologies has declined over time.

The proportion of new applicants citing a financial reason for choosing renewable heat technologies fell from 51% in survey waves 1-3 to 40% by waves 10-12. These declines were driven by falls in financial reasons given by applicants installing air source heat pumps and biomass systems.

In the same period, the proportion of new applicants mentioning attitudinal reasons rose from 17% to 25%.

Despite these changes, financial factors were the most common main reasons given for choosing renewable heat technologies by applicants from all technology groups.

- The prospect of claiming the RHI was the main reason given by applicants who installed biomass systems (23%), compared to 3%-10% for other technologies.
- People installing in self-build homes were most likely to say the main reason was a recommendation by a professional (12% vs. 3% for other applicants)
- Previous users of oil or LPG were most likely to cite the RHI as the main reason for choosing renewable technologies – 17% compared to 7% for previous gas users and 14% for electricity.

Base: new applicants who installed a renewable heating system for more than one reason, except refusals (n = 3,128); question MO2, single response only

FINDING A RENEWABLE HEAT TECHNOLOGY INSTALLER

The most popular way new applicants found a renewable heat technology installer was by 'word of mouth or a recommendation' (39%).

The internet was commonly used: 25% used a 'general web search', and 18% found their installer through 'websites which put them in direct contact with installers'.

There has been an **increase** over time in the proportion of people relying on word of mouth recommendations (35% in waves 1-3 rising to 40% in waves 10-12).

Of people who used 'word of mouth' to find their installer 40% found the process of finding an installer 'very easy'. Easiest of all was using an installer the applicant had used before (57% found this 'very easy').

Word of mouth was particularly important to:

- People who installed a ground source heat pump (50% compared to an average of 38% for all other technologies combined).
- People in a self-built property (50% compared to 38% in retrofit properties).
- Conversely, those in retrofit properties were more likely than self-builders to rely on a general web search (25% vs 17%) or websites directing them to installers (19% vs 11%); those in self-built properties were more likely to use a trade show to find an installer (16% vs. 8% for retrofit applicants).

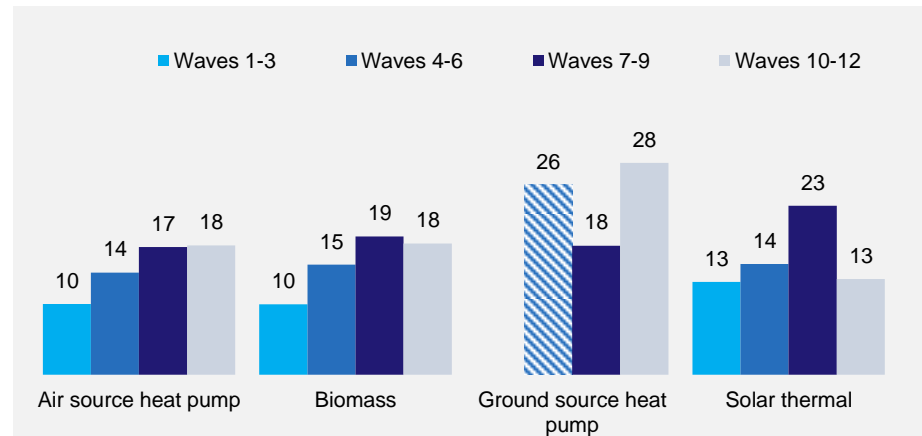
The majority found it easy (35% 'very easy', 46% 'fairly easy') to find an installer whom they believed would fit the technology correctly.

A small proportion found this difficult (13% 'fairly difficult', 5% 'very difficult').

Applicants who installed a ground source heat pump were more likely to report that they found finding an installer difficult (25% found it 'fairly' or 'very' difficult, compared with 17% for all other technologies).

There has been an increase over time in the proportion finding it **difficult to find an installer** to meet their needs, rising from just over one in ten (11%) applicants in waves 1-3 to nearly two in ten (18%) in waves 10-12. This change is particularly true of those installing air source and biomass systems.

Applicants finding it difficult to find an installer to meet their needs (%), by technology type and time



Base: New applicants, except refusals (3,079), question IN7, single response only

INSTALLATION EXPERIENCE

Over half (59%) of owner-occupier new applicants to the Renewable Heat Incentive (RHI) scheme did not face any difficulties during the installation process.

For those that did face difficulties, the most commonly cited problems were:

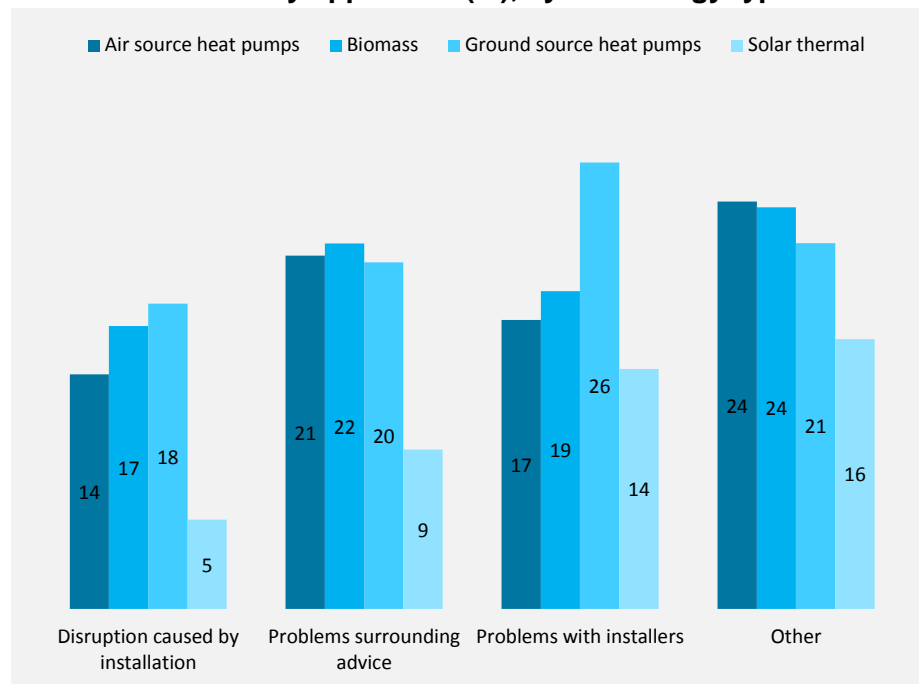
- ‘disruption caused by installation’ (14% of all new applicants);
- problems surrounding advice (‘unclear information or advice’, 12%; ‘not clear who to go to for advice’, 10%; ‘lack of information or advice’, 8%);
- and problems with installers (‘lack of trusted installers’, 11%, ‘identifying or finding an installer’, 9%, ‘lack of local installers’, 8%).

People having solar thermal technology installed were the **least** likely to experience difficulties (72% reported no problems, compared to 55-59% for non-solar technologies). This was true of every potential problem, especially disruption caused by installation, and also of issues surrounding advice.

Applicants installing a ground source heat pump had particular problems with installers. 26% reported a lack of trusted installers, difficulties identifying an installer or a lack of local installers, compared to 18% for the other three technologies combined.

Installers provided a wide range of **additional services** to applicants. Over three-quarters (77%) of applicants had a ‘demonstration of how to use their renewable heat technology’, 64% received a warranty, 50% had ‘help with making their RHI application’, and 42% received ‘advice on renewable heating technologies’. Less frequently received were ‘energy saving advice’ (25%), a ‘maintenance package’ (33%) and a ‘Green Deal Assessment’ (31%).

Difficulties faced by applicants (%), by technology type



Base: New applicants, except refusals (3,076), question BA2, multiple responses possible

Those who had received a demonstration on how to use their installation were more likely to report that they were ‘very satisfied’ with their installation (51% compared to 42%).

Over time, the percentage of applicants receiving advice on renewable heating reduced (from 48% in waves 1-3 to 39% in waves 10-12), while the proportion of those receiving help with making grant applications increased (from 16% in waves 1-3 to 21% in waves 10-12).

DIFFICULTIES FACED WHEN INSTALLING RENEWABLE HEAT TECHNOLOGIES

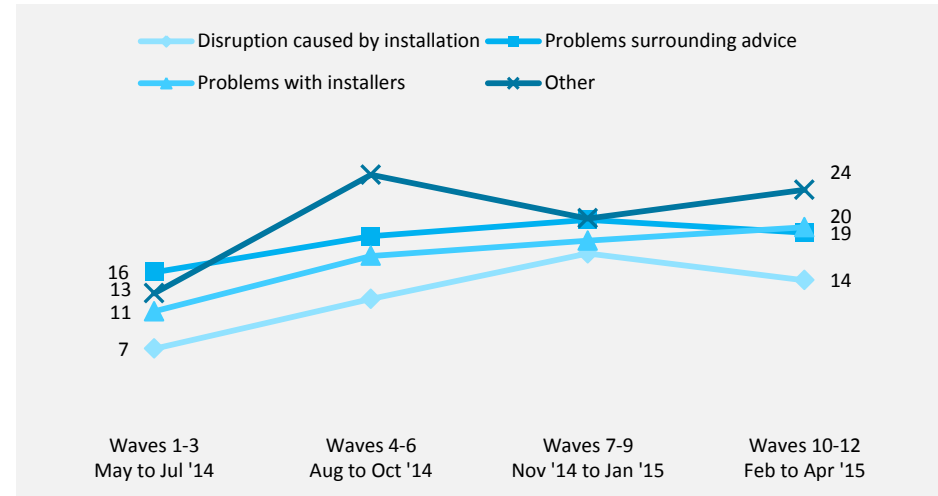
There was no clear pattern over time in installation problems reported, though slightly more people in waves 10-12 reported **difficulties** (41%) than in waves 1-3 (31%) (rising to 42% in between).

The biggest **increase over time** in reported difficulties was seen among those installing biomass technology (rising from 29% in waves 1-3, to 46% in waves 7-9, and 43% in waves 10-12). This was driven in particular by respondents reporting difficulties with finding an installer (rising from 2% in waves 1-3 to 12% in waves 10-12) and by the disruption caused by the installation (rising from 6% in waves 1-3 to 17% in waves 10-12). These increases may be driven by changes in the installer market or by changes in applicants' expectations.

Those in **properties that were self-built** were less likely to report difficulties (30%) than those in retrofit properties (41%), possibly reflecting the fact that installations in self-built properties are more likely to be part of wider building works.

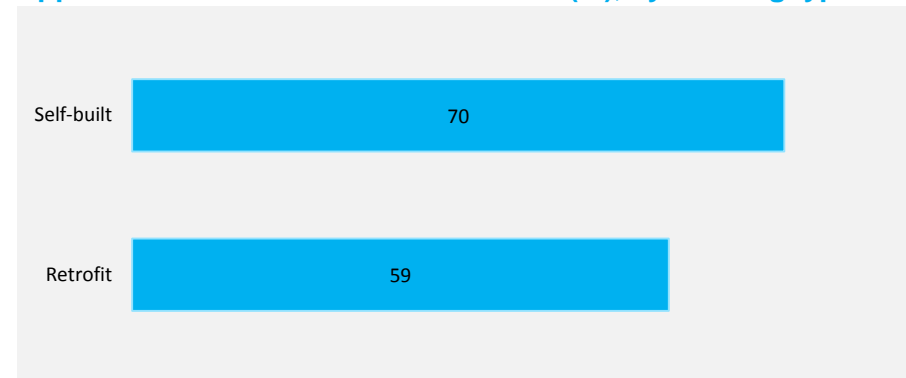
Applicants switching from gas also reported greater **clarity on who to go to for advice** (5% reported not being clear on who to go to, compared with 14% of those switching from electrical heating and 11% of those switching from oil or LPG).

Difficulties faced by applicants, over time (%)



Base: New applicants, except refusals (3,076), question BA2, multiple selections possible

Applicants who did not face difficulties (%), by building type



Base: New applicants except refusals (3,076), question BA2, multiple selections possible

INFLUENCE OF THE RENEWABLE HEAT INCENTIVE ON RENEWABLE HEAT TECHNOLOGY INSTALLATIONS

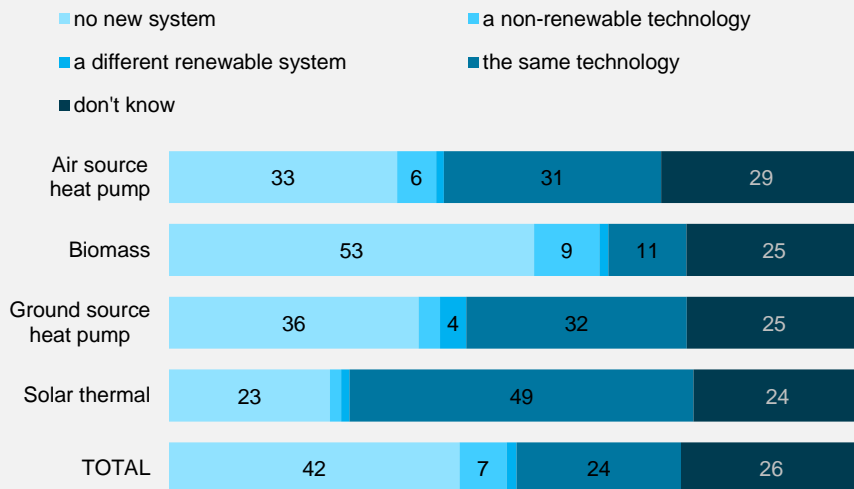
Applicants believed that the Renewable Heat Incentive (RHI) was key in their decision to install a renewable heating system.

Nearly half of all new applicants believed that without the RHI, they would have either not replaced their heating system at all (42%) or installed a non-renewable technology (7%). This would indicate a large amount of additional value created by the RHI.

This influence was particularly large for biomass applicants, 53% of whom would not have installed a renewable heating system without the RHI. On the other hand, nearly half of solar thermal applicants said that the RHI made no difference to their decision to install their technology.

Applicants' hypothetical behaviour in the absence of RHI (%)

Without the RHI, applicants believe they would have installed...



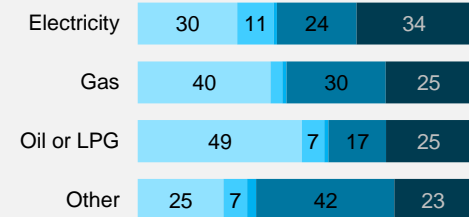
Base: New applicants, except refusals (3,124) – questions IM1, IM4 & IM5 combined, single response only

Applicants whose **previous fuel was oil** were more likely to believe that they would not have installed a new system at all without the RHI (49%).

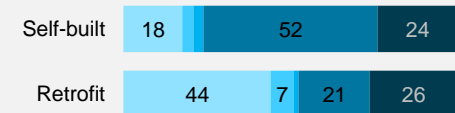
Over half (52%) of applicants with **self-built properties** believed they would have installed the same technology without the RHI, compared to around one in five of applicants with retrofit properties.

Finally, applicants with **higher estimated heat demand** (which reflects the size of the house as well as other heating related properties like insulation) were also more influenced by the RHI.

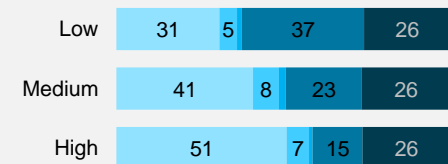
Previous fuel (%)



Current property is... (%)



Energy Performance Certificate (EPC) estimated heat demand (%)



Base: New applicants, except refusals (3,124), questions IM1, IM4 & IM5 combined - single response

Note: this question relies on respondents' judgement on how they would have acted in a hypothetical situation. Some care should be exercised in interpreting results, since people are not always able to accurately predict how they would act in hypothetical situations. Further, over a quarter of respondents did not know how they would have acted without the RHI.

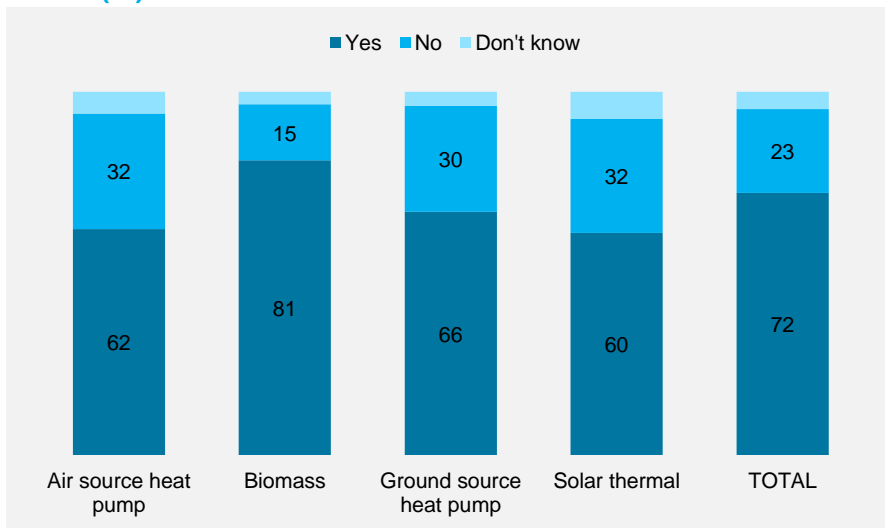
AWARENESS OF DEGRESSION AND ITS IMPACT

Degression refers to a budget mechanism whereby individual tariffs offered to new applicants are lowered if uptake of the scheme is higher than specified limits. During the 12 months of the census (with applications submitted between 1 May 2014 and 30 April 2015) the biomass tariff degressed twice, reducing from 12.20p to 10.98p on 1 January 2015 and further to 8.93p on 1 April 2015. Tariffs for other technologies increased marginally by 1.6% on 1 April 2015. Degressions are announced a month in advance.

Nearly three quarters (72%) of new applicants were aware that the value of RHI tariffs may be reduced in the future.

Awareness was particularly high among biomass applicants, over eight in ten (81%) of whom were aware of degression.

Applicants' awareness that degression may reduce tariffs (%)

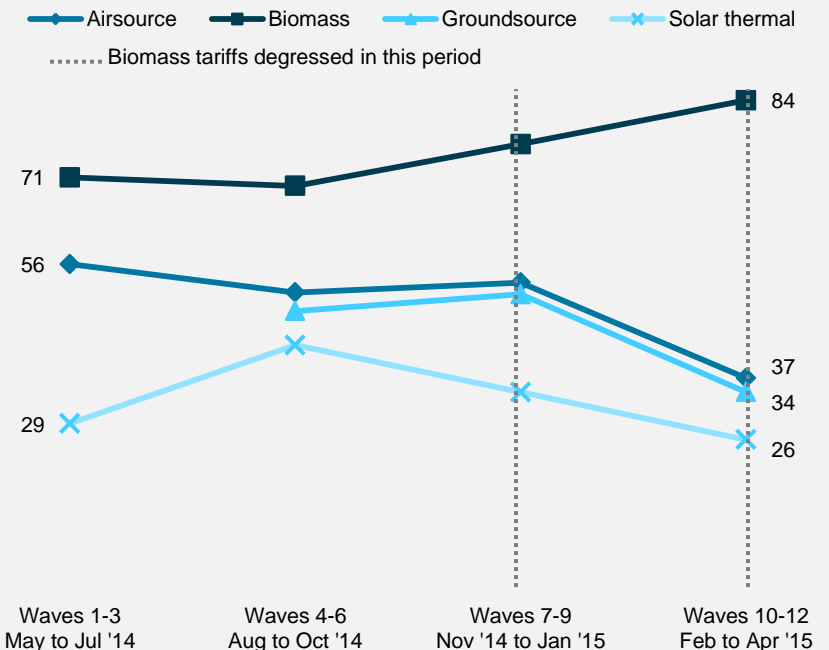


Base: New applicants (n = 3,126), question FI5, single response only

Over six in ten (63%) of those aware of degression say they installed their technology more quickly to avoid a lowering of tariffs.

The impact of degression on actual installations has been particularly pronounced for biomass applicants, for whom it has been rising over time. Air source heat pump applicants appear to have been increasingly less influenced by the risk of degression.

Applicants who believe they installed more quickly as a result of degression (%)



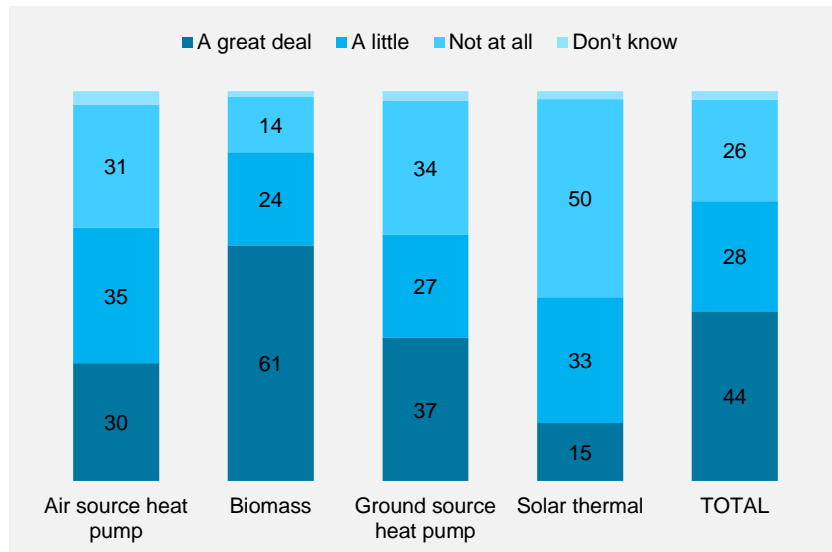
Base: New applicants aware of degression, except refusals (n = 2,250), question FI6, single response only. Note: base sizes for heat pumps and solar thermal are small for some wave groups.

INFLUENCE OF TARIFF BANDS ON APPLICANTS' TECHNOLOGY CHOICE

The tariffs payable influenced the technology choice of over seven in ten (72%) new applicants, and of **over eight in ten (84%) new biomass applicants**.

61% of biomass applicants say that the tariffs payable under the Renewable Heat Incentive (RHI) influenced their choice of renewable heating technology “a great deal”. A further quarter (24%) of biomass applicants say they were influenced “a little”. Solar thermal applicants saw themselves as least influenced by RHI tariffs, with only less than a sixth (15%) believing they were influenced ‘a great deal’, and a third (33%) ‘a little’.

Extent to which applicants' technology choice was influenced by the tariffs payable under the RHI (%)



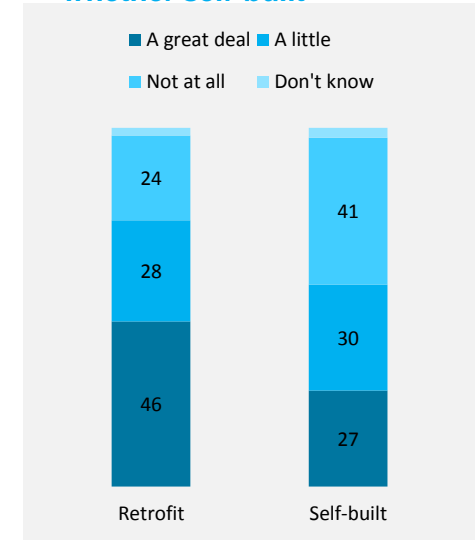
Base: New applicants, except refusals, survey waves 10-12 (n = 1,232), question IM3, single response

Applicants with retrofit properties and those switching from oil or LPG were more influenced by tariffs than others.

Only 27% of those who self-built their homes said they were influenced ‘a great deal’ in their technology choice by the RHI tariff, compared to 46% of those in retrofit homes.

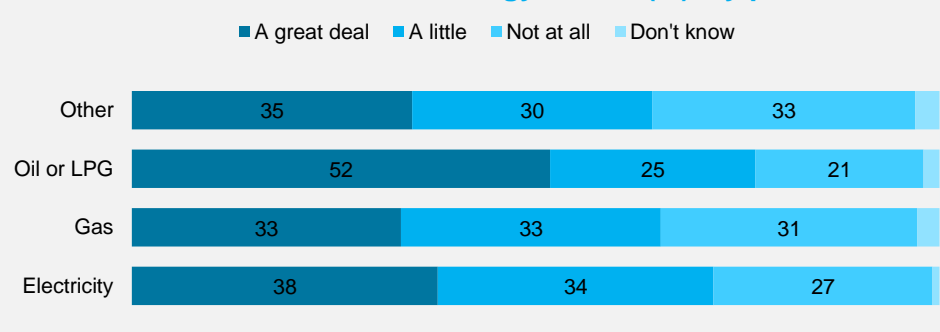
While 52% of those switching from oil or LPG were influenced a great deal, only 35% of those switching from other fuels were.

Influence of RHI tariffs on technology choice (%), by whether self-built



Base: New applicants, except refusals, survey waves 10-12, (n = 1,232), question IM3, single response

Influence of RHI tariffs on technology choice (%), by previous fuel



Base: New applicants, except, refusals, survey waves 10-12 (n = 1,232), question IM3, single response

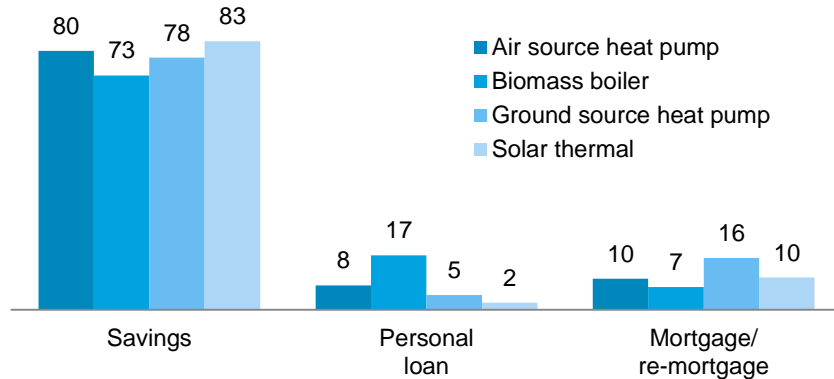
FINANCING RENEWABLE HEAT TECHNOLOGY INSTALLATIONS

Most new applicants to the Renewable Heat Incentive (RHI) scheme funded the installation of their renewable heat technology through their own savings (77%).

Around one in ten used a personal loan (11%) or funding from a mortgage or re-mortgage on their home (9%). Note that some applicants used multiple funding sources.

While savings were the most common source of funding across technology types, personal loans were more prevalent among those installing biomass boilers (17%) compared with other technology types (2%-8%). Mortgages were more prevalent among those installing ground source heat pumps (16%) compared to other technology types (7%-10%).

Funding sources by technology type (%)



Base: All new applicant respondents (3,126), question F11, multiple responses possible

Mortgages were a significant source of funding for applicants in self-built properties. Over a quarter (26%) of those in a self-built home used a mortgage or re-mortgage, compared with 7% of those in other properties. Only 4% of those installing a renewable heat technology in self-built homes used personal loans, compared to 12% of those in other homes.

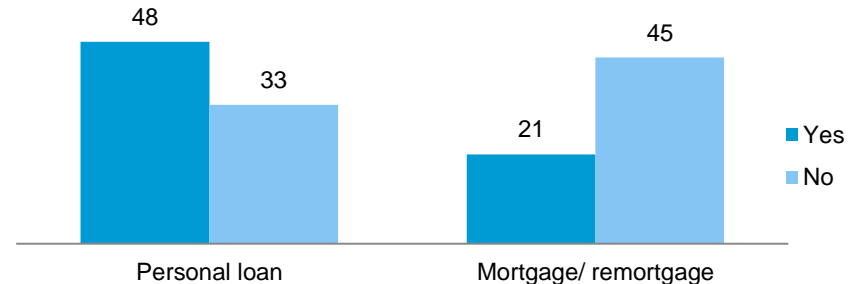
Over time, savings have become less common as a funding source for installing renewable heat technologies

In waves 1-3 of the survey 81% used savings to finance their installation, but by waves 10-12 this had fallen to 74%. This pattern was particularly pronounced among those installing biomass boilers, with 82% using savings in waves 1-3 compared with 69% in waves 10-12. Despite these changes, savings have remained by far the biggest source of funding for financing the installation of renewable heat technologies.

Almost half (48%) of those financing their renewable heat technology through a personal loan said that the RHI scheme made it easier to secure funding for their installation.

The RHI also made it easier for 21% of those who used a mortgage to secure their funding (although 45% of this group said that it did not help secure their funding).

Has the Renewable Heat Incentive scheme made it easier for the respondents to secure finance to install your renewable heat technology? (%)



Base: New applicant respondents who funded their renewable heat technology using a personal loan (n=340) or through a mortgage/re-mortgage (n = 263), question IM2, single response

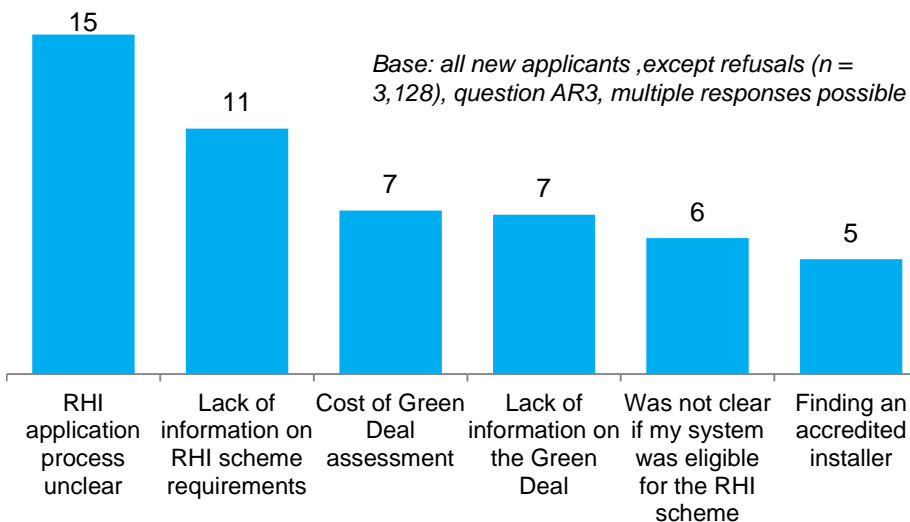
APPLICANTS' EXPERIENCES – DIFFICULTIES FACED IN MEETING THE REQUIREMENTS OF THE RENEWABLE HEAT INCENTIVE SCHEME

Two-thirds (67%) of new applicants did not face any difficulties in meeting the initial requirements of the Renewable Heat Incentive (RHI) scheme.¹

More than half of new applicants installing each technology type said that they did not face any difficulties.

Where difficulties were cited, the one mentioned most often (by applicants across all technology types) was an unclear RHI application process (mentioned by 15% of all new applicants).

Did you face any of the following difficulties in meeting the requirements of the Renewable Heat Incentive scheme? (% of applicants who said they experienced each of the most commonly cited problems)



Applicants who installed biomass systems were least likely to say they encountered any difficulties in meeting the requirements of the RHI scheme (27%, compared to 38%-45% for other technology types).

Biomass applicants were least likely to report difficulties with an unclear RHI application process (9% of biomass applicants compared to 19%-22% for other technologies).

Those who installed solar thermal systems were most likely to report difficulties (45%). Over a third (38%) of air source heat pump applicants encountered difficulties, as did almost the same proportion (39%) of ground source applicants.

Those installing solar thermal systems were more likely than those installing other technologies to cite the cost of the Green Deal Assessment as a difficulty (15% of solar thermal applicants, compared to 4%-8% for other technologies). This may reflect the fact that the cost of the Green Deal Assessment is proportionately higher compared to the total cost for solar thermal installations.

There were no significant differences over time in the proportions of applicants reporting difficulties in meeting the RHI scheme requirements, either overall or within technology types.

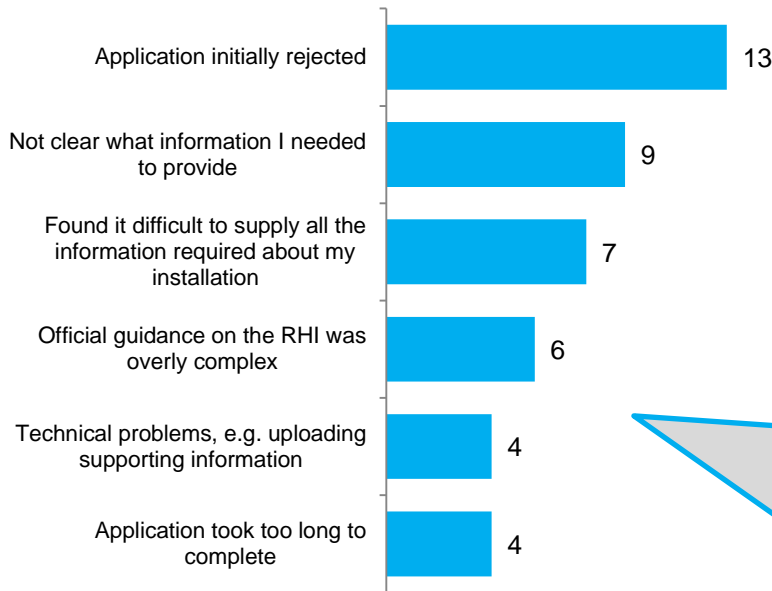
¹ This stage covers applicants' preparations prior to installing the renewable heat technology. They can only apply for the Renewable Heat Incentive once the new heat system has been installed.

APPLICANTS' EXPERIENCES - DIFFICULTIES FACED WITH THE RENEWABLE HEAT INCENTIVE APPLICATION PROCESS

Three-quarters (72%) of new applicants did not have any problems in completing the Renewable Heat Incentive (RHI) application.

A quarter (26%) said they did experience problems with the application (3% said they did not know). The most common problem was respondents' applications being rejected.

What problems did you have in completing the Renewable Heat Incentive application? (% of applicants citing most frequently mentioned problems with the application)



Base: new applicants, except refusals (n = 2,942), question APP2, multiple responses possible

13% of applicants mentioned having their application initially rejected. This was the most common problem encountered by applicants for all four technology types. Around one in ten (9%) were not clear what information they needed to provide; 7% found it difficult to supply all the information required.

Applicants who installed biomass heat systems were least likely to report problems with the RHI application. Only 19% of biomass applicants said they had encountered any problem compared to 31%-35% for other technologies.

Almost half (48%) of applicants with self-built homes said they had problems with the RHI application compared to 24% of other applicants.

For all application difficulties covered, biomass applicants experienced them less often than applicants for other technologies. For example:

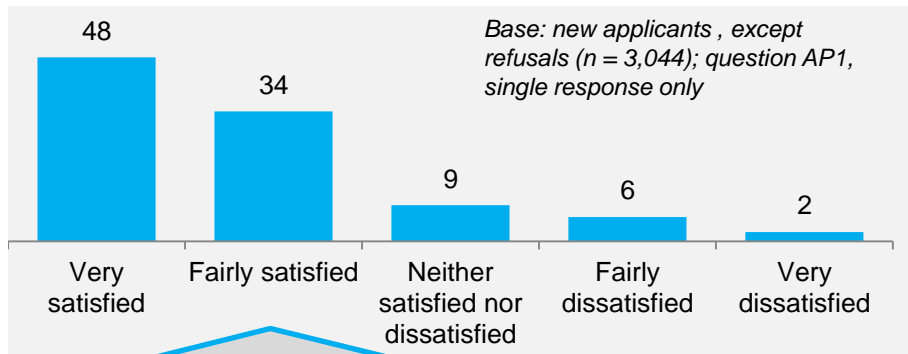
- 10% of all new biomass applicants said their application was initially rejected, compared to 16% for other technology types;
- 6% of biomass applicants said it was not clear what information they needed to provide, compared to 12% for other technologies;
- 4% of biomass applicants found it difficult to supply all the information needed about their installation, compared to 11% for other technologies;
- only 3% of biomass applicants said the official guidance on RHI was too complex, compared to 8% for other technology types;
- biomass applicants were also least likely to say the application took too long (2% compared to 5% for other systems).

The proportion of applicants reporting problems with the RHI application fell from 36% in waves 1-3 to 26% in waves 10-12 (with some slight fluctuation). This was mainly driven by a fall in the proportion of people saying their application was initially rejected, from 23% of all applicants in survey waves 1-3 to 10% in waves 10-12.

SATISFACTION WITH APPLYING FOR THE RENEWABLE HEAT INCENTIVE SCHEME AND WITH THE PAYMENT PROCESS

Overall levels of satisfaction with the ease of applying for the Renewable Heat Incentive (RHI) were very high – 82% of new applicants were very or fairly satisfied.

Please rate your overall satisfaction with the ease of applying for the Renewable Heat Incentive (%)



Applicants who installed biomass heating systems were more likely to report being very satisfied with the ease of applying for the RHI (57%) than people who installed other technologies (37-40%).

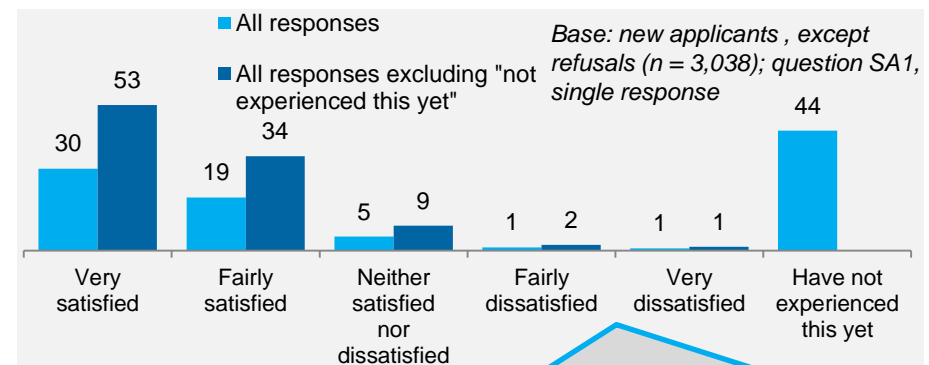
Similarly, those installing air source (12%), ground source (12%) or solar thermal (14%) systems were more likely to report being dissatisfied (fairly or very) with the ease of applying than those who installed biomass systems (5%).

Self-build applicants were much less likely to say they were very satisfied with the ease of applying – 29% compared to 50% of other applicants. Unsurprisingly, those with self-built homes were also much more likely to report being dissatisfied (whether fairly or very dissatisfied) – 16% compared to 8% for other applicants.

There were no significant changes over time in the levels of satisfaction with the ease of applying for the RHI.

A large minority of applicants (44%) had not yet experienced the RHI payment process. Half of all applicants (49%) were satisfied (30% very satisfied, 19% fairly satisfied). Only 2% of applicants were dissatisfied with the RHI payment process.

How satisfied are you with the process for receiving the Renewable Heat Incentive payment? (%)



Applicants who installed biomass heating systems were most likely to say they had not yet experienced the RHI payment system (49%); solar thermal applicants were most likely to have experienced it (33% had not experienced it, 67% had).

Excluding applicants who had not yet experienced payments, some significant differences emerge. Technology type seems to have some link to satisfaction with the RHI payment process. Biomass applicants were most likely to say they were very satisfied (59%); air source applicants were least likely to be very satisfied (45%).

Looking at overall satisfaction (*very* or *fairly* satisfied), ground source applicants were most likely to be satisfied (93%) and air source applicants least satisfied (82%).

There were no significant changes over time in satisfaction with the process for receiving RHI payments.

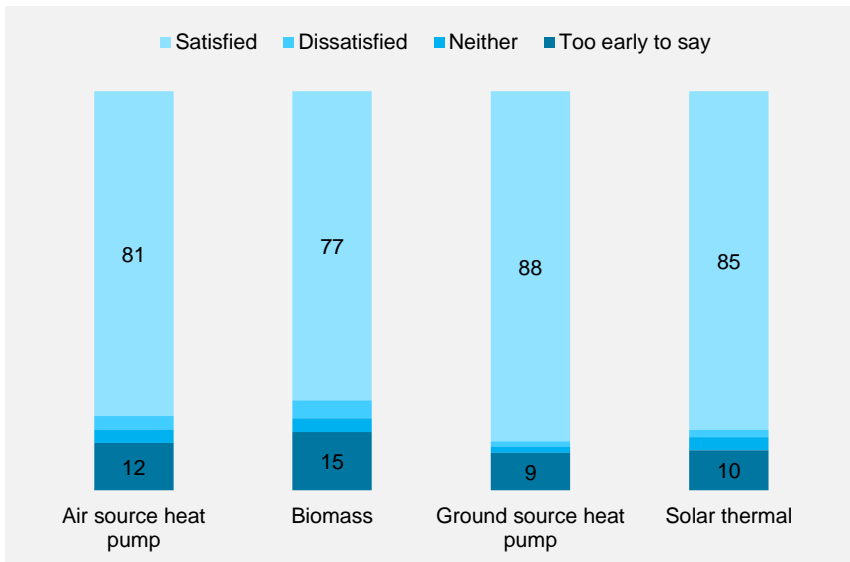
SATISFACTION WITH RENEWABLE HEAT TECHNOLOGIES

A majority (80%) of new applicants to the Renewable Heat Incentive (RHI) scheme were satisfied overall with their technology (49% 'very satisfied', 31% 'fairly satisfied').

A few (4%) were dissatisfied; 13% said it was 'too early to say'.

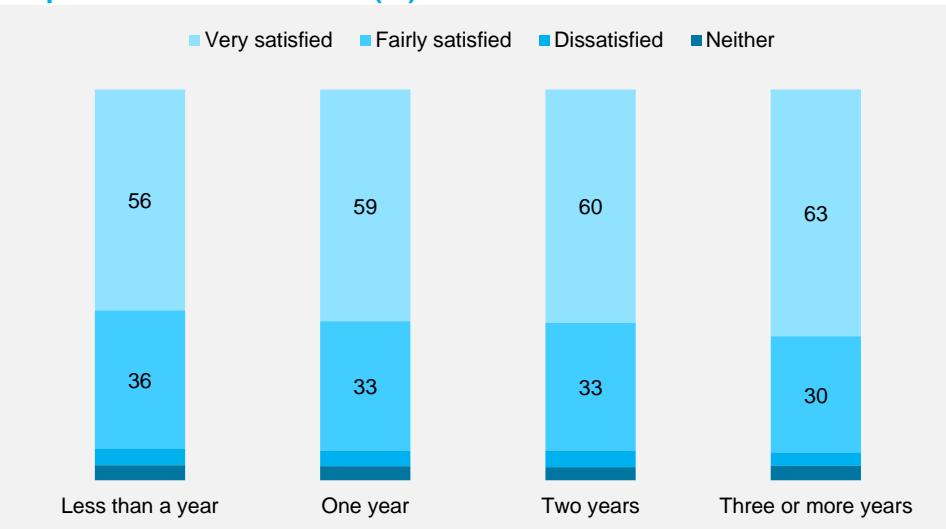
Applicants who installed a ground source heat pump were most likely to report satisfaction (88% were 'very' or 'fairly satisfied'). Ground source heat pump applicants were also most satisfied when discounting those with too little experience and considering the amount of experience with the installation.

Satisfaction with renewable heat technology, by technology type (%)



Base: New applicants (3,036) question SAT1, single response only

Satisfaction with renewable heat technology, by length of experience of installation (%)



Base: All applicants, excluding those responding 'Too early to say' and 'Don't know' (9,560); question SAT1, single response only

New and legacy applicants with greater experience tended to be more satisfied with their renewable heat installation.

Among those applicants that have expressed how satisfied they are with their renewable heat installation (excluding those that find that it is 'too early to tell'), the more experience applicants had with their heat installation¹, the more satisfied they tended to be. Just over half (56%) of those with less than one year's experience with their installation were very satisfied, compared to 63% of those with three or more years of experience.

¹ Measured in number of years between commissioning the installation and being surveyed. These figures consider new and legacy applicants, as new applicants tend to have commissioned very recently.

APPLICANTS' SATISFACTION WITH DIFFERENT ASPECTS OF THEIR RENEWABLE HEAT TECHNOLOGY INSTALLATION

New applicants' levels of satisfaction varied across different aspects of their renewable heat technology.

- 84% were satisfied (very or fairly) with how their installation looked;
- 83% were satisfied with the noise level of their installation;
- 70% were confident in understanding the system controls;
- 66% were satisfied with the ease of adjusting the controls; and
- 65% were satisfied with how reliable the technology was so far (note that 23% of new applicants said it was 'too early to say').

Air source heat pump applicants tended to be less often 'very satisfied' than other applicants. Solar thermal applicants were most satisfied overall.

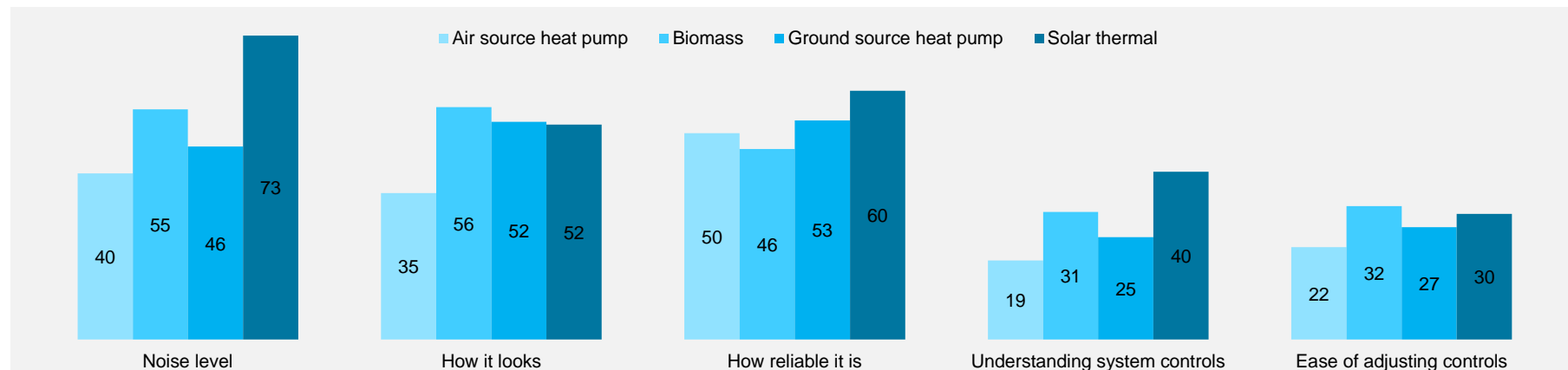
Satisfaction with reliability increased with greater use of the installation. 52% of new and legacy applicants that had their installation for less than a year were 'very satisfied', compared to 60% with those that had their installation three years or more.

Applicants for air source heat pumps were least satisfied, while solar thermal applicants were most satisfied.

Air source heat pump applicants were less satisfied with their installation's noise (excluding those that felt it was too early to say, 77% were very or fairly satisfied compared to 87% for other technologies), its looks (77% vs. 86%), understanding the system controls (64% vs. 77%) and ease of adjusting controls (63% vs. 72%).

Solar thermal applicants were happier with the installations' noise (89% vs. 84%), reliability (90% vs. 82%), and understanding system controls (79% vs. 73%).

Proportion of applicants 'very satisfied' with different aspects of their installation (%), by technology



Base: New applicants, excluding those who felt it was 'too early to say' (2,341-3,019), question EB5, single response only

QUESTION INDEX

	Question reference	Question
Sources of information about renewable heat technologies and the Renewable Heat Incentive	AW1	Did you access information on installing renewable heating systems in your home, from any of the following sources?
	AW6	Which of the following did you trust the most to provide information about the renewable heat technology you installed in your home?
	AR1	How did you find out about the Renewable Heat Incentive (RHI) scheme?
	AR2	Overall, how would you rate the usefulness of information on the Renewable Heat Incentive (RHI) provided by each of the following?
Procurement and installation of renewable heat technology	MO3	Did any of the following prompt your decision to install a new heating system at the time that you did?
	MO2	What was the main reason you decided to install a renewable heat technology rather than a conventional heating system in your home?
	MO1	Why did you decide to install a renewable heating system rather than a conventional heating system?
	IM1	Without the Renewable Heat Incentive (RHI), would you have installed a new heating system?
	IM4	Without the Renewable Heat Incentive (RHI), would you have chosen to install a different technology to the renewable heat technology?
	IM5	Which heating technology type would you have chosen instead?
	F15	Are you aware that the Renewable Heat Incentive (RHI) tariff may reduce (degress) in the future?
	F16	Did the possible reduction in the Renewable Heat Incentive (RHI) tariff payable, encourage you to install your renewable heat technology more quickly?
	IM3	To what extent did the tariffs payable under RHI influence your choice of renewable heating technology?
	F11	How did you fund the installation of your renewable heat technology?
	IM2	Has the Renewable Heat Incentive (RHI) scheme made it easier for you to secure finance to install your renewable heat technology?
	IN6	How did you identify an installer for your renewable heat technology?
	IN7	How easy or difficult was it for you to find an installer whom you believed would fit your renewable heat technology correctly?
	IN8	How easy was the installation process for your renewable heat technology?
	BA2	Did you face any of the following difficulties in the overall process of installing the renewable heat technology in your home?
IN9	Did you receive any of these services from the installer of your renewable heat technology?	
Renewable Heat Incentive	AR3	Did you face any of the following difficulties in meeting the requirements of the Renewable Heat Incentive (RHI) scheme?
	APP1	Did you have any problems completing the Renewable Heat Incentive application?
	APP2	What problems did you have in completing the Renewable Heat Incentive application?
	AP1	Please rate your overall satisfaction with the ease of applying for the Renewable Heat Incentive?
	SA1	How satisfied are you with the process for receiving the Renewable Heat Incentive (RHI) payment?
Satisfaction with renewable heat technologies	SAT1	How satisfied overall are you with your renewable heat technology?
	EB5	How satisfied are you with these different aspects of your renewable heat technology?