

# uk:pulse

consumer views on energy issues

## The UK Pulse: consumers' thoughts and action on energy in the home.

## Introduction

**Our homes are evolving. The number of F and G rated homes (extremely energy inefficient) has gone from 29% in 1996 to 6% in 2012<sup>1</sup>. The average energy performance rating has gone from an E in 2001 to a D in 2012<sup>2</sup>. We're still not where we want to be but there has been progress.**

Unsurprisingly, householders and landlords have installed the technologies that offer the quickest wins and biggest energy saving paybacks: millions of cavity walls have been insulated in recent years and almost no totally uninsulated lofts remain.

That's good news. But as our homes improve the opportunities change. In the next stage of the evolution of our homes we need householders to engage with their energy use in a new, deeper way. This means persuading more householders to consider upfront financial investment in technologies. It means persuading more householders to take an interest in the way they use energy in the home.

The new opportunities are:

- Promoting comprehensive insulation solutions for all homes: this will inevitably entail higher costs than the lower-hassle actions that have been achieved so far.
- Encouraging rapid uptake of new energy saving technologies as they emerge, for example LED lighting.
- Continuing to bring home renewable energy into the mainstream so householders with suitable homes understand the benefits of the installation.
- Transforming householders' ability to monitor and understand their energy use – thereby reducing their energy waste.

New tools are becoming available to help. We're seeing rapid innovation in apps and devices to enable households to understand their energy use. And there's financial innovation from government and the private sector: for example, the radically new domestic Renewable Heat Incentive (RHI) makes it much more attractive for households off the gas network to invest in low-carbon heating technologies.

But we can't ignore the fact that if we're going to build deeper engagement then we need to understand more about how householders use energy, experience energy-related problems and might be motivated to make improvements. That's where the UK Pulse comes in.

In the first of a series of studies, we present the energy-related challenges that householders face. We look at what the UK public currently understands about the energy technologies available, what they see as the ideal improvement for their home and the barriers to installing or using them. We look at the proliferation of appliances and gadgets in the home.

The UK Pulse findings show that there needs to be a radical shift in how we market and communicate the benefits of energy efficiency in the home. People's motivations for changing behaviour, or choosing how and where to invest money in energy efficiency, are diverse across genders, age groups and UK regions, as well as being heavily influenced by the type of property people own or rent. We need to move away from big messages for broad audiences to information that is tailored to people's individual motivations, their lifestyle and their home.

We recognise that taking action on energy is more difficult for some householders, particularly for renters and those on low incomes. The Pulse highlights how many of these households are experiencing very cold and poor housing conditions. For these householders, our evidence helps to build the case for an effective and appropriate set of policy interventions.

This report provides a series of intriguing insights into many issues that could be explored in more depth. If you'd like to discuss any of the issues raised, do get in touch by emailing [ukpulse@est.org.uk](mailto:ukpulse@est.org.uk).

**The UK Pulse is a quantitative, online survey of more than 2,000 people aged 16-75 from across the UK conducted by the Energy Saving Trust working with Ipsos MORI.**

**In some cases we have compared data to answers from a similar study we ran in 2011, these comparisons are indicative only.**

<sup>1</sup>English Housing Survey, 2012

<sup>2</sup>ibid

# 1. Motivations for energy-saving action

We considered five areas of concern that might lead to action on saving energy in the home:

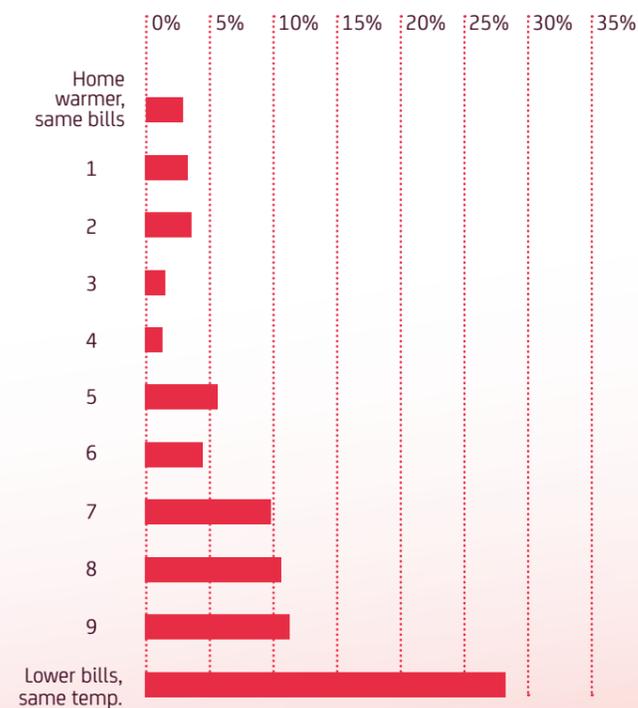
- ✔ Climate change – and the potential to reduce carbon emissions from the home
- ✔ Cost – concerns about energy bills
- ✔ Comfort – are homes warm enough?
- ✔ Control – do householders feel in control of their energy consumption?
- ✔ Condition of the home – are there problems with damp, draughts and mould?

The sections that follow show how concerns in each area differ between groups of householders.

We correlated concerns in each of these areas against planned action to install significant energy saving measures or renewable energy measures. For this, we looked at home owner-occupiers only and found that:

- ✔ No single issue is a strong predictor for homeowners taking action – motivations are likely to be a complex mix of factors.
- ✔ Owners of homes with cold rooms or that have damp, mould or draughts are the most likely to consider energy saving upgrades.
- ✔ For example, 92% of homeowners who struggle to heat all of their rooms are planning or considering one of the following upgrades: a new boiler, renewable energy system or significant insulation improvements.

## Why would you make energy efficiency upgrades?



Householders were asked on a sliding scale where they would principally “take” the benefits of energy efficiency: as a warmer home with similar-sized bills, or as a lower-bill home heated to the same temperature.

Their answers to some extent seem to be contradicted by our finding that planned energy saving action correlates more strongly with cold and damp problems than worries about bills.

# 35%

35% of households<sup>4</sup> use secondary heating in winter; 16% use portable electric heaters.

### Climate change

Scepticism about climate change has lessened. In line with other research, we didn't see a strong correlation between climate change worry and taking action on home energy saving or installing renewable energy.

- ✔ Climate change is chosen as one of the three most important issues facing the UK (out of a list of 17 issues) by 9% of respondents.
- ✔ 9% are climate change sceptics (down from 16% in 2011). They disagree with the statement that “climate change is a major concern and proven fact”. 62% agree with this statement (up from 52% in 2011).
- ✔ Governments were identified as having the main responsibility for tackling climate change by 44% of respondents. Individuals have the lead responsibility according to only 8%.

### Cost – energy bills

- ✔ Energy bills are seen as a major national issue. Energy bills are ranked fourth in importance by respondents in a list of challenges for the future of the UK, behind the economy, the NHS and immigration.
- ✔ Energy bills are a major personal issue: 73% of respondents are worried about energy bills. 31% of all respondents are very worried.
- ✔ 87% of large families<sup>3</sup> are worried about bills.
- ✔ Most people cite energy bills as the main reason why they would choose to install energy saving upgrades, but intention and action may be different. The people considering or planning improvements seem more likely to be those with cold homes than those with energy bill worries.

### Comfort

Nearly 40% of our respondents are not warm enough in winter and 20% can't easily heat all the rooms in their home. Difficulty in heating rooms is the biggest single predictor for householders considering or planning energy saving action.

- ✔ 39% of respondents said that from November to March their home is not as warm as they would like it to be. The majority of renters (51%) experience cold homes in the winter. There is a physiological and psychological dimension: men seem more tolerant of colder homes in the winter than women (35% of men and 42% of women said their home wasn't warm enough).
- ✔ 21% of respondents cannot easily heat all the rooms using their primary heating system. 32% of pre-1919 home residents can't easily heat their home.
- ✔ 35% heat one room (nearly always the living room) more than other rooms in winter in order to keep energy costs under control.

35% of households<sup>4</sup> use secondary heating in winter; 16% use portable electric heaters. The 2012 Household Electricity Survey<sup>5</sup> found that additional electric heaters were the biggest users of electricity in the home for the homes that had them – ahead of all the usual domestic appliances.

# 87%

87% of large families are worried about bills.

<sup>3</sup>With 5+ people

<sup>4</sup>Question restricted to those using standard boiler/central heating or electric storage heaters.

<sup>5</sup>Defra, DECC, EST Household Electricity Survey.

### Condition of the home

We asked people about damp, condensation, mould and draughts. These problems affect a surprisingly large proportion of householders and are also closely correlated with energy saving action (24% of homeowners with several draughty rooms are planning to take action in the next year, compared with 12% of all homeowners).

- 28% of households have mould; 9% have the problem in several rooms.
- 43% of households have draughts; 18% have several draughty rooms.
- Problem condensation (39%) and damp on the inside of walls (24%) are also prevalent.
- Draughts and structural damp problems are more prevalent in pre-1919 homes (38% of pre-1919 homes have damp on the inside of walls). Condensation problems and mould are much more prevalent in rented homes (37% of renters report mould compared with 21% of owner occupiers).

The reasons for not tackling these problems relate more to knowledge than finance.

#### Analysis of barriers: why hasn't your draught, damp or mould problem been addressed?

- 17% I've taken steps but it hasn't resolved it
- 17% I'm not sure what to do to solve the problem
- 16% I'm currently looking into resolving it
- 15% I know what I need to do but I can't afford to make the improvements
- 12% I'm part way through having the problem resolved

# 44%

44% of households say they have draughts; 18% say they have several draughty rooms.

# 21%

21% of respondents cannot easily heat all the rooms using their primary heating system. 32% of pre-1919 home residents can't easily heat their home.

### Control

Most householders (69% of owner occupiers, 58% of renters) feel in control of their energy use. 15% of all householders (22% of renters) feel out of control.

The most often cited reason for out-of-control energy use was the number of appliances in their homes. Second on the list (and the principal control issue for renters and those in older homes) is poor insulation and difficulty in heating the home:

#### Analysis of barriers: why does your energy use feel out of control?

- 40% I have a lot of appliances that all use a lot of electricity
- 35% My home is hard to keep warm
- 34% My home is not very well insulated
- 30% Other members of the household use more energy than I would like
- 26% My heating system is old and inefficient
- 20% I don't understand how much energy my home uses
- 19% My heating system is very difficult to control

Base: All adults aged 16-75 in the UK who do not feel in control of the amount of energy that is used in their home

The challenges associated with appliances, which are linked to growing numbers of appliances and larger appliances, are highlighted by some of the wider data in our study:

- Only 16% correctly identified within £20 the amount of money it costs the average home to run a fridge-freezer during a year (£58), while 10% knew how much it would cost to run a kettle (£23) within £10.
- More than half of respondents (54%) living in houses that own tumble dryers used them at least once a week in the summer.
- More than half of our respondents that had bought a TV in the last six months bought one which was 39 inches or more.

Big energy savings are possible from better management of household heating. But householders showed a better-than-expected relationship with their heating controls.

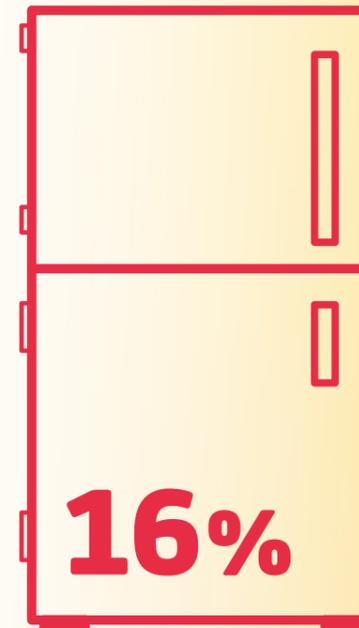
But the fact that people are happy with heating controls does not mean they are using them correctly: only 13% of householders described their controls as difficult to use, and 50% said they are easy to use.

However, 25% of private tenants struggle with their controls, possibly as a result of the higher prevalence of electric heating in the private rented sector.

15% of all householders (22% of renters) feel their energy use is out-of-control. The most often cited reason for out-of-control energy use was the number of appliances in their homes.



54% of respondents who own tumble dryers used them at least once a week in the summer.



16% correctly identified within £20 the amount of money it costs the average home to run a fridge-freezer during a year.



More than half of our respondents that had bought a TV in the last six months bought one which was 39 inches or more.

## 2. Interest in and understanding of technologies

### Home energy technologies: dreaming

We asked homeowners to pick their ideal energy saving improvement: what would they install if money and hassle were no object.

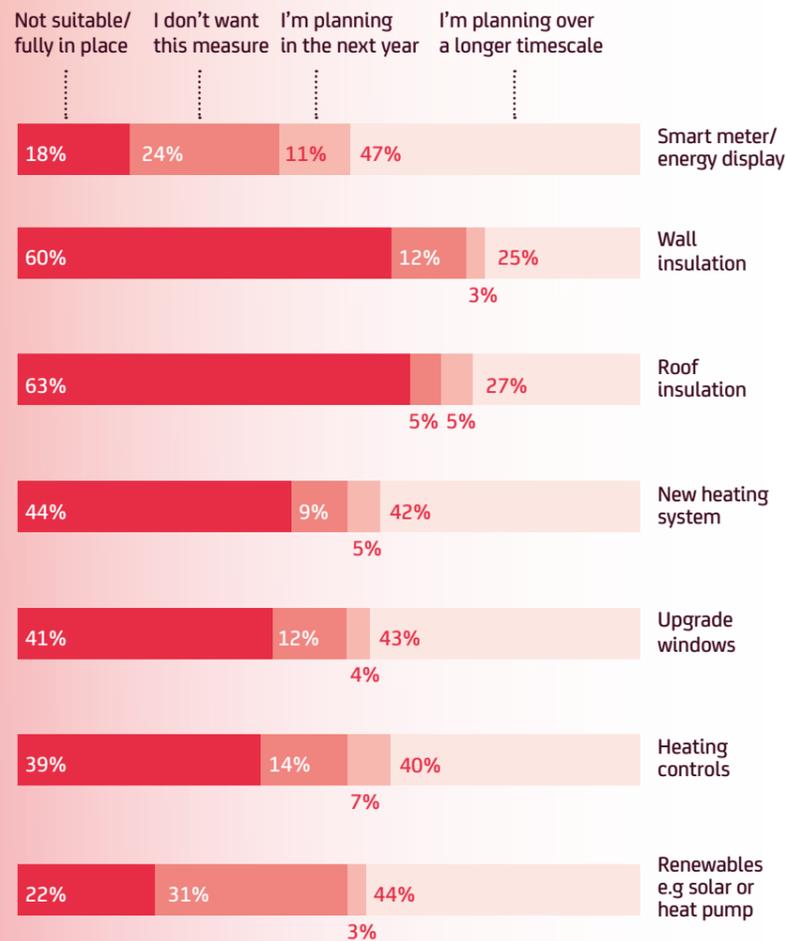
- For men, a renewable energy system such as solar panels or heat pumps is the ideal energy improvement (chosen by 28% of male respondents).
- Women put the latest double or triple glazing top of their list (chosen by 22% of female respondents).
- Bottom of the list for “dream” energy saving measures are draught proofing, low energy lighting and insulated doors.

### Home energy technologies: planning

We asked householders about measures they were actually planning and considering for their home. Looking at householders who thought their home was suitable for each measure:

- Aside from lighting (which is on a regular replacement cycle), a smart meter/energy display to help manage energy use is the measure the highest proportion of home owners (14%) are actually considering for their home in the next year.
- However, smart meters rank lower when householders think about the longer term. Loft insulation, boilers and glazing are the main measures that householders are considering over a longer time frame.
- Of the “dream” energy saving measures, a comparatively small proportion are actually planned: 6% of home owners are planning to actually install windows in the next year, 4% renewable energy systems.

### Interest in some key energy saving technologies



### Understanding of specific technologies

We tested the state of consumer knowledge and interest across three important technology areas.

#### LED Lighting

LED lighting is one of the most cost-effective energy saving technologies currently available for homeowners.

- There's a need to build interest in lighting: low energy lighting is at the bottom of our “dream technology” list.
- 62% are able to name LEDs as a lighting technology from a prompted list.
- Of the 62% familiar with LEDs, a third (33%) do not yet have any LEDs and a third (33%) use the bulbs in only a few fittings.
- The top reason people are not buying LEDs is because of cost (cited by 30% of people who are familiar with the technology) and because they don't think they have the right fittings (22%). Householders familiar with LED bulbs seem happy with the way they work – only 7% report a negative experience.

#### Renewables

We found extensive enthusiasm for renewable energy systems. But there's still considerable confusion about the technologies and the incentives available for them, even in basic terms. Men seem more likely to be better informed about them than women<sup>7</sup>.

- 47% of householders would like to know the suitability of their home for renewable energy measures.
- 68% can correctly identify from a prompted list that solar photovoltaic panels generate electricity, and 30% can correctly identify that solar thermal panels provide hot water.
- Men (39%) are nearly twice as likely as women (21%) to correctly identify that solar thermal panels provide hot water.
- In a question highlighting the benefits but not the costs of solar PV technology, only 16% of house<sup>8</sup> owners said they wouldn't want the panels.
- Awareness of both solar panel technologies is higher in the south west of England (82% know how PV works, 37% solar thermal).
- Given a prompted list, 45% are able to correctly identify what the Feed-in Tariff is but we didn't find strong evidence of awareness of the new Renewable Heat Incentive (RHI), even in rural areas.

#### Wall insulation

There is a debate about how many of the UK's 5.1 million uninsulated cavity wall homes can be easily insulated. But it is clear that the challenge is to convince owners of the remaining harder to insulate properties that their homes need to be insulated and very often can be insulated.

- 49% of homeowners believe their homes have fully insulated walls. 15% of owners of pre-1919 homes believe their walls have been insulated. In fact, only 2-4% of solid wall homes have insulated walls<sup>6</sup>
- Around half (47%) of owners of solid wall homes (pre-1919) believe their home is not suitable for wall insulation:

### Barriers to action: why haven't you had your walls insulated?

34% I didn't think I could install wall insulation in my home

16% It's too expensive

14% I'm concerned about damp issues

9% I don't feel I need it

Base: All home owners aged 16-75 whose homes haven't been insulated



39% of men can correctly identify that a solar thermal panel provides hot water - compared to 21% of women.



62% are able to name LEDs as a lighting technology from a prompted list. Of the 62% familiar with LEDs, a third (33%) do not yet have any.

<sup>6</sup> DECC, Oct 2012 Estimates of Home Insulation levels

<sup>7</sup> We didn't find this effect in relation to energy efficiency technologies – e.g. men are only very slightly more likely to know about LED light bulbs than women.

<sup>8</sup> We restricted this question specifically to house owners who are most likely to be able to install solar technologies.

### 3. My life, my home

#### Decision makers

The respondents to our study reflect the changing housing market in the UK:

- ✔ 17% are private renters
- ✔ 72% of 18-to-24-year-olds, and 21% of 25-to-34-year-olds, live in the household of a parent or relative
- ✔ 4% live in shared housing (11% in London)
- ✔ 60% of those not sharing homes or living with relatives are aged over 45

Decision makers in homes, and those most able to take action on home energy, belong to an older age group. Many of them are landlords.

#### Rented homes

Many social housing tenants still face acute energy-related problems, even though they live in what is officially the most energy efficient part of the UK's housing stock.<sup>9</sup> Social tenants (46%) are the most likely to be very concerned about energy bills and to report that their home in winter is not as warm as they would like (53%).

Relations between landlords and tenants can be a problem in both social and private tenures. Only 11% of tenants thought their landlord would make an energy efficiency upgrade without putting up the rent. 14% of tenants thought landlords would make the upgrade while asking for more rent.

We asked if respondents thought landlords should not be able to let out properties that had very poor levels of energy efficiency<sup>10</sup>. 69% of all householders agreed and 13% disagreed. 74% of private tenants agreed, 48% strongly.

#### Buying, selling and renting

We asked a number of questions to understand the energy related issues facing people who are buying or renting a home.

- ✔ Awareness of the Energy Performance Certificate (EPC) rating on properties sold has more than doubled since we last surveyed in 2011 (from 16% to 35%).
- ✔ Up to 52% of English and Welsh homes have now been issued with an EPC<sup>11</sup>, and of our respondents, 23% of householders (across the UK) claim to know their home's EPC rating.
- ✔ Home buyers and renters are enthused by renewable energy features: 59% would be more likely to rent or buy a property with a renewable energy system such as a solar panel or heat pump (29% much more likely). Private tenants have the greatest interest: 76% would be more likely to rent a property with a renewable energy system.
- ✔ We asked whether householders supported the spirit of England's zero carbon newbuild homes legislation: 87% agreed – and only 4% disagree – that new homes should be built with the latest renewables technologies and to the highest standards of energy efficiency possible.



Home buyers and renters would be 59% more likely to rent or buy a property with a renewable energy system such as a solar panel.



# 23%

23% of householders (across the UK) claim to know their home's EPC rating.

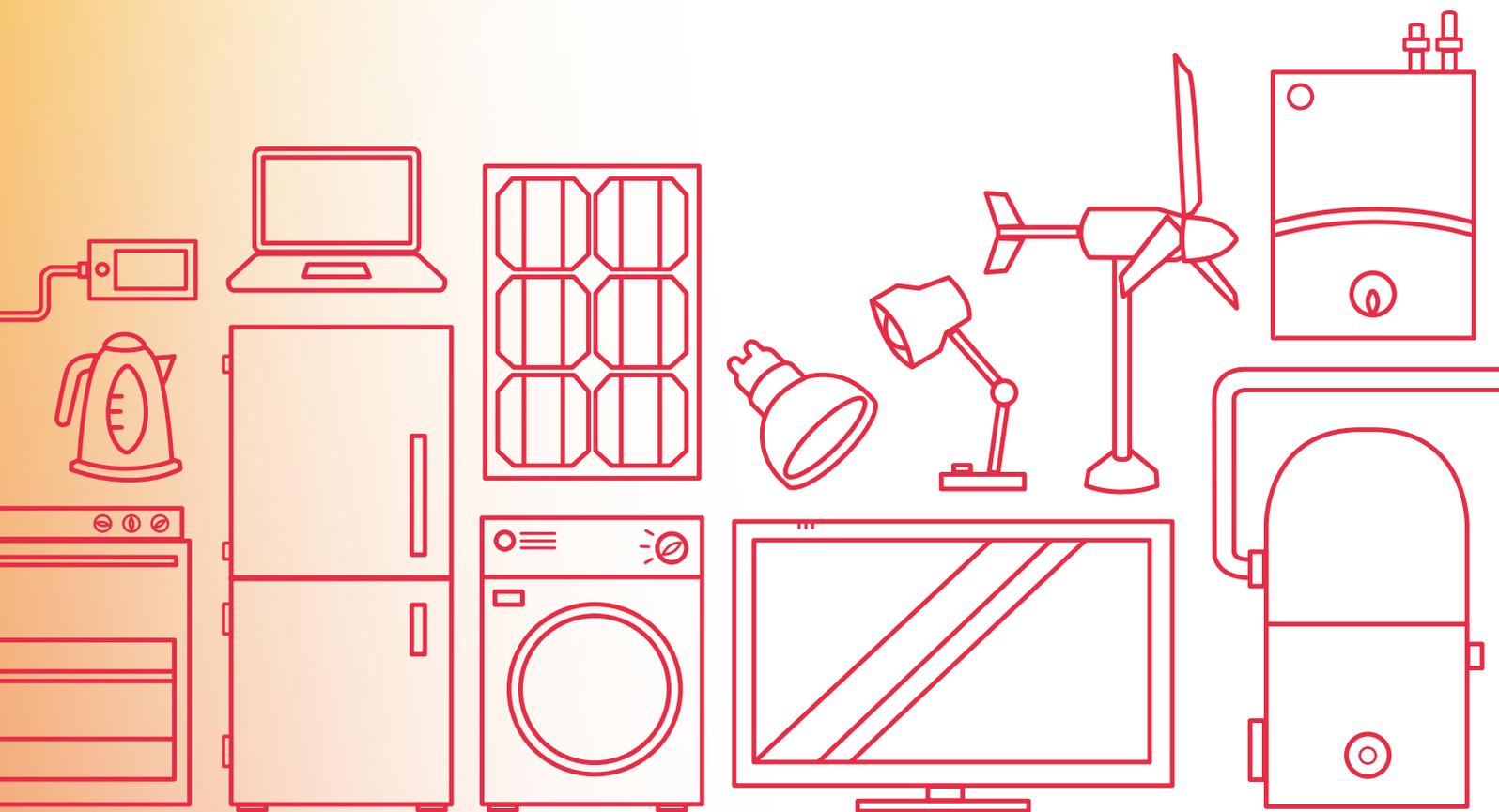
# 69%

69% of all householders thought landlords should not be able to let out properties that had very poor levels of energy efficiency.

<sup>9</sup> English Housing Survey, 2012 data

<sup>10</sup> "To what extent do you agree with the statement 'Landlords should not be allowed to rent out properties that are very energy inefficient with poor insulation and/or heating systems'."

<sup>11</sup> Based on Landmark data on the number of EPCs lodged at July 2014 (12.1 million). Number of homes calculated based on national housing survey data for England and Wales..



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