

# **Energy Use in Homes 2004**

**A series of reports on domestic energy use in  
England**

## **Space and Water Heating**



# Energy Use in Homes 2004

## A series of reports on domestic energy use in England

**This is one of a series of three reports on the energy characteristics of the stock as observed by the 2004 English House Condition Survey.**

**The reports in this series are:**

- 1. Space and Water Heating**
- 2. Thermal Insulation**
- 3. Energy Efficiency**

*The English House Condition Survey is funded and provided courtesy of Communities and Local Government. More information about this survey can be found at [www.communities.gov.uk/ehcs](http://www.communities.gov.uk/ehcs)*

*The 2004 EHCS Energy Analysis has been prepared by BRE with the funding and support of the Department for Environment, Food and Rural Affairs (Defra) through a contract managed by the Energy Saving Trust. This publication is Crown Copyright. For any further information please contact [environment@bre.co.uk](mailto:environment@bre.co.uk)*

© Crown Copyright. 2008.

---

## Energy Use in Homes 2004: Space and Water Heating

---

### Executive Summary

The predominant space heating system across the stock is the boiler driven radiator system, identified as the primary source for 84% of dwellings, up by 1% from 2003. This represents a yearly increase of around 380,000 taking into account new build and upgrades from fixed room heaters. The latter category has fallen from 6% to 5% of the stock, some 200,000 dwellings. Storage radiators are still used in around 7% of dwellings.

The vast majority of the stock (84%) is fuelled by gas, up by 180,000 dwellings since 2003, with oil use also seeing an increase of 50,000 homes. The proportions of dwellings using systems running on electricity, solid fuel or communal heating have all fallen slightly, with communal system decreases approximately in line with a drop in the quantity of flats.

The increase in central heating systems has led to an increase in dwellings having a secondary system installed, with an additional 120,000 homes using fixed room heaters as a back-up source of space heating. In total, 76% of dwellings use a secondary source of space heating, up by 2% from 2003.

Among dwellings containing heating systems with boilers, 27% use a combination boiler, up from 25% in 2003. This is an increase of 450,000 dwellings, with around 90,000 more condensing boilers. Standard boilers still predominate whilst there have been decreases in the use of back boilers and non-boiler driven systems.

As a consequence of both the increase in boiler ownership and installation of combi boilers in particular over 400,000 more dwellings use central heating for their hot water than in 2003, with other water heating systems decreasing as the primary source. Immersion heaters are still found in just over half the stock, but are predominantly used as a secondary rather than primary source of hot water.

Central heating with radiators is a more prevalent heating system in houses than flats, and detached and semi-detached houses in particular have seen large increases, due to the large new build proportions in these categories. Flats are more likely to use storage radiators (particularly purpose built flats), communal systems and room heaters for their primary space heating.

Since 1991 the proportion of dwellings primarily using boiler driven systems has risen steadily, from 71% to 84%. Of the minority central heating systems, the proportion of communal heating schemes have risen from a handful in 1991 to 350,000 in 2004 although this has fallen recently due to a decrease in the number of flats. Room heater use has fallen from 18% to 5%.

The use of gas fuelled systems is up by 6% in the last 15 years, whilst oil systems have nearly doubled and solid fuel use has fallen by around three quarters. Electricity fuelled systems have seen a gradual decline. Combination boilers now make up a quarter of the stock, increasing from very few in 1991, with standard boilers decreasing by nearly 2 million or 14% of the total stock in the same period.

Since 1991, terraces have seen the largest proportional switch from room heaters to central heating, with corresponding increases in gas use and water heated in conjunction with central heating, whilst older dwellings and private rented have seen the largest uptake of boiler driven systems. Older dwellings have also seen the largest proportional increase in combination boilers.

## 2004 Space and Water Heating Update Report

### Summary

- § The number and proportion of dwellings using a boiler driven central heating system has increased since 2003, as has mains gas use and centrally heated water.
- § The private rented sector has made some recent improvement in the efficiencies of its heating systems, although a large potential for further upgrades remains.
- § Combination and condensing boiler uptake has risen, with many older dwellings upgrading from standard and back boilers or non-central heating systems.

### Introduction

This report studies the provision of space and water heating systems throughout the English housing stock. It examines distinct categories of primary and secondary space heating systems and fuels and also looks at categories of water heating systems and boiler types. The report examines heating systems in 2004 as observed by the English House Condition Survey (EHCS). It is based upon a sample of approximately 16,500 dwellings.

The first section examines the distribution of these systems across different types of dwelling, followed by analysis of typical distributions against household characteristics. The final section shows how these proportions have changed over time, with an indication of the potential that remains for installing more energy efficient systems.

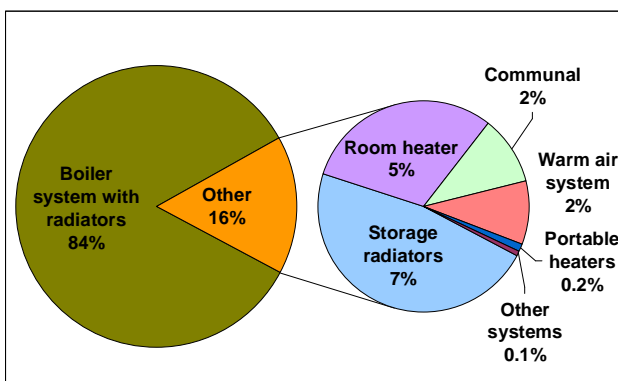


Figure 1: Proportions of primary space heating systems

The predominant space heating system across the stock is the boiler driven radiator system as shown in Figure 1. It is identified as the primary source for 84% of dwellings. This represents an increase of around 380,000 of these systems since 2003, compared with an increase of 130,000 dwellings across the whole stock. Storage radiators are used in 7% of dwellings, with stock relying on fixed room heaters amounting to 5%, equivalent to around 200,000 fewer of these systems than in 2003.

The vast majority of systems, (84%), are fuelled by gas, with 9% of systems running on electricity and the remaining 8% using oil, solid fuel or communal systems, (Figure 2). An increase of 180,000 gas fuelled systems is accounted for through the majority of new build properties, along with around 80,000 conversions from solid fuel or electricity.

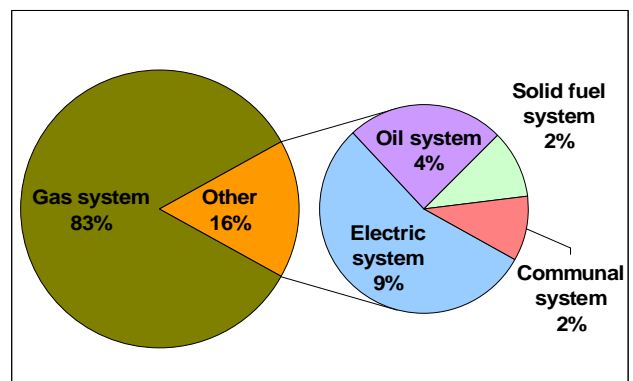


Figure 2: Proportions of fuels used for space heating

The increase in central heating systems has led to an increase in dwellings having a secondary system installed, due to central heating becoming the primary system, but the original system not necessarily being removed. There are now an additional 120,000 homes with the option to use fixed room heaters as a back-up source of space heating compared with 2003.

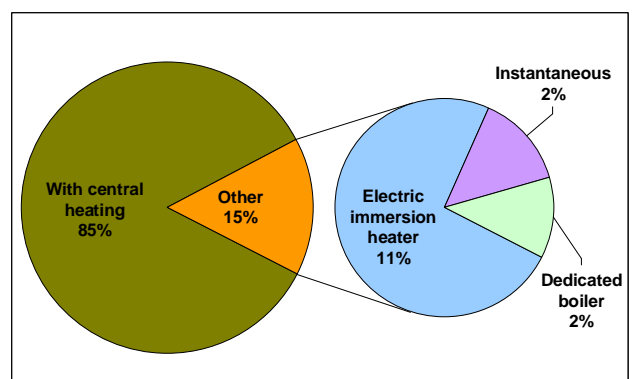


Figure 3: Proportions of water heating systems

A dwelling's hot water is supplied through a combined central heating and hot water system in 84% of cases (Figure 3), with an electric immersion heater used by 12% of the stock as the main source of hot water. In fact, immersion heaters are present in around 54% of the stock, usually as a supplementary system. This report will focus solely on the primary source. The remaining 4% of primary systems are either dedicated water heating boilers or instantaneous heating systems.

There are an additional 430,000 dwellings that have water heated in conjunction with a central heating system since 2003. This constitutes upgrades from all other types of system, particularly immersion heaters and instantaneous systems.

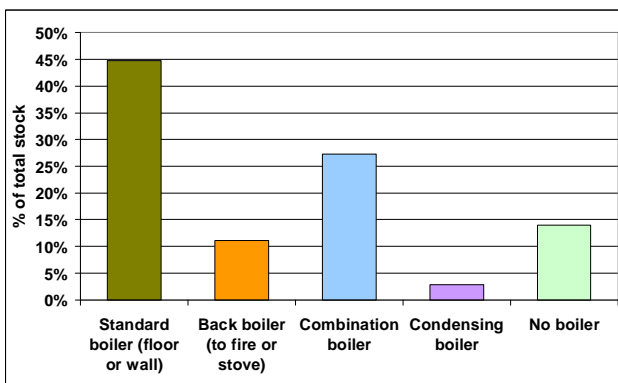


Figure 4: Proportions of boiler types

Of the 18.6 million dwellings with boilers, 45% are traditional floor-standing or wall-hung units, 11% are back boilers, 27% are combination boilers and 3% condensing boilers (Figure 4). This represents an increase of 460,000 combination and 90,000 condensing boilers since 2003, with new dwellings and systems upgraded to central heating contributing to the majority of these, whilst around 170,000 back boilers have been replaced.

## Dwelling Analysis

### Space Heating Systems

Wet radiator central heating is more common in houses than flats, particularly in detached and semi-detached houses, with these systems being found in 94% and 91% of these dwelling types respectively (Figure 5). These proportions are similar to 2003 but correspond to increases of 250,000 detached dwellings and 220,000 semi-detached with these systems, many of which were in dwellings built during the previous year.

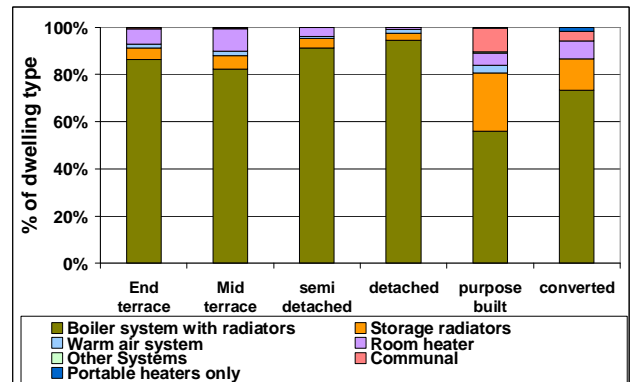


Figure 5: Comparison of space heating systems by dwelling type

Converted flats and purpose built flats have the lowest incidence of boiler systems, (73% and 56% respectively), with decreases in the number of these systems corresponding to falls in the stock levels of all flats since 2003. They have the largest proportions of dwellings relying on storage radiators and the vast majority of communal systems. Room heaters are the primary heating system in relatively high numbers of mid-terrace and semi-detached homes, although the frequencies of these fell by around 80,000 and 60,000 respectively since 2003. Room heaters are also found in the majority of detached dwellings, but are mainly used as a secondary system.

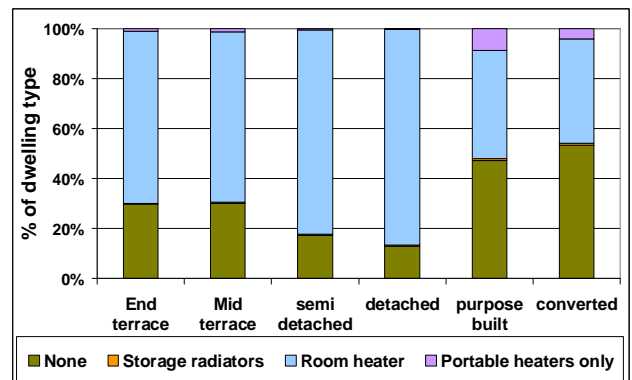


Figure 6: Comparison of secondary heating systems by dwelling type

Flats are less likely to have a secondary source of space heating than houses (Figure 6). This is mainly due to their smaller size, with centrally and communally heated flats in particular using only one source of heating. Where storage heaters have been identified as the primary source, almost all dwellings also contain fixed or portable heaters. These systems are likely to be used to provide on-peak 'top up' heating.

Wet radiator boiler systems predominate in all age bands, with 91% of dwellings built between 1919 and 1944 using these systems, compared with 84% of all stock (Figure 7).

Storage heaters are a more common primary heating system in newer dwellings, with one-third of these systems found in post 1980 stock. The inverse is true for dwellings with room heaters as the primary system, 43% are found in pre 1919 dwellings compared with only 8% in post 1980 stock. Both warm air and communal systems, although making up a relatively small percentage of the total stock, are found mainly in 1965 – 1980 dwellings.

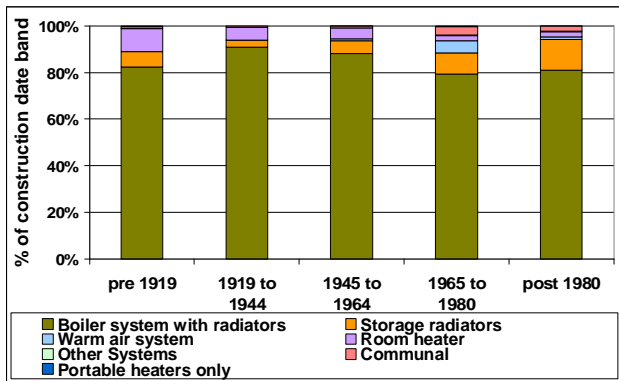


Figure 7: Comparison of space heating systems by construction date

The largest numbers of conversions from room heaters to central heating as a primary source have occurred in pre 1919 and mid-20th century housing, with corresponding increases in the number of dwellings using fixed heaters for additional heating requirements.

A comparison of primary heating systems by region shows a similar picture to that in 2003, with boiler systems most predominant in the East Midlands and North East. The South West uses a higher proportion of storage heaters than other regions, which reflect the lower level of access to mains gas in this region. The highest proportion of room heaters are found in Yorkshire and the North West and 37% of communal systems are found in London, which makes up 15% of the total stock. These systems are found mainly in the high proportion of purpose built flats in the London area.

The Eastern region has seen the largest swing from storage and room heaters to boiler driven central heating since 2003, with nearly 80,000 more of these systems.

A dwelling with a larger floor area is clearly more likely to contain central heating, with 94% of the largest fifth of the stock using a boiler driven system, compared with only 65% of the smallest fifth (Figure 8). In contrast, the smallest dwellings are eight times more likely to use storage heaters as their primary source and four times more likely to use room heaters.

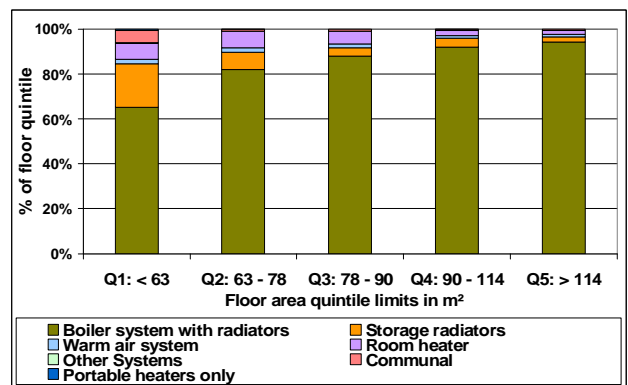


Figure 8: Comparison of space heating systems by floor area

Larger homes are also more likely to employ a secondary method of space heating, predominantly fixed room heaters such as open fires, while portable heaters are used most frequently as an additional source in smaller dwellings.

### Space Heating Fuel

Purpose built flats have the highest proportion of electrically heated systems, accounting for 44% of dwellings in this heating category despite making up only 14% of the overall stock. They also have the lowest percentage of gas fuelled systems, with 61% compared with a proportion for all dwellings of 84%. Detached houses have the largest proportion of oil powered systems.

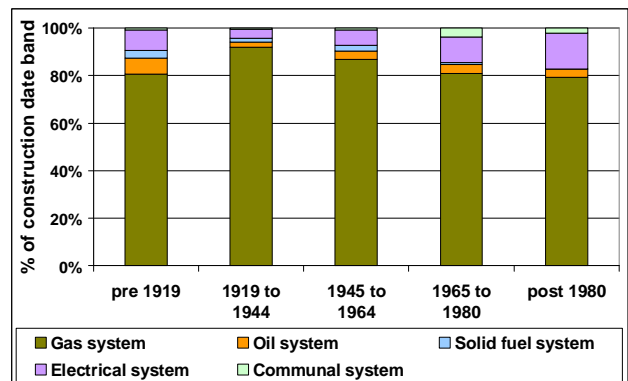


Figure 9: Comparison of space heating systems by construction date

Solid fuel and oil systems are more likely to be found in older stock, and are much less common in recently constructed dwellings, in which electrical heating is more predominant than in other age categories (Figure 9). 57% of electrical systems occur in dwellings built after 1965 whilst only 40% of all stock was built in this period.

The Southern and Eastern regions have a higher proportion of electrical space heating systems than other regions, this is particularly apparent in the South West

where 19% of primary heating systems are electric, compared with a stock average of 9%. This is, again, primarily due to a comparative lack of access to the mains gas network in this region.

Smaller stock is also the most likely to use electrical systems, with 51% of the electrical systems occurring in the smallest floor area quintile. The largest fifth of all dwellings, of which 58% are detached houses, use 60% of all oil fuelled systems.

### Water Heating Systems

As previous discussion would suggest, we find that dwellings which heat their water via an electric immersion are far more likely to be flats than houses, with 32% of purpose built flats using this system compared to a whole stock proportion of 11% (Figure 10). Water heating in conjunction with a central heating system is, again, most predominant in detached and semi-detached houses.

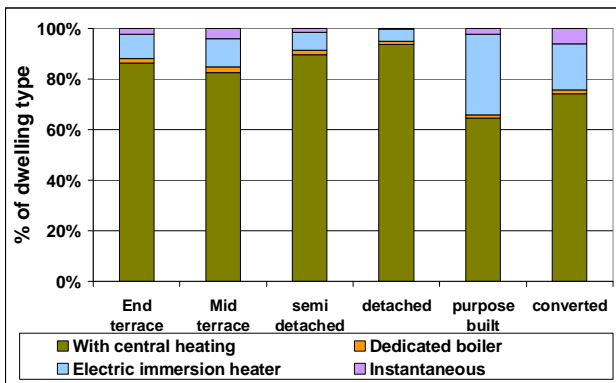


Figure 10: Comparison of water heating systems by dwelling type

Pre 1919 stock includes nearly half of all dwellings which use an instantaneous source for hot water. The highest proportions of electric immersion heaters are found in newer stock, although centrally heated new build homes are gradually decreasing this proportion.

The South West region is above the national average for the use of hot water systems that are not combined with central heating such as dedicated boilers, electric immersions and instantaneous heaters.

We also find, as with space heating, that larger homes have a higher proportion of hot water produced in conjunction with central heating than smaller stock. This is strongly linked to the relative typical sizes of flats and detached or semi-detached houses.

### Boiler Types

Standard floor or wall boilers still predominate in detached and semi-detached homes, whilst combination boilers are

increasingly found in terraces and flats. The slow but steady uptake of condensing boilers can be seen in detached dwellings in appendix table 4.2.

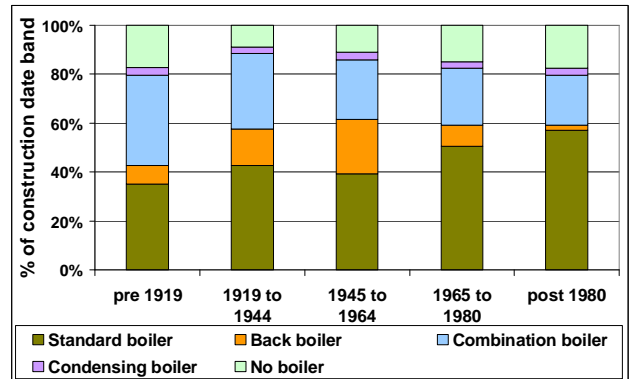


Figure 11: Comparison of boiler types by construction date

Examining boiler types against construction date we see a higher proportion of combination boilers in older dwellings (Figure 11), with more back boilers in dwellings built between 1945 and 1964.

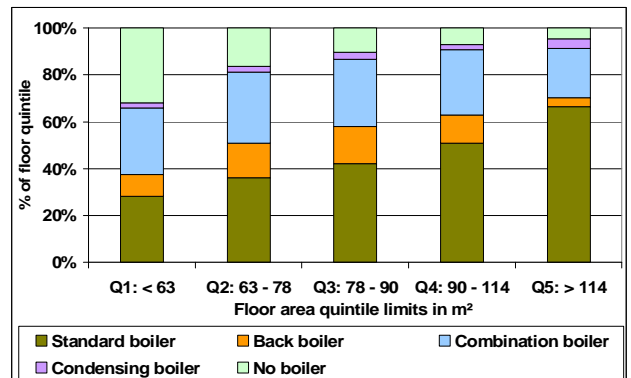


Figure 12: Comparison of boiler types by floor area

Standard and condensing boilers are found more frequently in larger dwellings (Figure 12), whilst combination boilers are spread more evenly across the dwelling size categories. Dwellings in the smallest quintile include 46% of those in which no boiler is present.

### Thermal Insulation

We might expect a number of energy efficiency measures to be found within the same dwelling, and therefore we should find a correlation between efficient space and water heating systems and a high level of thermal insulation. These cases should occur throughout the more recently built social dwellings along with higher income areas of the private sector, in which these measures were retrospectively fitted. Equally, there is a pattern of high cost heating systems being present in combination with low levels of insulation.

In 2004 we find that boiler driven space heating systems occur in a higher proportion of dwellings where the majority of windows are double glazed, than in those with no double glazing (Figure 13). Those with none have the highest percentages of fixed room heaters, storage radiators and portable heaters.

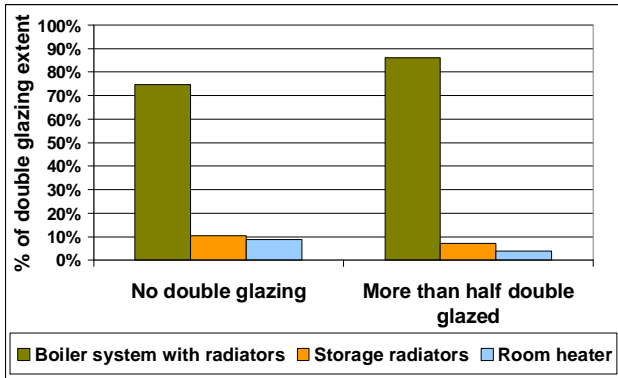


Figure 13: Comparison of space heating system by double glazing extent

Room and portable heaters also occur most frequently in homes with solid walls, although boiler driven central heating is found to the same degree in solid and cavity walled dwellings. This can be attributed to the high incidence of these systems in older dwellings, which are more likely to be of solid wall construction.

Dwellings with no loft insulation use proportionally fewer boiler systems and rely more frequently on room heaters. Perhaps counter-intuitively, a similar pattern is seen in dwellings with a very high level of loft insulation, which may suggest an effort to counteract an expensive heating system with additional insulation.

A similar pattern is seen when comparing space heating fuels and water heating systems to thermal insulation. Dwellings with no double glazing or no loft insulation include a lower proportion of gas fuelled systems and a higher percentage of solid fuel and electrical systems. They are also less likely to heat water together with a central heating system. Dwellings with insulated solid walls, primarily purpose built flats, include a high proportion of electric and communal systems.

Combination and condensing boilers are more prevalent in homes with full double glazing than none, as well as dwellings with a higher level of loft insulation. However combination boilers are more frequent in older, solid walled dwellings, reflecting the installations of the last 15 years to replace older, traditional boilers.

## Household Analysis

### Tenure

Clear patterns can be seen between space and water heating provision and dwelling tenure. Of the four tenure categories, private rented dwellings are the most reliant on non boiler driven systems, with around 14% of this stock using storage heaters and 10% of the stock using room heaters for space heating (Figure 14). However this category has seen the highest rate of central heating uptake since 2003, with the incidence of boiler systems increasing by 190,000 and a reduction in the proportion of storage and room heaters.

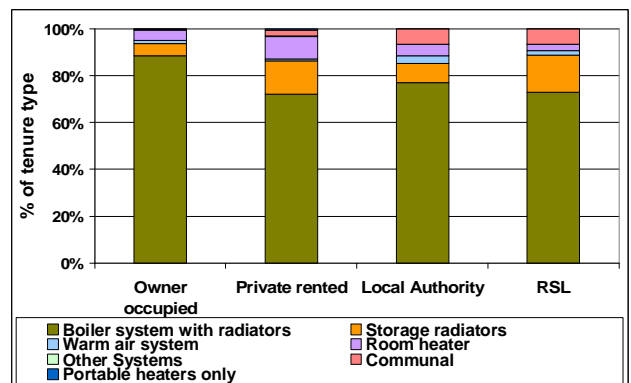


Figure 14: Comparison of space heating systems by tenure

Whilst the private rented sector remains behind other tenures in terms of energy efficient space and water heating, it is showing steady improvement with proportions of gas fuelled systems up by 2%, combined water and central heating systems up by 4% and combination boiler use up by 3% since 2003. RSL stock has seen a similar change over the past year with new dwellings and refurbishments accounting for a higher proportion of central heating systems.

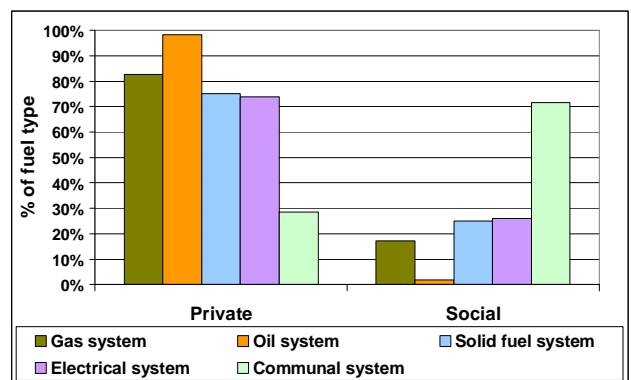


Figure 15: Comparison of space heating fuel by private or social sector



Social sector housing in general includes a far higher proportion of communal systems than private dwellings, (Figure 15), but almost no oil fuelled systems.

The owner occupied sector has the highest levels of gas central heating systems and centrally heated hot water systems, consistent with larger detached and semi-detached houses, of which 85% are owner occupied, compared with a total stock proportion of 71%.

### Neighbourhood

Levels of heating system categories vary according to the type of neighbourhood in which a dwelling is located (Figure 16). In city centres<sup>1</sup> and urban<sup>2</sup> areas, boiler driven systems make up a relatively low proportion of the stock, with room heaters more prevalent than in suburban<sup>3</sup> or rural residential<sup>4</sup> locations. In dwellings with boiler systems, combination boilers are more predominant in cities, as are condensing boilers to a lesser extent. Conversely back boilers are still found more often away from city and urban developments, although they are gradually being replaced in all locations.

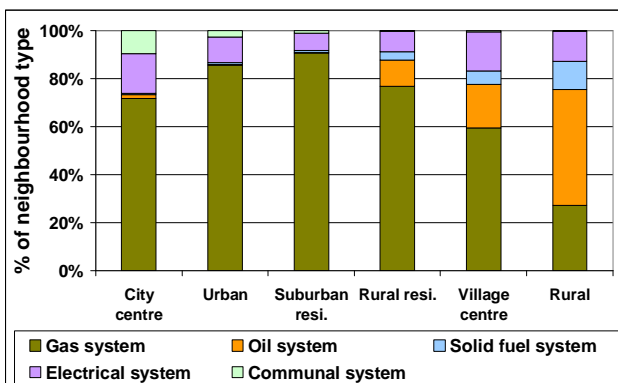


Figure 16: Comparison of primary fuel by neighbourhood category

Oil is the predominant fuel for space heating in rural areas. Despite being used in only 4% of all dwellings it is found in nearly half of rural<sup>5</sup> stock and 18% of village centre<sup>6</sup> dwellings. This is due to the high proportion of detached and semi-detached houses in these areas. Electricity is the primary fuel in 17% of city centre stock, twice the national proportion, due to the large number of purpose built flats found here. In city centres separate water heating systems are more prevalent than elsewhere, particularly inefficient instantaneous systems.

<sup>1</sup> The area immediately surrounding the core of large cities.  
<sup>2</sup> The area around the core of towns and small cities.  
<sup>3</sup> The outer area of a town or city.  
<sup>4</sup> The suburban areas of villages.  
<sup>5</sup> Isolated dwellings, small hamlets.  
<sup>6</sup> Traditional villages or the heart of old villages.

Dedicated water boilers are found proportionally more often in rural areas.

### Household Type

Single person households have the smallest percentage of boiler systems with radiators and the highest proportion of storage and room heaters (Figure 17). Single person households are the most likely to live in flats which reflects their reliance on non-boiler heating systems. Couples with dependent children have the highest incidence of boiler driven systems; these families make up the largest percentage of the owner occupied sector which again reflects the typical heating systems of this tenure.

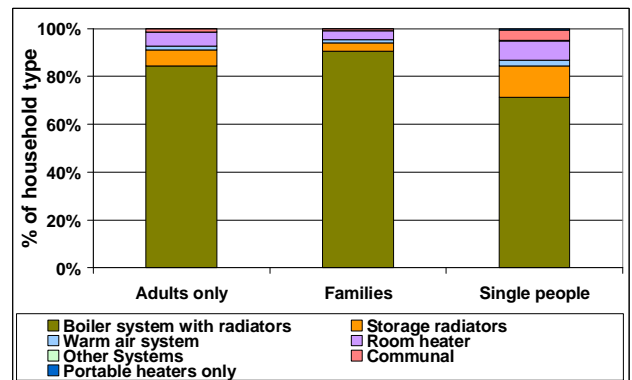


Figure 17: Comparison of heating systems by household type

Storage radiators and room heaters occur most frequently in both the youngest and oldest categories of Household Reference Person (HRP) and these categories are the least likely to use gas. Older households are more likely to use a secondary source of space heating, usually room heaters.

### Income

There is a strong correlation between income and heating provision (Figure 18).

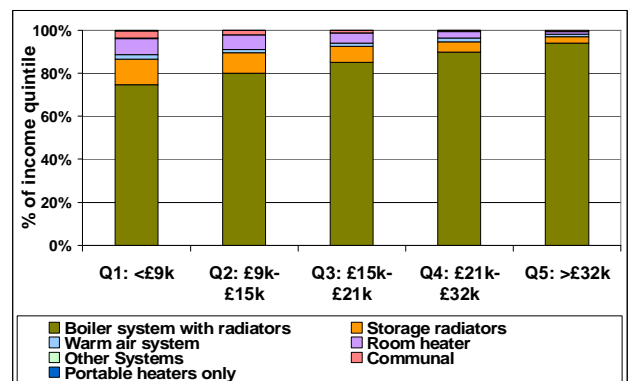


Figure 18: Comparison of space heating systems by household income

Households on low incomes are more reliant on storage radiators and room heaters for space heating and on water heated separately from the space heating system. Combination boiler use is split equally through the income distribution but condensing boilers are found more frequently at the high income end.

Low income households are more likely to be in terraces or flats, which also use a high proportion of non-central heating. Around 10% more of the highest income quintile uses gas for space and water heating than the lowest quintile.

## Comparison over time

### Space Heating Systems

Since 1991 the proportion of dwellings with central heating has risen steadily, with the predominant system being a boiler driven radiator system (Figure 19). The proportion of dwellings with this system has increased from 71% in 1991 to 85% in 2004.

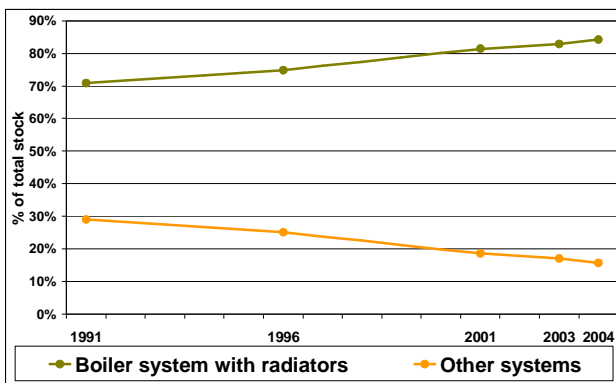


Figure 19: Timeline of boiler systems against other systems

Much of this increase has been due to upgrades from room heaters which, as shown separately in Figure 20, have decreased from 18% in 1991 to 5% in 2004.

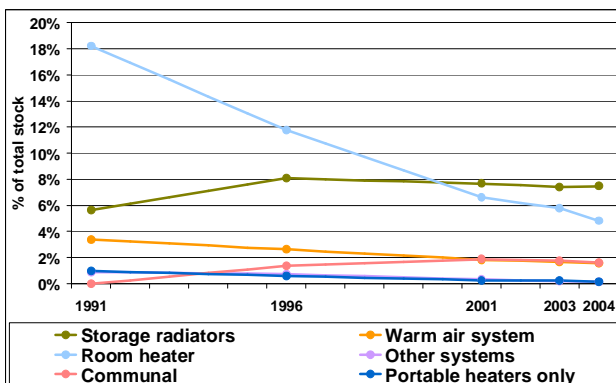


Figure 20: Timeline of minor primary heating systems

The proportion of communal heating schemes has risen due to its installation in a number of social sector flats, before levelling off recently. Warm air systems, mainly installed in the 1970s, have seen their frequency decrease, as these systems age and require replacement.

The overall increase in boiler driven central heating since 1991 has been seen in all dwelling types to differing extents, although purpose built flats have only had a small change in the proportion using these systems (Figure 21).

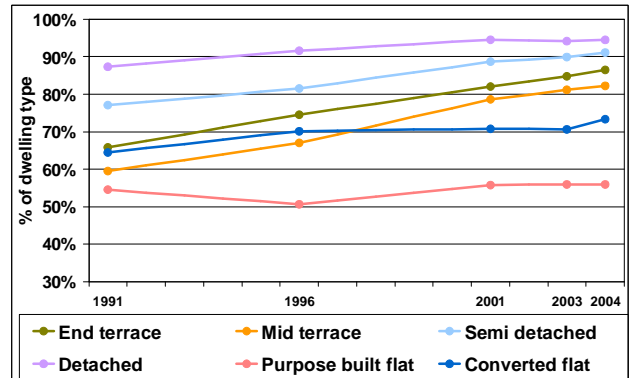


Figure 21: Timeline of boiler systems against dwelling type

The decrease in room heaters used in purpose built flats shown in Figure 22 is partly due to the uptake of communal heating and storage heater systems. Terraced houses have seen the greatest increase in ownership of central heating systems; with 23% more mid-terraces and 21% more end terraces using these systems. These increases are balanced by the removal of warm air systems and the reduced reliance on room heaters.

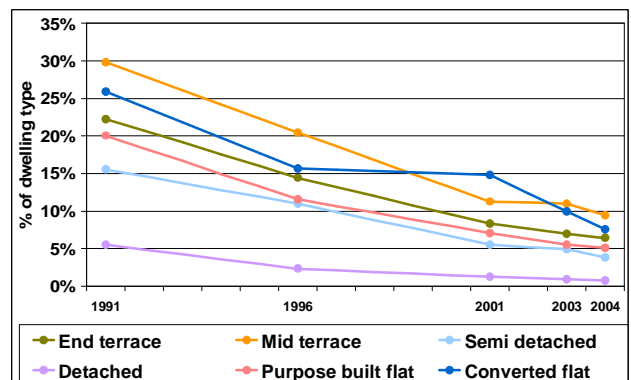


Figure 22: Timeline of room heaters against dwelling type

The increase in use of boiler systems with radiators since 1991 can be seen in each construction date category, but is most distinct in older stock, where central heating installations have replaced room heaters or portable electric heaters (Figure 23).

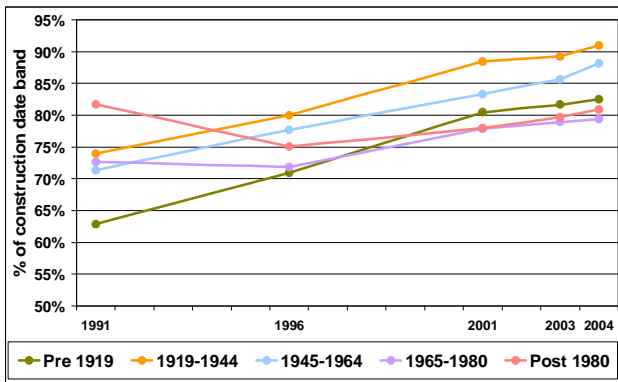


Figure 23: Timeline of boiler systems against construction date

Dwellings built between 1965 and 1980 have seen a large number of warm air heating systems and storage radiators replaced with boiler driven central heating.

The highest increases of central heating use since 1996 are in the North and Midlands, whilst the use of storage heaters has increased slightly in the Eastern and South East regions, resulting in a small shift from gas fuelled systems to electrical systems. In London the frequency of room heaters as the primary space heating source has decreased by around two thirds, as these systems have been replaced with central and communal heating.

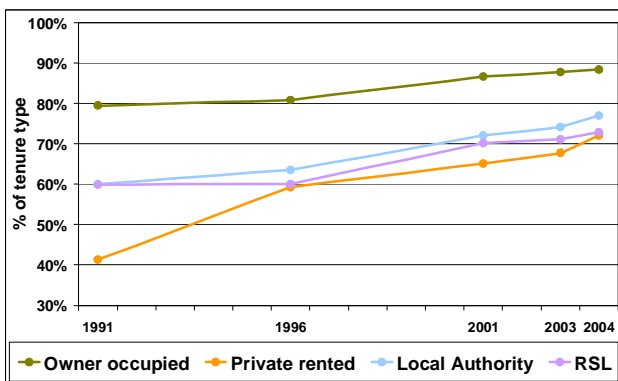


Figure 24: Timeline of boiler systems against tenure

The dominant owner occupied sector has seen a rise in boiler systems with radiators of around 3.3 million since 1991, an increase of 9% within this sector (Figure 24).

The numbers of all other systems, with the exception of communal heating, have fallen. Social housing has seen an increase in the proportion of boiler driven central heating systems since 1991 of 15%, although the transition of a large amount of local authority stock to RSL ownership in the early 1990s resulted in a large increase in the number of dwellings using storage heaters in the RSL sector (Figure 25).

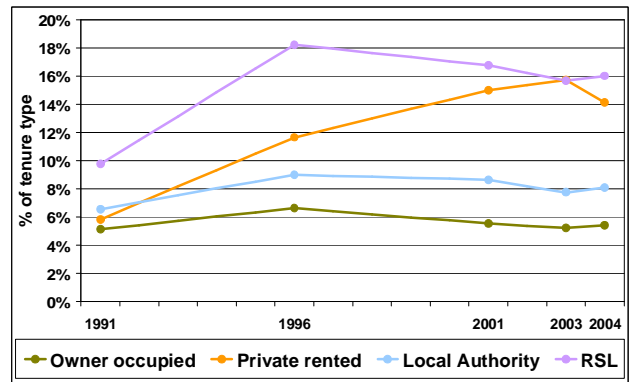


Figure 25: Timeline of storage heaters against tenure

Private rented stock has also seen increases in the use of central heating and storage heaters and a sharp decrease in dwellings relying on room heaters although it still has a proportionally higher amount of this heating category than other tenures.

The largest increase in the proportion of boiler driven central heating systems since 1991 has been among one parent families, coinciding with the largest percentage decrease in room heater use. The highest use of storage heaters and communal systems are still found in single person households, although these households have also seen a rise of around 11% in boiler driven central heating systems.

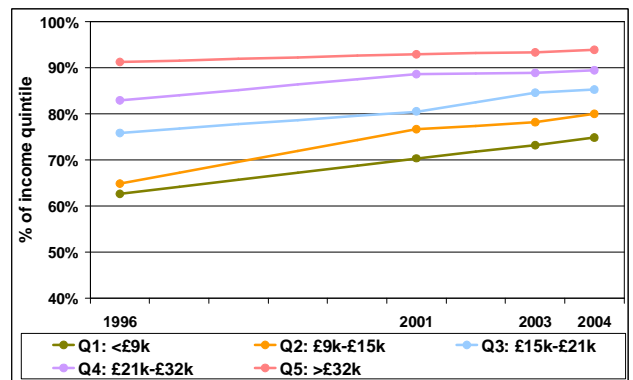


Figure 26: Timeline of boiler systems against income quintiles

Figure 26 indicates the increased uptake of central heating systems with radiators by lower income households. The difference in the proportions of the highest and lowest earning quintiles with these systems has shrunk from 29% in 1996 to 19% in 2004. In the lowest quintile these systems have predominantly replaced room heaters which have seen their incidence fall by over half in this period.

### Space Heating Fuel

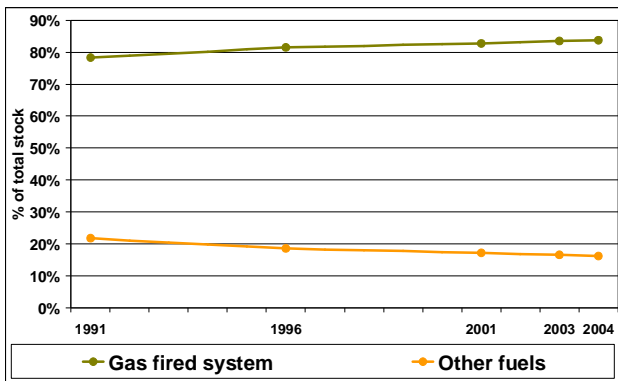


Figure 27: Timeline of gas fuelled systems against other systems

All forms of non-central heating systems have decreased since 1991, particularly individual room heaters and portable electric heaters. These categories have seen proportions drop by around two-thirds since 1991. These decreases correspond with a fall in the use of electricity and solid fuel since 1991; whilst gas and oil fuelled systems are found more frequently (Figures 27 and 28).

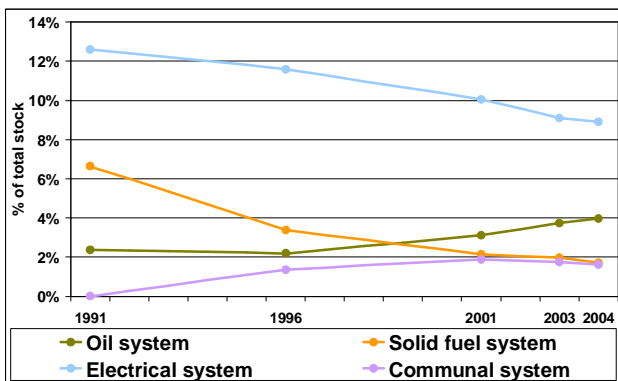


Figure 28: Timeline of minor primary heating fuels

The increase in oil fuelled systems can be mainly attributed to detached dwellings, predominantly in rural areas. Terraces have seen the greatest increase in gas fuelled heating (Figure 29), balanced by the largest decrease in electrical systems.

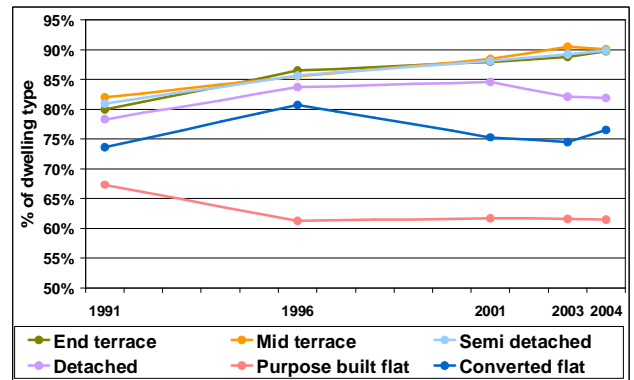


Figure 29: Timeline of gas fuelled systems against dwelling type

The swing from electric systems to gas fuelled systems is also more pronounced in older stock. The frequency of solid fuel systems has been cut by around 70% since 1991, with the largest decreases in pre-1945 stock.

Young households containing either one person or a couple have seen the highest increases in gas fuelled systems since 1991, whilst couples with dependent children are using twice as many oil fuelled systems in 2004.

### Water Heating Systems

A dwelling's hot water is primarily supplied by central heating in 84% of cases, up from 73% in 1991 (Figure 30). This difference amounts to around 4 million more dwellings using central heating to provide hot water in 2004 than in 1991.

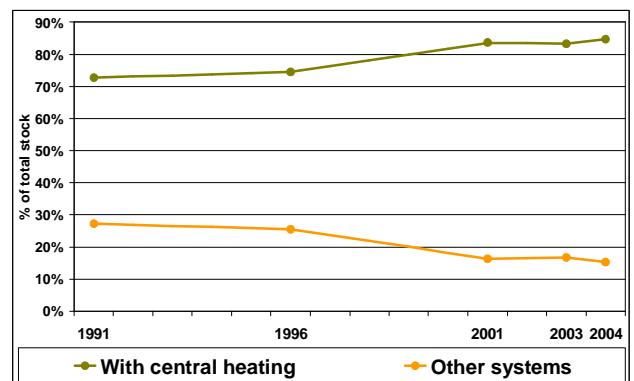


Figure 30: Timeline of centrally heated water against other systems

An electric immersion heater is used by 11% of the stock as the main source of hot water; this is down from 26% in 1991, whilst the proportions of other methods remain at consistently low levels, between 0% and 5% of the stock (Figure 31).

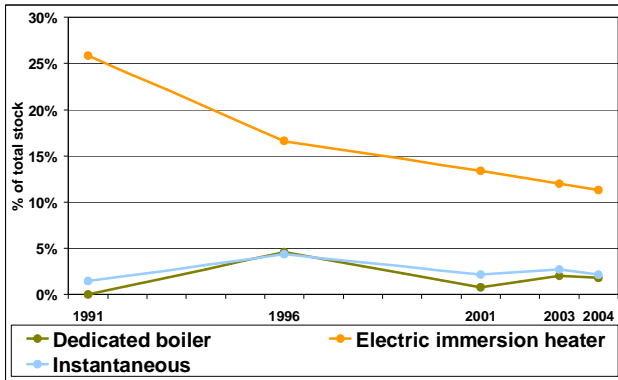


Figure 31: Timeline of minor water heating systems

Terraced dwellings show the largest changes in water heating systems since 1991 (Figure 32). Mid- and end terraces have increased their use of water heated by the central heating system by 16% and 20% respectively, with dedicated boilers, immersion and instantaneous heaters becoming rarer.

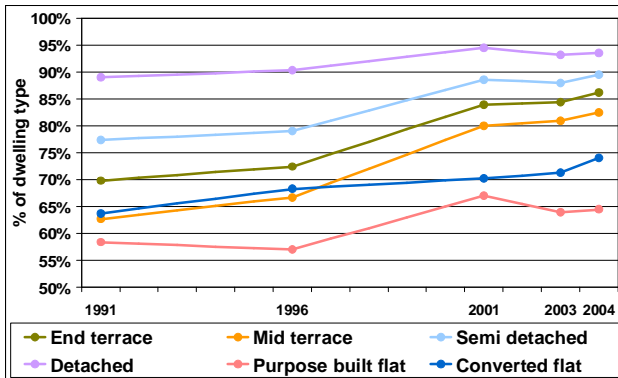


Figure 32: Timeline of water combined with central heating against dwelling type

The Midlands has seen the largest increase in the proportion of dwellings heating water together with a central heating system, with the majority of conversions from stock that previously used an electric immersion heater.

The transit of local authority stock to RSL's has significantly reduced the proportions of electrical space heating systems and immersion water heating systems in this sector.

### Boiler Type

The proportion of dwellings using a boiler for space heating has increased from 74% in 1991 to 86% in 2004. The numbers of standard floor or wall boilers and back boilers have steadily decreased, being replaced with combination boilers and, more recently, condensing boilers (Figure 33). From a small number of combination boilers in 1991 there were 2.8 million in 1996 (14% of the total stock) and 5.9 million in 2004 (27% of the stock).

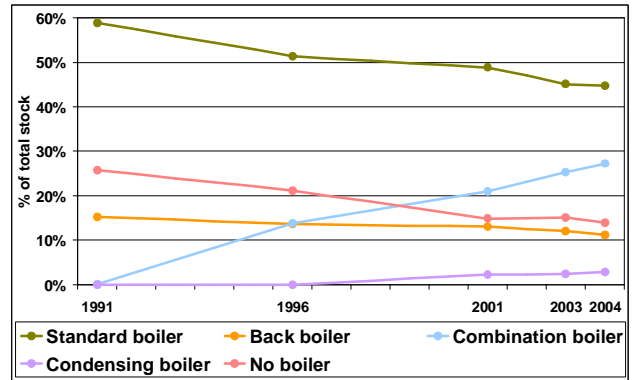


Figure 33: Timeline of boiler types

Between 1991 and 2004 the largest shift from standard boilers to combination boilers has been in flats, whilst terraced houses have had a large number of combination boilers installed where a non-boiler heating system was previously found (Figure 34).

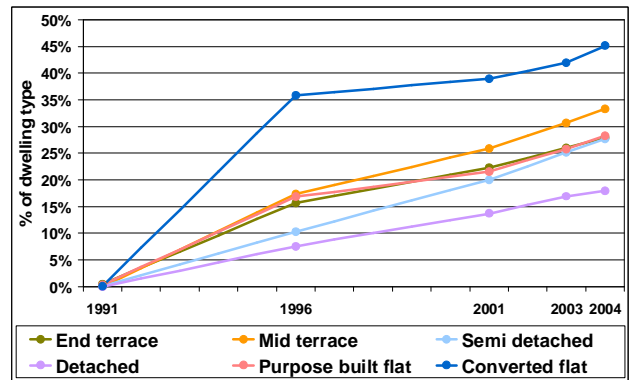


Figure 34: Timeline of combination boilers against dwelling type

Semi-detached and detached dwellings have seen the largest decrease in back boilers, again replaced by combination and, more recently, condensing boilers.

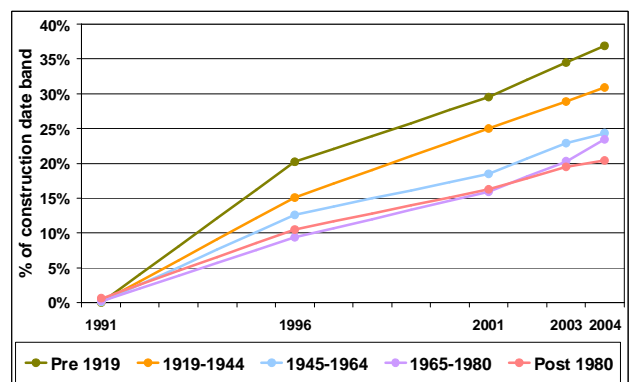


Figure 35: Timeline of combination boilers against construction date

Combination boilers have increased in frequency in all age bands from almost zero in 1991. Older stock again shows

the largest change (Figure 35). Around 37% of pre-1919 dwellings have combination boilers in 2004, compared to 20% of post-1980 stock. In pre-1965 stock, installation of combination and condensing boilers has replaced a significant number of non-boiler systems, whilst in post-1964 dwellings it is existing standard boilers that have been upgraded.

The quantity of RSL stock without a boiler has risen, due to the number of flats in this sector which use storage heaters and communal heating; however this number as a proportion of all RSL dwellings is decreasing, as newer centrally heated homes are built or transferred from local authority use.

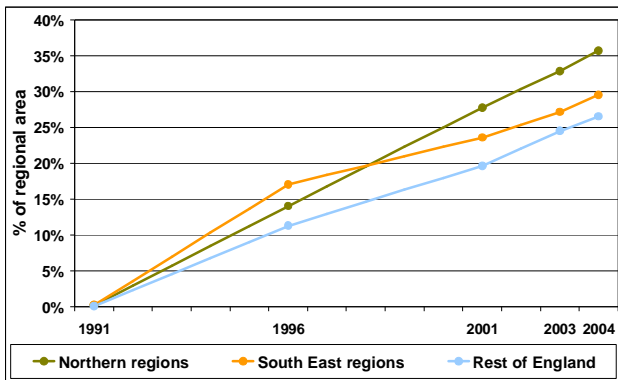


Figure 36: Timeline of combination and condensing boilers against broad regional areas

Figure 36 indicates the installation of combination or condensing boilers across the country, replacing standard or back boilers, and storage or room heater systems. The colder Northern regions have consistently seen a greater proportional increase in more modern boilers since 1996, with regions outside the North and the South East falling behind.

### Conclusions and Future Issues

The English housing stock has seen continued installation of boiler drive space and water heating systems, with gas and oil fuelled systems increasing in number. Where central heating already exists, standard and back boilers are being replaced with combination and condensing boilers, whilst incidences of room and portable heaters have declined to levels well below those existing 10 – 15 years ago.

Future update reports will establish whether majority-use heating systems are reaching their saturation point, whilst also focussing on the uptake of condensing boilers, now an important part of new-build and refurbishment building regulations.

## Space and Water Heating Update Update Tables 2004

These tables give detailed breakdowns of the four main heating groups (primary space heating type and fuel, water heating type and boiler type) against key variables, as an appendix to the Space and Water Heating Update Report 2004.

### Index

- Table 1.1 Primary space heating system - Proportion of space heating type
- Table 1.2 Primary space heating system - Proportion of space heating type by dwelling type
- Table 1.3 Primary space heating system - Proportion of space heating type by dwelling age
- Table 1.4 Primary space heating system - Proportion of space heating type by dwelling tenure
- Table 1.5 Primary space heating system - Proportion of space heating type by household composition
- Table 1.6 Primary space heating system - Proportion of space heating type by floor area
- Table 1.7 Primary space heating system - Proportion of space heating type by household income
  
- Table 2.1 Primary space heating fuel - Proportion of space heating fuel
- Table 2.2 Primary space heating fuel - Proportion of space heating fuel by dwelling type
- Table 2.3 Primary space heating fuel - Proportion of space heating fuel by dwelling age
- Table 2.4 Primary space heating fuel - Proportion of space heating fuel by dwelling tenure
- Table 2.5 Primary space heating fuel - Proportion of space heating fuel by household composition
- Table 2.6 Primary space heating fuel - Proportion of space heating fuel by floor area
- Table 2.7 Primary space heating fuel - Proportion of space heating fuel by household income
  
- Table 3.1 Water heating system - Proportion of water heating system
- Table 3.2 Water heating system - Proportion of water heating system by dwelling type
- Table 3.3 Water heating system - Proportion of water heating system by dwelling age
- Table 3.4 Water heating system - Proportion of water heating system by dwelling tenure
- Table 3.5 Water heating system - Proportion of water heating system by household composition
- Table 3.6 Water heating system - Proportion of water heating system by floor area
- Table 3.7 Water heating system - Proportion of water heating system by household income
  
- Table 4.1 Type of boiler - Proportion of boiler type
- Table 4.2 Type of boiler - Proportion of boiler type by dwelling type
- Table 4.3 Type of boiler - Proportion of boiler type by dwelling age
- Table 4.4 Type of boiler - Proportion of boiler type by dwelling tenure
- Table 4.5 Type of boiler - Proportion of boiler type by household composition
- Table 4.6 Type of boiler - Proportion of boiler type by floor area
- Table 4.7 Type of boiler - Proportion of boiler type by household income

Table 1.1 Primary space heating system - Proportion of space heating type

	count(000s), (column%)
Primary space heating system	Dwellings
Boiler system with radiators	18,200 ( 84.2 )
Storage radiators	1,616 ( 7.5 )
Warm air system	338 ( 1.6 )
Room heater	1,043 ( 4.8 )
Other Systems	28 ( 0.1 )
Communal	353 ( 1.6 )
Portable heaters only	35 ( 0.2 )
Total	21,613 ( 100.0 )

Base: All Dwellings



Table 1.2 Primary space heating system - Proportion of space heating type by dwelling type

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
End terrace	1,809 ( 86.5) ( 9.9)	100 ( 4.8) ( 6.2)	35 ( 1.7) ( 10.4)	134 ( 6.4) ( 12.9)	3 ( 0.1) ( 10.7)	9 ( 0.4) ( 2.6)	1 ( 0.1) ( 4.3)	2,093 (100.0) ( 9.7)
Mid terrace	3,535 ( 82.2) ( 19.4)	253 ( 5.9) ( 15.7)	81 ( 1.9) ( 24.0)	406 ( 9.5) ( 38.9)	5 ( 0.1) ( 19.3)	12 ( 0.3) ( 3.5)	6 ( 0.1) ( 16.0)	4,299 (100.0) ( 19.9)
Semi detached	6,141 ( 91.1) ( 33.7)	277 ( 4.1) ( 17.1)	52 ( 0.8) ( 15.5)	260 ( 3.9) ( 25.0)	0 ( 0.0) ( 0.0)	8 ( 0.1) ( 2.3)	0 ( 0.0) ( 0.0)	6,738 (100.0) ( 31.2)
Detached	4,554 ( 94.4) ( 25.0)	155 ( 3.2) ( 9.6)	73 ( 1.5) ( 21.6)	38 ( 0.8) ( 3.7)	2 ( 0.0) ( 7.0)	0 ( 0.0) ( 0.0)	3 ( 0.1) ( 8.4)	4,824 (100.0) ( 22.3)
Purpose built flat	1,682 ( 56.0) ( 9.2)	745 ( 24.8) ( 46.1)	96 ( 3.2) ( 28.5)	154 ( 5.1) ( 14.8)	18 ( 0.6) ( 63.1)	297 ( 9.9) ( 84.2)	13 ( 0.4) ( 38.2)	3,005 (100.0) ( 13.9)
Converted flat	479 ( 73.3) ( 2.6)	87 ( 13.4) ( 5.4)	0 ( 0.0) ( 0.0)	49 ( 7.6) ( 4.7)	0 ( 0.0) ( 0.0)	26 ( 4.0) ( 7.4)	12 ( 1.8) ( 33.2)	654 (100.0) ( 3.0)
Total	18,200 ( 84.2) (100.0)	1,616 ( 7.5) (100.0)	338 ( 1.6) (100.0)	1,043 ( 4.8) (100.0)	28 ( 0.1) (100.0)	353 ( 1.6) (100.0)	35 ( 0.2) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 1.3 Primary space heating system - Proportion of space heating type by dwelling age

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
Pre 1919	3,781 ( 82.5)	295 ( 6.4)	( 0.0)	451 ( 9.8)	3 ( 0.1)	37 ( 0.8)	17 ( 0.4)	4,584 (100.0)
	( 20.8)	( 18.2)	( 0.0)	( 43.2)	( 12.2)	( 10.4)	( 48.1)	( 21.2)
1919 - 1944	3,509 ( 91.0)	112 ( 2.9)	5 ( 0.1)	209 ( 5.4)	( 0.0)	20 ( 0.5)	1 ( 0.0)	3,856 (100.0)
	( 19.3)	( 7.0)	( 1.5)	( 20.0)	( 0.0)	( 5.7)	( 2.2)	( 17.8)
1945 - 1964	3,956 ( 88.1)	252 ( 5.6)	37 ( 0.8)	202 ( 4.5)	( 0.0)	36 ( 0.8)	5 ( 0.1)	4,489 (100.0)
	( 21.7)	( 15.6)	( 11.1)	( 19.4)	( 0.0)	( 10.2)	( 15.5)	( 20.8)
1965 - 1980	3,763 ( 79.4)	424 ( 8.9)	252 ( 5.3)	98 ( 2.1)	16 ( 0.3)	177 ( 3.7)	7 ( 0.2)	4,738 (100.0)
	( 20.7)	( 26.2)	( 74.7)	( 9.4)	( 57.6)	( 50.2)	( 21.1)	( 21.9)
1981 - 1990	1,453 ( 75.3)	301 ( 15.6)	35 ( 1.8)	67 ( 3.5)	4 ( 0.2)	65 ( 3.4)	5 ( 0.2)	1,931 (100.0)
	( 8.0)	( 18.6)	( 10.4)	( 6.5)	( 14.8)	( 18.4)	( 13.0)	( 8.9)
Post 1990	1,738 ( 86.2)	231 ( 11.5)	8 ( 0.4)	16 ( 0.8)	4 ( 0.2)	18 ( 0.9)	( 0.0)	2,015 (100.0)
	( 9.5)	( 14.3)	( 2.3)	( 1.6)	( 15.4)	( 5.0)	( 0.0)	( 9.3)
Total	18,200 ( 84.2)	1,616 ( 7.5)	338 ( 1.6)	1,043 ( 4.8)	28 ( 0.1)	353 ( 1.6)	35 ( 0.2)	21,613 (100.0)
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Base: All Dwellings

Table 1.4 Primary space heating system - Proportion of space heating type by dwelling tenure

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
Owner occupied	13,504 ( 88.4)	830 ( 5.4)	209 ( 1.4)	660 ( 4.3)	17 ( 0.1)	47 ( 0.3)	13 ( 0.1)	15,279 ( 100.0)
Private rented	1,685 ( 72.2)	330 ( 14.1)	17 ( 0.7)	225 ( 9.6)	8 ( 0.3)	54 ( 2.3)	16 ( 0.7)	2,334 ( 100.0)
Local Authority	1,798 ( 77.0)	189 ( 8.1)	81 ( 3.5)	115 ( 4.9)	2 ( 0.1)	147 ( 6.3)	4 ( 0.1)	2,335 ( 100.0)
RSL	1,213 ( 72.9)	267 ( 16.0)	32 ( 1.9)	44 ( 2.6)	2 ( 0.1)	106 ( 6.3)	2 ( 0.1)	1,665 ( 100.0)
Total	18,200 ( 84.2)	1,616 ( 7.5)	338 ( 1.6)	1,043 ( 4.8)	28 ( 0.1)	353 ( 1.6)	35 ( 0.2)	21,613 ( 100.0)
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Base: All Dwellings

Table 1.5 Primary space heating system - Proportion of space heating type by household composition

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
couple under 60	3,691 ( 88.3) ( 20.9)	228 ( 5.4) ( 14.9)	49 ( 1.2) ( 15.3)	161 ( 3.9) ( 16.8)	7 ( 0.2) ( 25.4)	34 ( 0.8) ( 10.6)	9 ( 0.2) ( 27.0)	4,179 ( 100.0) ( 20.1)
couple 60 or over	2,898 ( 86.5) ( 16.4)	217 ( 6.5) ( 14.3)	65 ( 1.9) ( 20.1)	140 ( 4.2) ( 14.6)	5 ( 0.2) ( 18.4)	24 ( 0.7) ( 7.4)	( 0.0) ( 0.0)	3,349 ( 100.0) ( 16.1)
couple with children	4,545 ( 92.6) ( 25.8)	158 ( 3.2) ( 10.4)	55 ( 1.1) ( 17.1)	123 ( 2.5) ( 12.8)	1 ( 0.0) ( 4.9)	24 ( 0.5) ( 7.6)	( 0.0) ( 0.0)	4,906 ( 100.0) ( 23.6)
lone parent with children	1,270 ( 86.1) ( 7.2)	91 ( 6.2) ( 6.0)	23 ( 1.5) ( 7.1)	71 ( 4.8) ( 7.4)	2 ( 0.1) ( 5.8)	18 ( 1.2) ( 5.6)	2 ( 0.1) ( 5.1)	1,476 ( 100.0) ( 7.1)
large adult household	1,245 ( 87.3) ( 7.1)	72 ( 5.0) ( 4.7)	21 ( 1.4) ( 6.4)	70 ( 4.9) ( 7.3)	2 ( 0.2) ( 8.7)	15 ( 1.1) ( 4.7)	2 ( 0.1) ( 5.4)	1,426 ( 100.0) ( 6.9)
one person under 60	1,886 ( 75.1) ( 10.7)	326 ( 13.0) ( 21.4)	44 ( 1.8) ( 13.6)	181 ( 7.2) ( 18.9)	7 ( 0.3) ( 25.7)	55 ( 2.2) ( 17.1)	11 ( 0.4) ( 34.1)	2,511 ( 100.0) ( 12.1)
one person 60 or over	2,092 ( 70.5) ( 11.9)	432 ( 14.6) ( 28.3)	66 ( 2.2) ( 20.4)	213 ( 7.2) ( 22.2)	3 ( 0.1) ( 11.2)	150 ( 5.1) ( 47.0)	9 ( 0.3) ( 28.3)	2,966 ( 100.0) ( 14.3)
Total	17,627 ( 84.7) ( 100.0)	1,524 ( 7.3) ( 100.0)	323 ( 1.6) ( 100.0)	960 ( 4.6) ( 100.0)	28 ( 0.1) ( 100.0)	320 ( 1.5) ( 100.0)	32 ( 0.2) ( 100.0)	20,814 ( 100.0) ( 100.0)

Base: All Dwellings

Table 1.6 Primary space heating system - Proportion of space heating type by floor area

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
Quintile 1: < 63m <sup>2</sup>	2,820 ( 65.2)	834 ( 19.3)	88 ( 2.0)	301 ( 7.0)	13 ( 0.3)	241 ( 5.6)	25 ( 0.6)	4,323 (100.0)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	3,540 ( 81.9)	337 ( 7.8)	77 ( 1.8)	324 ( 7.5)	6 ( 0.1)	33 ( 0.8)	4 ( 0.1)	4,320 (100.0)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	3,804 ( 87.9)	165 ( 3.8)	75 ( 1.7)	244 ( 5.7)	4 ( 0.1)	32 ( 0.7)	1 ( 0.0)	4,325 (100.0)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	3,971 ( 91.9)	173 ( 4.0)	48 ( 1.1)	100 ( 2.3)	3 ( 0.1)	23 ( 0.5)	4 ( 0.1)	4,322 (100.0)
Quintile 5: > 114m <sup>2</sup>	4,065 ( 94.1)	108 ( 2.5)	50 ( 1.2)	74 ( 1.7)	2 ( 0.0)	24 ( 0.5)	0 ( 0.0)	4,322 (100.0)
Total	18,200 ( 84.2)	1,616 ( 7.5)	338 ( 1.6)	1,043 ( 4.8)	28 ( 0.1)	353 ( 1.6)	35 ( 0.2)	21,613 (100.0)
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Base: All Dwellings

Table 1.7 Primary space heating system - Proportion of space heating type by household income

	count(000s), (row%), (column%)							
	Boiler system with radiators	Storage radiators	Warm air system	Room heater	Other Systems	Communal	Portable heaters only	Total
Quintile 1: < £9k	3,095 ( 74.6)	496 ( 12.0)	83 ( 2.0)	313 ( 7.5)	3 ( 0.1)	144 ( 3.5)	16 ( 0.4)	4,149 (100.0)
Quintile 2: £9k - £15k	3,330 ( 80.1)	392 ( 9.4)	65 ( 1.6)	278 ( 6.7)	5 ( 0.1)	85 ( 2.0)	4 ( 0.1)	4,158 (100.0)
Quintile 3: £15k - £21k	3,534 ( 85.1)	305 ( 7.3)	60 ( 1.5)	197 ( 4.8)	7 ( 0.2)	44 ( 1.1)	5 ( 0.1)	4,153 (100.0)
Quintile 4: £21k - £32k	3,747 ( 89.7)	205 ( 4.9)	70 ( 1.7)	122 ( 2.9)	3 ( 0.1)	25 ( 0.6)	5 ( 0.1)	4,177 (100.0)
Quintile 5: > £32k	3,921 ( 93.9)	127 ( 3.0)	46 ( 1.1)	50 ( 1.2)	10 ( 0.2)	22 ( 0.5)	2 ( 0.0)	4,177 (100.0)
Total	17,627 ( 84.7)	1,524 ( 7.3)	323 ( 1.6)	960 ( 4.6)	28 ( 0.1)	320 ( 1.5)	32 ( 0.2)	20,814 (100.0)
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Base: All Households

Table 2.1 Primary space heating fuel - Proportion of space heating fuel

	count(000s), (column%)
Primary space heating fuel	Dwellings
Gas fired system	18,103 ( 83.8)
Oil fired system	858 ( 4.0)
Solid fuel fired system	372 ( 1.7)
Electrical system	1,927 ( 8.9)
Communal system	353 ( 1.6)
Total	21,613 (100.0)

Base: All Dwellings

Table 2.2 Primary space heating fuel - Proportion of space heating fuel by dwelling type

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
End terrace	1,878 ( 89.8) ( 10.4)	42 ( 2.0) ( 4.9)	35 ( 1.7) ( 9.4)	128 ( 6.1) ( 6.6)	9 ( 0.4) ( 2.6)	2,093 (100.0) ( 9.7)
Mid terrace	3,872 ( 90.1) ( 21.4)	14 ( 0.3) ( 1.6)	88 ( 2.1) ( 23.7)	313 ( 7.3) ( 16.2)	12 ( 0.3) ( 3.5)	4,299 (100.0) ( 19.9)
semi detached	6,053 ( 89.8) ( 33.4)	190 ( 2.8) ( 22.2)	171 ( 2.5) ( 46.0)	315 ( 4.7) ( 16.4)	8 ( 0.1) ( 2.3)	6,738 (100.0) ( 31.2)
detached	3,952 ( 81.9) ( 21.8)	608 ( 12.6) ( 70.8)	70 ( 1.4) ( 18.8)	194 ( 4.0) ( 10.1)	( 0.0) ( 0.0)	4,824 (100.0) ( 22.3)
purpose built	1,847 ( 61.4) ( 10.2)	1 ( 0.0) ( 0.1)	6 ( 0.2) ( 1.5)	855 ( 28.4) ( 44.4)	297 ( 9.9) ( 84.2)	3,005 (100.0) ( 13.9)
converted	500 ( 76.5) ( 2.8)	3 ( 0.4) ( 0.3)	2 ( 0.3) ( 0.6)	123 ( 18.7) ( 6.4)	26 ( 4.0) ( 7.4)	654 (100.0) ( 3.0)
Total	18,103 ( 83.8) (100.0)	858 ( 4.0) (100.0)	372 ( 1.7) (100.0)	1,927 ( 8.9) (100.0)	353 ( 1.6) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings



Table 2.3 Primary space heating fuel - Proportion of space heating fuel by dwelling age

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
Pre 1919	3,696 ( 80.6) ( 20.4)	312 ( 6.8) ( 36.3)	144 ( 3.1) ( 38.6)	396 ( 8.6) ( 20.5)	37 ( 0.8) ( 10.4)	4,584 (100.0) ( 21.2)
1919 - 1944	3,541 ( 91.8) ( 19.6)	84 ( 2.2) ( 9.8)	70 ( 1.8) ( 18.9)	140 ( 3.6) ( 7.3)	20 ( 0.5) ( 5.7)	3,856 (100.0) ( 17.8)
1945 - 1964	3,904 ( 86.9) ( 21.6)	152 ( 3.4) ( 17.7)	104 ( 2.3) ( 28.0)	294 ( 6.5) ( 15.2)	36 ( 0.8) ( 10.2)	4,489 (100.0) ( 20.8)
1965 - 1980	3,830 ( 80.8) ( 21.2)	179 ( 3.8) ( 20.8)	47 ( 1.0) ( 12.6)	505 ( 10.7) ( 26.2)	177 ( 3.7) ( 50.2)	4,738 (100.0) ( 21.9)
1981 - 1990	1,451 ( 75.2) ( 8.0)	69 ( 3.6) ( 8.0)	7 ( 0.3) ( 1.8)	339 ( 17.5) ( 17.6)	65 ( 3.4) ( 18.4)	1,931 (100.0) ( 8.9)
Post 1990	1,681 ( 83.4) ( 9.3)	62 ( 3.1) ( 7.3)	372 ( 0.0) ( 0.0)	254 ( 12.6) ( 13.2)	18 ( 0.9) ( 5.0)	2,015 (100.0) ( 9.3)
Total	18,103 ( 83.8) (100.0)	858 ( 4.0) (100.0)	372 ( 1.7) (100.0)	1,927 ( 8.9) (100.0)	353 ( 1.6) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 2.4 Primary space heating fuel - Proportion of space heating fuel by dwelling tenure

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
Owner occupied	13,268 ( 86.8) ( 73.3)	742 ( 4.9) ( 86.4)	219 ( 1.4) ( 58.9)	1,003 ( 6.6) ( 52.1)	47 ( 0.3) ( 13.2)	15,279 (100.0) ( 70.7)
Private rented	1,699 ( 72.8) ( 9.4)	101 ( 4.3) ( 11.7)	60 ( 2.6) ( 16.2)	420 ( 18.0) ( 21.8)	54 ( 2.3) ( 15.2)	2,334 (100.0) ( 10.8)
Local Authority	1,895 ( 81.1) ( 10.5)	9 ( 0.4) ( 1.1)	68 ( 2.9) ( 18.2)	216 ( 9.3) ( 11.2)	147 ( 6.3) ( 41.6)	2,335 (100.0) ( 10.8)
RSL	1,240 ( 74.5) ( 6.9)	7 ( 0.4) ( 0.8)	25 ( 1.5) ( 6.7)	287 ( 17.3) ( 14.9)	106 ( 6.3) ( 29.9)	1,665 (100.0) ( 7.7)
Total	18,103 ( 83.8) (100.0)	858 ( 4.0) (100.0)	372 ( 1.7) (100.0)	1,927 ( 8.9) (100.0)	353 ( 1.6) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 2.5 Primary space heating fuel - Proportion of space heating fuel by household composition

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
couple under 60	3,600 ( 86.1) ( 20.6)	198 ( 4.7) ( 23.4)	68 ( 1.6) ( 19.5)	280 ( 6.7) ( 15.6)	34 ( 0.8) ( 10.6)	4,179 ( 100.0) ( 20.1)
couple 60 or over	2,810 ( 83.9) ( 16.1)	208 ( 6.2) ( 24.6)	62 ( 1.9) ( 17.9)	244 ( 7.3) ( 13.6)	24 ( 0.7) ( 7.4)	3,349 ( 100.0) ( 16.1)
couple with children	4,401 ( 89.7) ( 25.1)	246 ( 5.0) ( 29.1)	57 ( 1.2) ( 16.4)	178 ( 3.6) ( 9.9)	24 ( 0.5) ( 7.6)	4,906 ( 100.0) ( 23.6)
lone parent with children	1,305 ( 88.4) ( 7.5)	21 ( 1.4) ( 2.5)	26 ( 1.8) ( 7.5)	106 ( 7.2) ( 5.9)	18 ( 1.2) ( 5.6)	1,476 ( 100.0) ( 7.1)
large adult household	1,237 ( 86.7) ( 7.1)	51 ( 3.6) ( 6.0)	28 ( 1.9) ( 7.9)	96 ( 6.7) ( 5.3)	15 ( 1.1) ( 4.7)	1,426 ( 100.0) ( 6.9)
one person under 60	1,971 ( 78.5) ( 11.3)	42 ( 1.7) ( 5.0)	35 ( 1.4) ( 10.0)	408 ( 16.3) ( 22.8)	55 ( 2.2) ( 17.1)	2,511 ( 100.0) ( 12.1)
one person 60 or over	2,182 ( 73.6) ( 12.5)	80 ( 2.7) ( 9.4)	72 ( 2.4) ( 20.7)	482 ( 16.2) ( 26.9)	150 ( 5.1) ( 47.0)	2,966 ( 100.0) ( 14.3)
Total	17,505 ( 84.1) ( 100.0)	846 ( 4.1) ( 100.0)	349 ( 1.7) ( 100.0)	1,795 ( 8.6) ( 100.0)	320 ( 1.5) ( 100.0)	20,814 ( 100.0) ( 100.0)

Base: All Dwellings

Table 2.6 Primary space heating fuel - Proportion of space heating fuel by floor area

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
Quintile 1: < 63m <sup>2</sup>	3,039 ( 70.3) ( 16.8)	36 ( 0.8) ( 4.2)	35 ( 0.8) ( 9.4)	973 ( 22.5) ( 50.5)	241 ( 5.6) ( 68.2)	4,323 (100.0) ( 20.0)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	3,737 ( 86.5) ( 20.6)	58 ( 1.4) ( 6.8)	85 ( 2.0) ( 22.9)	406 ( 9.4) ( 21.1)	33 ( 0.8) ( 9.4)	4,320 (100.0) ( 20.0)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	3,894 ( 90.0) ( 21.5)	93 ( 2.1) ( 10.8)	96 ( 2.2) ( 25.9)	209 ( 4.8) ( 10.9)	32 ( 0.7) ( 9.2)	4,325 (100.0) ( 20.0)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	3,846 ( 89.0) ( 21.2)	158 ( 3.7) ( 18.4)	100 ( 2.3) ( 26.8)	195 ( 4.5) ( 10.1)	23 ( 0.5) ( 6.5)	4,322 (100.0) ( 20.0)
Quintile 5: > 114m <sup>2</sup>	3,586 ( 83.0) ( 19.8)	513 ( 11.9) ( 59.8)	56 ( 1.3) ( 15.0)	143 ( 3.3) ( 7.4)	24 ( 0.5) ( 6.7)	4,322 (100.0) ( 20.0)
Total	18,103 ( 83.8) (100.0)	858 ( 4.0) (100.0)	372 ( 1.7) (100.0)	1,927 ( 8.9) (100.0)	353 ( 1.6) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 2.7 Primary space heating fuel - Proportion of space heating fuel by household income

	count(000s), (row%), (column%)					
	Gas fired system	Oil fired system	Solid fuel fired system	Electrical system	Communal system	Total
Quintile 1: < £9k	3,231 ( 77.9) ( 18.5)	75 ( 1.8) ( 8.8)	116 ( 2.8) ( 33.2)	584 ( 14.1) ( 32.5)	144 ( 3.5) ( 44.9)	4,149 (100.0) ( 19.9)
Quintile 2: £9k - £15k	3,429 ( 82.5) ( 19.6)	88 ( 2.1) ( 10.4)	99 ( 2.4) ( 28.4)	457 ( 11.0) ( 25.5)	85 ( 2.0) ( 26.5)	4,158 (100.0) ( 20.0)
Quintile 3: £15k - £21k	3,543 ( 85.3) ( 20.2)	159 ( 3.8) ( 18.8)	57 ( 1.4) ( 16.4)	350 ( 8.4) ( 19.5)	44 ( 1.1) ( 13.9)	4,153 (100.0) ( 20.0)
Quintile 4: £21k - £32k	3,638 ( 87.1) ( 20.8)	224 ( 5.4) ( 26.4)	46 ( 1.1) ( 13.1)	245 ( 5.9) ( 13.7)	25 ( 0.6) ( 7.8)	4,177 (100.0) ( 20.1)
Quintile 5: > £32k	3,664 ( 87.7) ( 20.9)	300 ( 7.2) ( 35.5)	31 ( 0.7) ( 8.9)	159 ( 3.8) ( 8.9)	22 ( 0.5) ( 6.9)	4,177 (100.0) ( 20.1)
Total	17,505 ( 84.1) (100.0)	846 ( 4.1) (100.0)	349 ( 1.7) (100.0)	1,795 ( 8.6) (100.0)	320 ( 1.5) (100.0)	20,814 (100.0) (100.0)

Base: All Households

Table 3.1 Water heating system - Proportion of water heating system

	count(000s), (column%)
Water heating system	Dwellings
With central heating	18,312 ( 84.7 )
Dedicated boiler	390 ( 1.8 )
Electric immersion heater	2,449 ( 11.3 )
Instantaneous (including kettles)	463 ( 2.1 )
Total	21,613 ( 100.0 )

Base: All Dwellings

Table 3.2 Water heating system - Proportion of water heating system by dwelling type

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
End terrace	1,804 ( 86.2) ( 9.9)	39 ( 1.9) ( 10.1)	200 ( 9.6) ( 8.2)	49 ( 2.3) ( 10.5)	2,093 ( 100.0) ( 9.7)
Mid terrace	3,544 ( 82.4) ( 19.4)	101 ( 2.4) ( 25.9)	478 ( 11.1) ( 19.5)	176 ( 4.1) ( 37.9)	4,299 ( 100.0) ( 19.9)
semi detached	6,031 ( 89.5) ( 32.9)	125 ( 1.9) ( 32.1)	474 ( 7.0) ( 19.4)	108 ( 1.6) ( 23.3)	6,738 ( 100.0) ( 31.2)
detached	4,511 ( 93.5) ( 24.6)	71 ( 1.5) ( 18.1)	221 ( 4.6) ( 9.0)	22 ( 0.5) ( 4.7)	4,824 ( 100.0) ( 22.3)
purpose built	1,937 ( 64.5) ( 10.6)	42 ( 1.4) ( 10.9)	957 ( 31.9) ( 39.1)	68 ( 2.3) ( 14.8)	3,005 ( 100.0) ( 13.9)
converted	484 ( 74.0) ( 2.6)	11 ( 1.7) ( 2.8)	118 ( 18.1) ( 4.8)	40 ( 6.2) ( 8.7)	654 ( 100.0) ( 3.0)
Total	18,312 ( 84.7) ( 100.0)	390 ( 1.8) ( 100.0)	2,449 ( 11.3) ( 100.0)	463 ( 2.1) ( 100.0)	21,613 ( 100.0) ( 100.0)

Base: All Dwellings

Table 3.3 Water heating system - Proportion of water heating system by dwelling age

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
Pre 1919	3,697 ( 80.7) ( 20.2)	148 ( 3.2) ( 37.9)	514 ( 11.2) ( 21.0)	225 ( 4.9) ( 48.6)	4,584 (100.0) ( 21.2)
1919 - 1944	3,457 ( 89.7) ( 18.9)	65 ( 1.7) ( 16.7)	251 ( 6.5) ( 10.3)	82 ( 2.1) ( 17.7)	3,856 (100.0) ( 17.8)
1945 - 1964	3,941 ( 87.8) ( 21.5)	87 ( 1.9) ( 22.2)	393 ( 8.7) ( 16.0)	69 ( 1.5) ( 15.0)	4,489 (100.0) ( 20.8)
1965 - 1980	3,974 ( 83.9) ( 21.7)	57 ( 1.2) ( 14.7)	646 ( 13.6) ( 26.4)	60 ( 1.3) ( 13.0)	4,738 (100.0) ( 21.9)
1981 - 1990	1,509 ( 78.2) ( 8.2)	25 ( 1.3) ( 6.5)	375 ( 19.4) ( 15.3)	22 ( 1.1) ( 4.7)	1,931 (100.0) ( 8.9)
Post 1990	1,733 ( 86.0) ( 9.5)	7 ( 0.4) ( 1.9)	270 ( 13.4) ( 11.0)	5 ( 0.2) ( 1.0)	2,015 (100.0) ( 9.3)
Total	18,312 ( 84.7) (100.0)	390 ( 1.8) (100.0)	2,449 ( 11.3) (100.0)	463 ( 2.1) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings



Table 3.4 Water heating system - Proportion of water heating system by dwelling tenure

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
Owner occupied	13,363 ( 87.5) ( 73.0)	277 ( 1.8) ( 71.1)	1,323 ( 8.7) ( 54.0)	315 ( 2.1) ( 68.2)	15,279 (100.0) ( 70.7)
Private rented	1,701 ( 72.9) ( 9.3)	66 ( 2.8) ( 16.9)	475 ( 20.4) ( 19.4)	92 ( 3.9) ( 19.9)	2,334 (100.0) ( 10.8)
Local Authority	1,943 ( 83.2) ( 10.6)	37 ( 1.6) ( 9.5)	318 ( 13.6) ( 13.0)	36 ( 1.6) ( 7.9)	2,335 (100.0) ( 10.8)
RSL	1,305 ( 78.4) ( 7.1)	9 ( 0.6) ( 2.4)	332 ( 19.9) ( 13.6)	19 ( 1.1) ( 4.1)	1,665 (100.0) ( 7.7)
Total	18,312 ( 84.7) (100.0)	390 ( 1.8) (100.0)	2,449 ( 11.3) (100.0)	463 ( 2.1) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 3.5 Water heating system - Proportion of water heating system by household composition

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
couple under 60	3,673 ( 87.9) ( 20.7)	76 ( 1.8) ( 20.1)	375 ( 9.0) ( 16.1)	56 ( 1.3) ( 14.1)	4,179 ( 100.0) ( 20.1)
couple 60 or over	2,902 ( 86.7) ( 16.4)	70 ( 2.1) ( 18.4)	329 ( 9.8) ( 14.1)	48 ( 1.4) ( 12.2)	3,349 ( 100.0) ( 16.1)
couple with children	4,499 ( 91.7) ( 25.4)	70 ( 1.4) ( 18.4)	260 ( 5.3) ( 11.2)	78 ( 1.6) ( 19.8)	4,906 ( 100.0) ( 23.6)
lone parent with children	1,283 ( 86.9) ( 7.2)	14 ( 0.9) ( 3.6)	152 ( 10.3) ( 6.5)	28 ( 1.9) ( 7.1)	1,476 ( 100.0) ( 7.1)
large adult household	1,238 ( 86.8) ( 7.0)	23 ( 1.6) ( 6.1)	136 ( 9.5) ( 5.8)	29 ( 2.1) ( 7.5)	1,426 ( 100.0) ( 6.9)
one person under 60	1,914 ( 76.2) ( 10.8)	46 ( 1.8) ( 12.2)	481 ( 19.1) ( 20.7)	70 ( 2.8) ( 17.8)	2,511 ( 100.0) ( 12.1)
one person 60 or over	2,207 ( 74.4) ( 12.5)	80 ( 2.7) ( 21.2)	593 ( 20.0) ( 25.5)	85 ( 2.9) ( 21.5)	2,966 ( 100.0) ( 14.3)
Total	17,716 ( 85.1) ( 100.0)	378 ( 1.8) ( 100.0)	2,325 ( 11.2) ( 100.0)	395 ( 1.9) ( 100.0)	20,814 ( 100.0) ( 100.0)

Base: All Dwellings

Table 3.6 Water heating system - Proportion of water heating system by floor area

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
Quintile 1: < 63m <sup>2</sup>	3,013 ( 69.7) ( 16.5)	69 ( 1.6) ( 17.6)	1,112 ( 25.7) ( 45.4)	130 ( 3.0) ( 28.1)	4,323 (100.0) ( 20.0)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	3,551 ( 82.2) ( 19.4)	110 ( 2.6) ( 28.3)	565 ( 13.1) ( 23.1)	93 ( 2.2) ( 20.1)	4,320 (100.0) ( 20.0)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	3,799 ( 87.8) ( 20.7)	60 ( 1.4) ( 15.4)	356 ( 8.2) ( 14.5)	110 ( 2.6) ( 23.9)	4,325 (100.0) ( 20.0)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	3,922 ( 90.7) ( 21.4)	78 ( 1.8) ( 19.9)	244 ( 5.7) ( 10.0)	78 ( 1.8) ( 16.8)	4,322 (100.0) ( 20.0)
Quintile 5: > 114m <sup>2</sup>	4,027 ( 93.2) ( 22.0)	73 ( 1.7) ( 18.8)	171 ( 4.0) ( 7.0)	52 ( 1.2) ( 11.1)	4,322 (100.0) ( 20.0)
Total	18,312 ( 84.7) (100.0)	390 ( 1.8) (100.0)	2,449 ( 11.3) (100.0)	463 ( 2.1) (100.0)	21,613 (100.0) (100.0)

Base: All Dwellings

Table 3.7 Water heating system - Proportion of water heating system by household income

	count(000s), (row%), (column%)				
	With central heating	Dedicated boiler	Electric immersion heater	Instantaneous	Total
Quintile 1: < £9k	3,194 ( 77.0) ( 18.0)	94 ( 2.3) ( 24.8)	741 ( 17.9) ( 31.9)	121 ( 2.9) ( 30.5)	4,149 (100.0) ( 19.9)
Quintile 2: £9k - £15k	3,370 ( 81.0) ( 19.0)	85 ( 2.0) ( 22.5)	607 ( 14.6) ( 26.1)	95 ( 2.3) ( 24.2)	4,158 (100.0) ( 20.0)
Quintile 3: £15k - £21k	3,538 ( 85.2) ( 20.0)	79 ( 1.9) ( 21.0)	454 ( 10.9) ( 19.5)	83 ( 2.0) ( 20.9)	4,153 (100.0) ( 20.0)
Quintile 4: £21k - £32k	3,741 ( 89.6) ( 21.1)	70 ( 1.7) ( 18.5)	309 ( 7.4) ( 13.3)	57 ( 1.4) ( 14.5)	4,177 (100.0) ( 20.1)
Quintile 5: > £32k	3,873 ( 92.7) ( 21.9)	50 ( 1.2) ( 13.2)	215 ( 5.1) ( 9.2)	39 ( 0.9) ( 9.9)	4,177 (100.0) ( 20.1)
Total	17,716 ( 85.1) (100.0)	378 ( 1.8) (100.0)	2,325 ( 11.2) (100.0)	395 ( 1.9) (100.0)	20,814 (100.0) (100.0)

Base: All Households

Table 4.1 Type of boiler - Proportion of boiler type

count(000s), (column%)	
Type of boiler	Dwellings
Standard boiler	9,673 ( 44.8)
Back boiler	2,413 ( 11.2)
Combination boiler	5,891 ( 27.3)
Condensing boiler	620 ( 2.9)
No boiler	3,018 ( 14.0)
Total	21,613 ( 100.0)

Base: All Dwellings

Table 4.2 Type of boiler - Proportion of boiler type by dwelling type

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
End terrace	891 ( 42.6) ( 9.2)	308 ( 14.7) ( 12.7)	583 ( 27.9) ( 9.9)	63 ( 3.0) ( 10.2)	248 ( 11.8) ( 8.2)	2,093 ( 100.0) ( 9.7)
Mid terrace	1,502 ( 34.9) ( 15.5)	563 ( 13.1) ( 23.3)	1,431 ( 33.3) ( 24.3)	120 ( 2.8) ( 19.3)	683 ( 15.9) ( 22.6)	4,299 ( 100.0) ( 19.9)
semi detached	3,011 ( 44.7) ( 31.1)	1,127 ( 16.7) ( 46.7)	1,867 ( 27.7) ( 31.7)	190 ( 2.8) ( 30.7)	543 ( 8.1) ( 18.0)	6,738 ( 100.0) ( 31.2)
detached	3,375 ( 70.0) ( 34.9)	222 ( 4.6) ( 9.2)	865 ( 17.9) ( 14.7)	165 ( 3.4) ( 26.6)	198 ( 4.1) ( 6.6)	4,824 ( 100.0) ( 22.3)
purpose built	741 ( 24.7) ( 7.7)	165 ( 5.5) ( 6.9)	849 ( 28.3) ( 14.4)	67 ( 2.2) ( 10.8)	1,183 ( 39.4) ( 39.2)	3,005 ( 100.0) ( 13.9)
converted	153 ( 23.4) ( 1.6)	28 ( 4.2) ( 1.1)	295 ( 45.1) ( 5.0)	15 ( 2.3) ( 2.4)	164 ( 25.0) ( 5.4)	654 ( 100.0) ( 3.0)
Total	9,673 ( 44.8) ( 100.0)	2,413 ( 11.2) ( 100.0)	5,891 ( 27.3) ( 100.0)	620 ( 2.9) ( 100.0)	3,018 ( 14.0) ( 100.0)	21,613 ( 100.0) ( 100.0)

Base: All Dwellings

Table 4.3 Type of boiler - Proportion of boiler type by dwelling age

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
Pre 1919	1,607 ( 35.1) ( 16.6)	352 ( 7.7) ( 14.6)	1,691 ( 36.9) ( 28.7)	145 ( 3.2) ( 23.4)	789 ( 17.2) ( 26.2)	4,584 ( 100.0) ( 21.2)
1919 - 1944	1,648 ( 42.7) ( 17.0)	575 ( 14.9) ( 23.8)	1,192 ( 30.9) ( 20.2)	101 ( 2.6) ( 16.4)	339 ( 8.8) ( 11.2)	3,856 ( 100.0) ( 17.8)
1945 - 1964	1,770 ( 39.4) ( 18.3)	996 ( 22.2) ( 41.3)	1,092 ( 24.3) ( 18.5)	139 ( 3.1) ( 22.4)	493 ( 11.0) ( 16.3)	4,489 ( 100.0) ( 20.8)
1965 - 1980	2,400 ( 50.7) ( 24.8)	398 ( 8.4) ( 16.5)	1,110 ( 23.4) ( 18.9)	126 ( 2.7) ( 20.3)	703 ( 14.8) ( 23.3)	4,738 ( 100.0) ( 21.9)
1981 - 1990	1,046 ( 54.2) ( 10.8)	64 ( 3.3) ( 2.7)	360 ( 18.6) ( 6.1)	32 ( 1.6) ( 5.1)	429 ( 22.2) ( 14.2)	1,931 ( 100.0) ( 8.9)
Post 1990	1,201 ( 59.6) ( 12.4)	28 ( 1.4) ( 1.1)	445 ( 22.1) ( 7.6)	77 ( 3.8) ( 12.4)	264 ( 13.1) ( 8.7)	2,015 ( 100.0) ( 9.3)
Total	9,673 ( 44.8) (100.0)	2,413 ( 11.2) (100.0)	5,891 ( 27.3) (100.0)	620 ( 2.9) (100.0)	3,018 ( 14.0) (100.0)	21,613 ( 100.0) (100.0)

Base: All Dwellings

Table 4.4 Type of boiler - Proportion of boiler type by dwelling tenure

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
Owner occupied	7,599 ( 49.7) ( 78.6)	1,444 ( 9.4) ( 59.8)	4,214 ( 27.6) ( 71.5)	462 ( 3.0) ( 74.6)	1,560 ( 10.2) ( 51.7)	15,279 ( 100.0) ( 70.7)
Private rented	740 ( 31.7) ( 7.7)	159 ( 6.8) ( 6.6)	763 ( 32.7) ( 13.0)	49 ( 2.1) ( 8.0)	622 ( 26.7) ( 20.6)	2,334 ( 100.0) ( 10.8)
Local Authority	778 ( 33.3) ( 8.0)	568 ( 24.3) ( 23.6)	481 ( 20.6) ( 8.2)	67 ( 2.9) ( 10.9)	441 ( 18.9) ( 14.6)	2,335 ( 100.0) ( 10.8)
RSL	556 ( 33.4) ( 5.7)	242 ( 14.5) ( 10.0)	432 ( 25.9) ( 7.3)	41 ( 2.5) ( 6.6)	395 ( 23.7) ( 13.1)	1,665 ( 100.0) ( 7.7)
Total	9,673 ( 44.8) ( 100.0)	2,413 ( 11.2) ( 100.0)	5,891 ( 27.3) ( 100.0)	620 ( 2.9) ( 100.0)	3,018 ( 14.0) ( 100.0)	21,613 ( 100.0) ( 100.0)

Base: All Dwellings



Table 4.5 Type of boiler - Proportion of boiler type by household composition

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
couple under 60	2,025 ( 48.4) ( 21.5)	400 ( 9.6) ( 17.1)	1,215 ( 29.1) ( 21.6)	105 ( 2.5) ( 17.5)	435 ( 10.4) ( 15.5)	4,179 ( 100.0) ( 20.1)
couple 60 or over	1,726 ( 51.5) ( 18.3)	464 ( 13.9) ( 19.8)	689 ( 20.6) ( 12.2)	88 ( 2.6) ( 14.6)	382 ( 11.4) ( 13.6)	3,349 ( 100.0) ( 16.1)
couple with children	2,495 ( 50.9) ( 26.5)	418 ( 8.5) ( 17.9)	1,507 ( 30.7) ( 26.7)	184 ( 3.7) ( 30.7)	302 ( 6.2) ( 10.7)	4,906 ( 100.0) ( 23.6)
lone parent with children	618 ( 41.9) ( 6.6)	209 ( 14.1) ( 8.9)	426 ( 28.9) ( 7.6)	42 ( 2.9) ( 7.1)	181 ( 12.3) ( 6.4)	1,476 ( 100.0) ( 7.1)
large adult household	610 ( 42.8) ( 6.5)	201 ( 14.1) ( 8.6)	411 ( 28.9) ( 7.3)	45 ( 3.2) ( 7.6)	158 ( 11.1) ( 5.6)	1,426 ( 100.0) ( 6.9)
one person under 60	844 ( 33.6) ( 9.0)	218 ( 8.7) ( 9.3)	794 ( 31.6) ( 14.1)	82 ( 3.3) ( 13.7)	573 ( 22.8) ( 20.4)	2,511 ( 100.0) ( 12.1)
one person 60 or over	1,106 ( 37.3) ( 11.7)	433 ( 14.6) ( 18.5)	592 ( 20.0) ( 10.5)	53 ( 1.8) ( 8.9)	781 ( 26.3) ( 27.8)	2,966 ( 100.0) ( 14.3)
Total	9,424 ( 45.3) ( 100.0)	2,343 ( 11.3) ( 100.0)	5,636 ( 27.1) ( 100.0)	599 ( 2.9) ( 100.0)	2,812 ( 13.5) ( 100.0)	20,814 ( 100.0) ( 100.0)

Base: All Dwellings

Table 4.6 Type of boiler - Proportion of boiler type by floor area

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
Quintile 1: < 63m <sup>2</sup>	1,224 ( 28.3) ( 12.7)	394 ( 9.1) ( 16.3)	1,229 ( 28.4) ( 20.9)	101 ( 2.3) ( 16.3)	1,375 ( 31.8) ( 45.6)	4,323 ( 100.0) ( 20.0)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	1,558 ( 36.1) ( 16.1)	643 ( 14.9) ( 26.7)	1,307 ( 30.3) ( 22.2)	113 ( 2.6) ( 18.2)	699 ( 16.2) ( 23.2)	4,320 ( 100.0) ( 20.0)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	1,820 ( 42.1) ( 18.8)	687 ( 15.9) ( 28.5)	1,245 ( 28.8) ( 21.1)	130 ( 3.0) ( 20.9)	445 ( 10.3) ( 14.7)	4,325 ( 100.0) ( 20.0)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	2,203 ( 51.0) ( 22.8)	515 ( 11.9) ( 21.4)	1,207 ( 27.9) ( 20.5)	96 ( 2.2) ( 15.5)	301 ( 7.0) ( 10.0)	4,322 ( 100.0) ( 20.0)
Quintile 5: > 114m <sup>2</sup>	2,869 ( 66.4) ( 29.7)	173 ( 4.0) ( 7.2)	903 ( 20.9) ( 15.3)	180 ( 4.2) ( 29.0)	198 ( 4.6) ( 6.6)	4,322 ( 100.0) ( 20.0)
Total	9,673 ( 44.8) ( 100.0)	2,413 ( 11.2) ( 100.0)	5,891 ( 27.3) ( 100.0)	620 ( 2.9) ( 100.0)	3,018 ( 14.0) ( 100.0)	21,613 ( 100.0) ( 100.0)

Base: All Dwellings

Table 4.7 Type of boiler - Proportion of boiler type by household income

	count(000s), (row%), (column%)					
	Standard boiler	Back boiler	Combination boiler	Condensing boiler	No boiler	Total
Quintile 1: < £9k	1,339 ( 32.3) ( 14.2)	688 ( 16.6) ( 29.4)	1,077 ( 26.0) ( 19.1)	99 ( 2.4) ( 16.6)	946 ( 22.8) ( 33.6)	4,149 ( 100.0) ( 19.9)
Quintile 2: £9k - £15k	1,610 ( 38.7) ( 17.1)	604 ( 14.5) ( 25.8)	1,087 ( 26.1) ( 19.3)	106 ( 2.6) ( 17.8)	751 ( 18.1) ( 26.7)	4,158 ( 100.0) ( 20.0)
Quintile 3: £15k - £21k	1,807 ( 43.5) ( 19.2)	526 ( 12.7) ( 22.4)	1,151 ( 27.7) ( 20.4)	117 ( 2.8) ( 19.6)	552 ( 13.3) ( 19.6)	4,153 ( 100.0) ( 20.0)
Quintile 4: £21k - £32k	2,185 ( 52.3) ( 23.2)	353 ( 8.5) ( 15.1)	1,161 ( 27.8) ( 20.6)	121 ( 2.9) ( 20.3)	356 ( 8.5) ( 12.7)	4,177 ( 100.0) ( 20.1)
Quintile 5: > £32k	2,482 ( 59.4) ( 26.3)	172 ( 4.1) ( 7.4)	1,160 ( 27.8) ( 20.6)	155 ( 3.7) ( 25.8)	208 ( 5.0) ( 7.4)	4,177 ( 100.0) ( 20.1)
Total	9,424 ( 45.3) ( 100.0)	2,343 ( 11.3) ( 100.0)	5,636 ( 27.1) ( 100.0)	599 ( 2.9) ( 100.0)	2,812 ( 13.5) ( 100.0)	20,814 ( 100.0) ( 100.0)

Base: All Households