

# Taking control

Energy policy and the potential for energy consumers to take control of their bills

October 2014

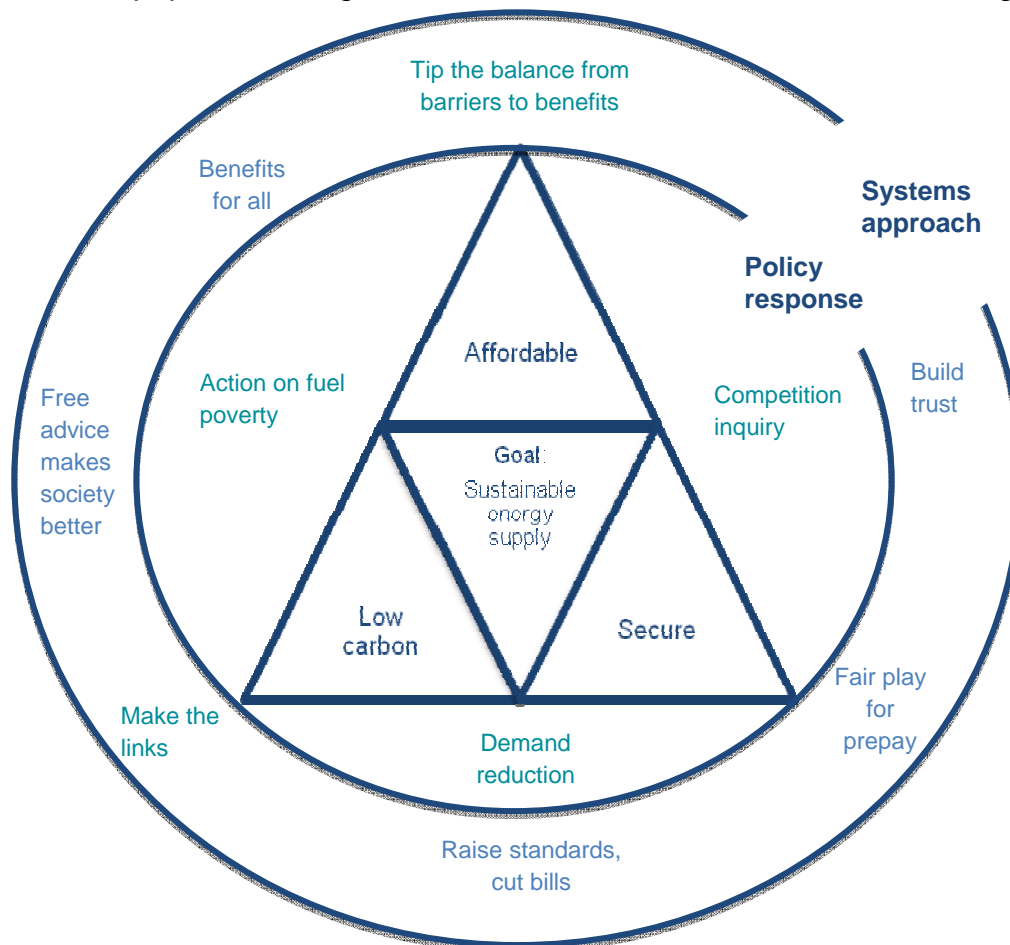


## Foreword

For too long energy consumers have been seen only as the recipients of energy and related bills. We want to see the smart world address this lack of market power, and the UK Government has shown interest in the potential for empowering consumers.<sup>1</sup> However, political debate, policy developments and media coverage currently reinforce the idea that consumers have no control, and that high bills can be blamed solely on suppliers and government social and environmental policies. The oft-forgotten culprit is the poor quality housing stock, leaking heat and with it consumers' cash. This inefficiency is compounded by a lack of control and overarching systemic problems that mean it goes unaddressed: a lack of visionary leadership, a lack of urgency, and the lack of a clear consumer offer.

It is well understood that the challenge faced by our current energy system is threefold: the ongoing risks to secure energy supplies, a stable climate and, amid these challenges, ensuring essential energy services are affordable.

We think the policy response is also threefold: the competition investigation to ensure energy is produced and delivered as cost-effectively as possible; a new fuel poverty programme that overhauls the British housing stock to make it fit for the 21<sup>st</sup> century; and, the focus of this paper, ensuring that consumers can take control of their energy bills.



<sup>1</sup> Cabinet Office (2011) *Behaviour Change and Energy Use*, <http://bit.ly/1FvOSf>

Taking Control shows there are many ways in which consumers could take charge of their energy bill by using less, wasting less and paying less. It looks at the impact of related government policies, and what action is needed to make measures more appealing:

- addressing their affordability
- improving their accessibility
- through changes to consumer protections and/or
- by ensuring consumers get a fair deal.

These policies must not work in isolation. They can only deliver on their objectives if they are part of a systems approach that gives consumers a clear, trustworthy and affordable offer, works to a consistent vision (though aspects may change as politics and emerging technologies play their part), and embeds urgency to avoid mounting risks for future generations.

This report also sets out our vision for future energy services, and the underpinning principles, along with frameworks to help the Citizens Advice Service assess emerging policy proposals. We look forward to using these in our work with Government and the related energy, appliance and building sectors to give consumers the control they need over their energy bills.

### **Citizens Advice Service in England, Wales and Scotland**

The Citizens Advice Service provides free, confidential and impartial advice to help people resolve their problems. As the UK's largest advice provider, the Citizens Advice Service is equipped to deal with any issue, from anyone, spanning debt and employment to housing and immigration plus everything in between. We value diversity, promote equality and challenge discrimination.

The service aims:

- To provide the advice people need for the problems they face.
- To improve the policies and practices that affect people's lives.

Citizens Advice Bureaux deliver advice services from over 3,500 community locations in England and Wales, run by 382 independent registered charities. Citizens Advice itself is also a registered charity, as well as being the membership organisation for these 382 member bureaux.

In Scotland, 61 Citizens Advice Bureaux (CAB) help over 250,000 clients with over half a million new problems every year. More than 2,200 trained volunteers and 600 paid staff ensure that thousands of people in Scotland receive vital advice every day.

The Citizens Advice Service represents the interests of consumers across essential, regulated markets. We use compelling evidence, expert analysis and strong argument to put consumer interests at the heart of policy-making and market behaviour.

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### Executive summary

The UK Government estimates efficient use of energy by households could reduce demand equivalent to the output from 22 power stations by 2020.<sup>2</sup> That level of efficiency would drive down bills directly and indirectly, by reducing both household demand on the grid and the need to invest in new poles, wires and other infrastructure. It would also have more far-reaching benefits: helping the nation meet its legally binding renewable energy targets and carbon emission reduction goals, and helping mitigate climate change.

Citizens Advice and Citizens Advice Scotland (hereafter referred to together as 'The Citizens Advice Service') has reviewed policies that help consumers use less, waste less and pay less. It considers where energy and bill savings can be made and, where they are not being saved through current policy, and the wider policy-making approach, it sets out approaches that meet the needs of today's and tomorrow's consumers.

### Where there's a challenge there's an opportunity

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While political parties may disagree on the 'how' of reducing energy demand, we welcome the continued political consensus on the challenges that face the nation's energy supply:

- **Affordable energy bills** – rising bills affect everyone, but hit the most vulnerable hardest.
- **Secure energy supply** – meeting inflexible and growing demand from intermittent and inflexible supplies.
- **Carbon emission reduction** – substantial and sustained reductions of greenhouse gas emissions are required to limit climate change.<sup>3</sup>

Citizens Advice thinks the policy response is also threefold: the competition investigation to ensure energy is produced and delivered as cost-effectively as possible; a new fuel poverty programme that overhauls the British housing stock to make it fit for the 21<sup>st</sup> century; and, the focus of this paper, ensuring that consumers can take control of their energy bills.

Demand reduction policies offer opportunities to help meet these challenges, whilst also delivering a range of social and environmental benefits, and again are largely subject to political consensus.

The debate to be had is over the design and implementation of policies in a challenging environment where each household is unique, incomes are squeezed and consumer interest is lacking. And how do they work as a system? Demand-side measures have a cumulative impact, and can affect each other's effectiveness. This may lead to competing policies or incomplete solutions.<sup>4</sup>

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<sup>2</sup> DECC (2012) *Annex E: the energy efficiency marginal abatement cost curve*, <http://bit.ly/1COQqAJ>, p7

<sup>3</sup> IPCC (2014) *Fifth Assessment Report* <http://bit.ly/1x6GIK>

<sup>4</sup> DECC (2014) *D3: Opportunities for integrating demand side policies*, <http://bit.ly/1wtjaig>

### Progress to date

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Since 2005, consumer gas prices have risen by over 120 per cent, retail electricity prices have risen over 75 per cent, and the cost of liquid heating fuels has more than doubled. The National Audit Office (NAO) says utility bills will increase over the next 10 years to fund large-scale infrastructure spending, and carbon taxes will add £67 per year to the average household energy bill by 2020, and that is before geopolitical risks take their toll.

Despite this seemingly clear cost driver to use less, waste less and pay less, policies to engage, enable and encourage uptake of energy, and bill-saving, measures are yet to gain traction with the British public. Energy costs are increasingly cited as a worry by low income families, with around 3.5 million homes living in fuel poverty.<sup>5</sup>

The Committee on Climate Change (CCC) reports that carbon emissions have fallen in the building sector,<sup>6</sup> due to a mix of energy efficiency improvement, the recession and changes in the electricity sector; but the Committee also notes the sharp fall in insulation rates since the introduction of the Energy Company Obligation and the Green Deal in early 2013.

The Citizens Advice Service puts this sharp fall in uptake rates down to a failure to understand the complexity of the consumer journey. Its review of individual policies shows the breadth and depth of levers available to, and in use by Government. It also shows that policy development is often incomplete: failing to identify the trigger for action, providing an incomplete accreditation framework, providing better information without ensuring consumers can then use that information to take control; or weakening building regulations which not only has a direct impact on home-buyers but also sends a signal to the wider property market of the low value the Government places on energy efficiency.

If we, as a society, are serious about tackling the high energy bills that harm the health and opportunities of too many households, we need to pull together and deliver a consistent vision with complete consumer policies. We strongly believe that Government and other sectors can build consumer confidence, but Government policy needs to present a more consistent vision to consumers and apply a fuller understanding of the factors that support that confidence.

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<sup>5</sup> Note these figures are based on different definitions of fuel poverty. Fuel poverty in England is measured by the Low Income High Costs definition, <http://bit.ly/1BwYeck>; in Wales and Scotland it is defined as a household with a spend of 10 per cent or more of their income on energy, <http://bit.ly/1t4DK82>, <http://bit.ly/1yXpQYz>

<sup>6</sup> CCC (2014) *Meeting Carbon Budgets – 2014 Progress Report to Government*, <http://bit.ly/1oWKvVJ>

### Our vision

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The Citizens Advice Service has a vision for energy services that addresses the key challenges in policy development. Individual policies may not be able to deliver on all aspects, due to the complexity of the issues they seek to address, but there is both the potential and the need to deliver this vision in the round.

**Energy services are affordable, accessible and safe for all.**

#### Principles

##### 1. Affordable

Energy is an essential service. Keep it affordable by giving consumers the ability to control their energy use, and minimising the costs that are passed on by industry and government through bills. Profits need to be earned; and today's hard-pressed consumers cannot carry the full costs of lack of investment in the past and the high upfront cost of low carbon generation.

##### 2. Accessible

Customers need simplicity. Ensure access to advice, supply, products and services is hassle free and quick. If products and systems are not easy to use, energy and cost saving potential is quickly lost.

The energy services market itself needs to be accessible – whether that is to new generators and suppliers in the energy market or to products and services used in the home. Innovation is key to answering the challenges of the 21<sup>st</sup> century.

##### 3. Safe

There have been a myriad of industry scandals. Customers should not be mis-sold to, misled or face requests for unreasonable fees or demands. Regulations must be enforced, and when things go wrong there must be an easy way to get resolution and redress.

Consider also the needs of future consumers. The upfront costs of moving to a low carbon economy are a vital investment for long-term benefits. The indirect benefit of mitigating climate change is more than matched by the direct benefit of healthier, cheaper-to-heat homes that could eliminate fuel poverty.

##### 4. Fair

Energy services must meet the needs of all consumers including those who are vulnerable because of their particular circumstances such as income, health, heating system or housing. This means calls for cost-reflectivity must be tempered by the need to ensure all consumers can meet their basic needs, now and in the future.

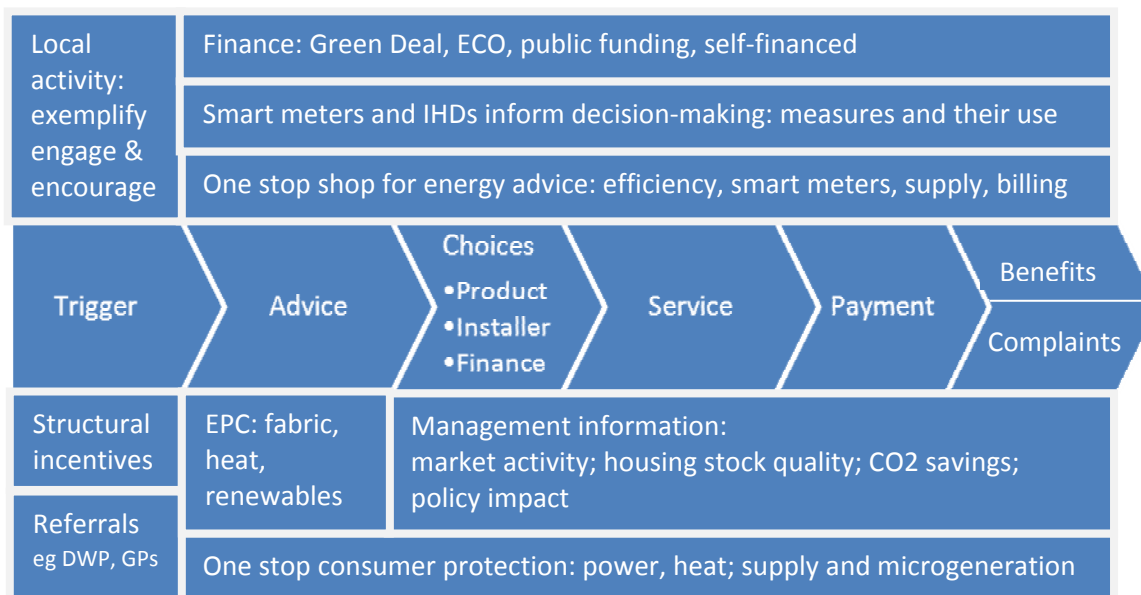


## A framework for consumer confidence

The Citizens Advice Service is concerned that while Government has shown it can identify new services and provide legislative and regulatory backing to ensure they work in technical terms, it is not giving sufficient attention to consumer willingness to engage. This was a concern that our predecessor as statutory energy watchdog, Consumer Focus, consistently raised in the development of the Green Deal, and we want lessons learned.

In the main body of this report we review individual policies that affect consumers' ability to reduce bills by switching supplier or tariff, or by taking action to reduce demand. We make recommendations to make demand-reduction policies more affordable, accessible, safer and fairer. These would in themselves be an improvement but should not be considered in isolation. We want to see a systems approach that recognises the links between policies, encouraging synergies rather than competition between policies, summarised in Figure 1.

**Figure 1: Demand reduction – a framework for consumer confidence**

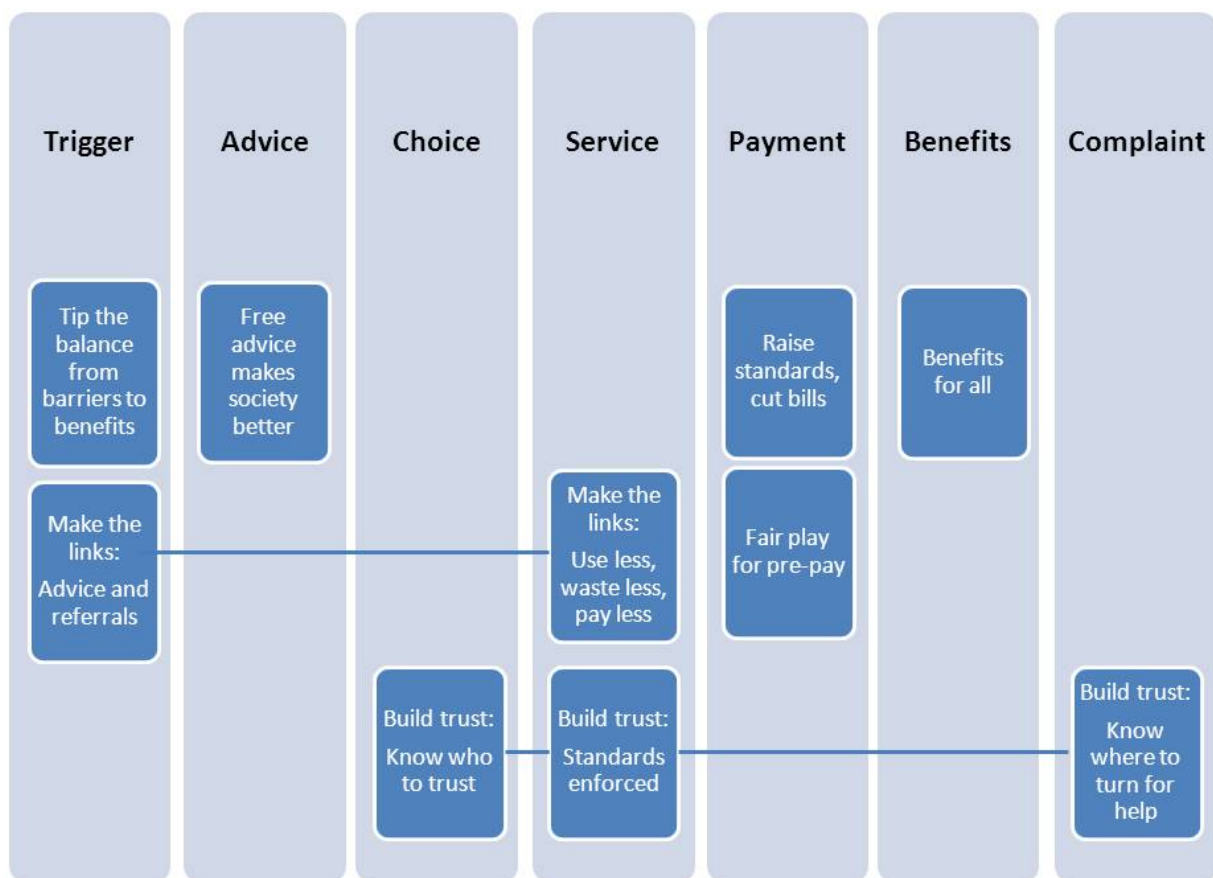


The core of this framework is formed by the steps a consumer will need to take to save money on their bills. Support will be needed where consumers are not taking these steps. For example, what intervention could bring forward demand for energy efficient housing? How could the Government make it easier for consumers to navigate the complexities of advice provision in the energy market? How does the consumer know who to trust to install measures, and why charge them an interest rate on energy efficiency measures that have such a benefit for society? Some interventions may support a single step; others, such as joined up protections, could support consumers through multiple steps, for the uptake of multiple products and services.

## Mapping strategic objectives

The challenges and opportunities behind both the vision and the consumer confidence framework are complex. Taking the issues emerging from its review of individual policies, the Citizens Advice Service has mapped the key objectives which it believes could pave the way from today's challenges to tomorrow's confident marketplace.

**Figure 2: Strategy map for improving a consumer's ability to take control**



### Tip the balance from barriers to benefits

Consumers weigh up what's on offer. Perceived benefits need to outweigh the perceived barriers, including costs, before they take action, and policymakers need to put customers' needs, motivations and concerns at the centre of planning to increase response rates, reduce costs and avoid wasted effort.

### Make the links

A failure to make the links from the consumer perspective affects the cost of delivery and the consumer experience, which in turn potentially limits uptake and affects the reputation of bill-saving measures, potentially pushing the cost of the transition up further.

### **Free advice makes society better**

Rising energy bills in a complex market means it's important that people can access relevant, impartial advice, can get help to make complex decisions and have the confidence and opportunity to act on the issues that concern them.

### **Build trust**

The public has lost confidence in the energy market, largely due to a lack of transparency and supplier behaviour such as mis-selling, badly explained tariffs, and variable complaint-handling standards. Progress is being made but we must remember these issues were not isolated, were reported by the consumer watchdogs, and could have been avoided. We want lessons to be learned for the wider energy services market in terms of the role of energy companies, and how standards are assured.

### **Raise standards, cut bills**

High energy bills are not purely a function of the retail market. Energy price rises, in part driven by geopolitical risks, are exacerbated by the quality of British housing. There is a strong economic and social case for investment in domestic energy efficiency, and it is not appropriate for all such improvements to be funded through energy bills. Where possible the beneficiary should pay to focus funds where they are most needed.

### **Fair play for pre-pay**

Despite paying on average £80 a year more than Direct Debit customers, energy prepayment meter (PPM) users get a second class service including limited top up options, little or no choice of tariffs, faulty keys or meters, and poor customer service. Vulnerable consumers have as much right as any, and more need than most, to have control over their bills.

### **Benefits for all**

The Citizens Advice Service believes it important that customers get maximum benefit and minimum inconvenience from policies, and that nobody is left behind. All customers should be able to access improvements from new smart technology that they are funding, and all households must have a pathway to access energy efficiency measures regardless of their income, payment method, location, dwelling or personal circumstances.

## 1. The challenge

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### 1. The challenge

Rising energy bills are one of the main causes of reduced household energy demand over the past decade, along with the obligation placed on energy companies to deliver energy efficiency measures. But the approach to date appears unlikely to meet the goals of affordable energy bills, secure energy supply, and low carbon emissions.

#### Affordable energy bills

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The Competition and Markets Authority (CMA) is investigating the energy market,<sup>7</sup> and the Government has sought to reduce the policy costs on energy bills (now at around 6 per cent, Figure 3), but affordability is not only driven by energy prices. UK domestic gas and electricity prices are some of the lowest in the EU 15.<sup>8</sup> So why are its bills some of the highest?

**Figure 3: Breakdown of a dual fuel bill<sup>9</sup>**

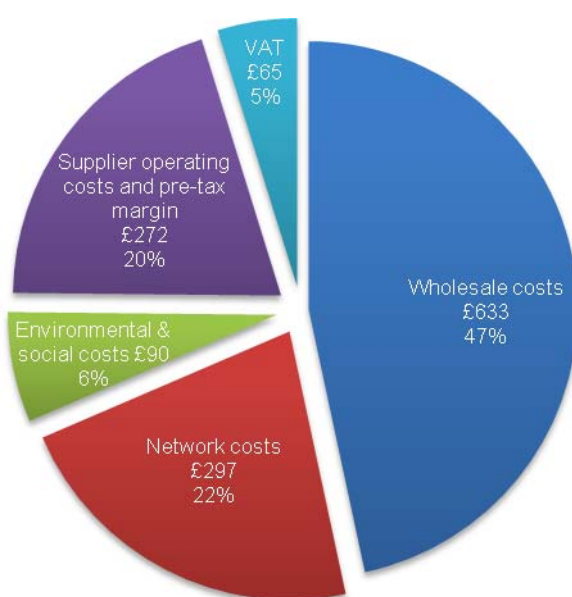


Figure 4 compares energy poverty<sup>10</sup> across European countries that are both 'fairly prosperous' and have a full heating season. Only Danish and Czech households spend proportionately more of their income on energy than UK households. In a related consumer survey, only Belgium had a larger proportion of households that say they cannot afford adequate heat.

**Figure 4: European Commission estimate of energy poverty**

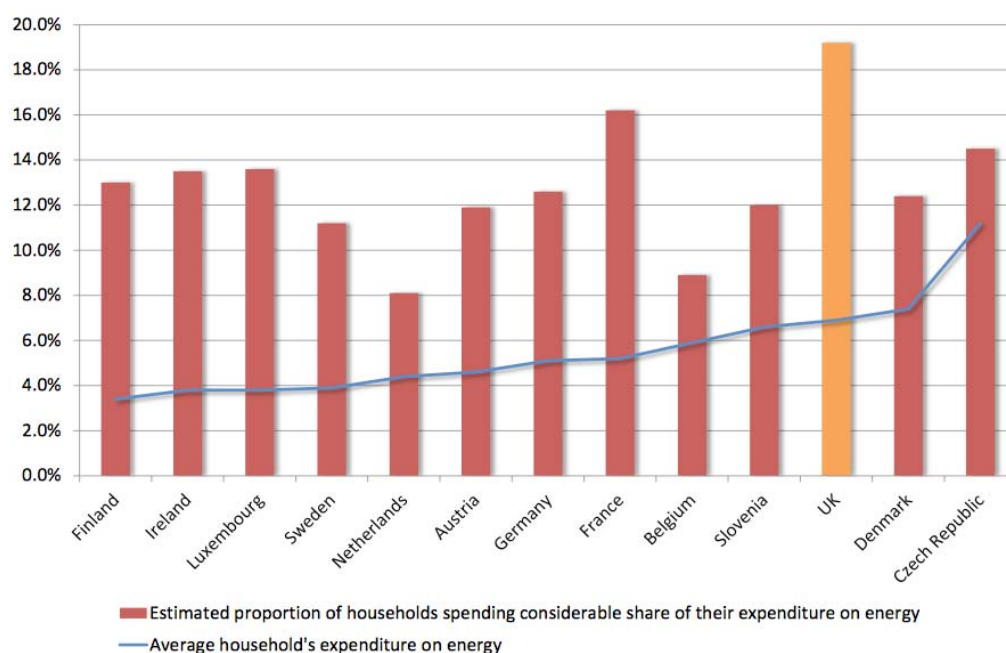
<sup>7</sup> Gov.uk (2014) *CMA case: Energy Market Investigation*, <http://bit.ly/1op0Ndp>

<sup>8</sup> DECC (2014) *Quarterly Energy Prices, March 2014*, <http://bit.ly/1x3seIR>

<sup>9</sup> Ofgem (2014) *Understanding energy bills*, <http://bit.ly/1Fva4Ww>

<sup>10</sup> Defined by the Commission for the purpose of this research as households spending more than twice the national average share of their expenditure on energy.

## 1. The challenge



The driver of these high bills is the quality of the UK housing stock:<sup>11</sup> a combination of old construction methods, such as solid walls (with no cavities) and maintenance issues such as leaking roofs, damp walls, floors or foundation, or rot in window frames or floors.

It is the residents of these oldest, coldest and worst maintained properties who suffer most from rising bills. Higher bills have little impact on the behaviour of the wealthiest consumers,<sup>12</sup> but those on lower incomes respond by cutting back on heating their homes, and other energy use such as cooking food. Consumers also self-ration their energy consumption due to fears about debt and/or disconnection, or indeed self – disconnection.<sup>13</sup>

It costs the NHS in England £1.36 billion a year to treat winter-related disease due to cold housing in the private sector;<sup>14</sup> Liddell estimates that for every £1 spent on energy efficiency measures, the NHS makes a saving of up to 42p.<sup>15</sup> Further, only a small proportion of the 30,000 excess winter deaths are caused by accidents, the main causes are respiratory and circulatory diseases with cold homes being a major contributory factor.<sup>16</sup>

In brief, consumers only have two ways to take on the energy companies: switching or substantially reducing their energy use. Switching to better deals is a welcome move to save money in the short term and puts some pressure on retail charges, but without

<sup>11</sup> ACE (2013) *Cold man of Europe*, <http://bit.ly/1ziQlc7>

<sup>12</sup> Independent study by Institute of Fiscal Studies cited in Consumer Focus (2011) *Fuel price inflation and low income consumers*, <http://bit.ly/1w0P4Ea>

<sup>13</sup> Citizens Advice (2014) *Topping up or dropping out: self-disconnection among prepayment meter users*, <http://bit.ly/1yU78AX>

<sup>14</sup> Age Concern (2012) *The cost of cold*, <http://bit.ly/1pwgCKq>

<sup>15</sup> Liddell, C. (2008) *Estimating the health impacts of Northern Ireland's Warm Homes Scheme 2000-2008*, <http://bit.ly/122nQ3n>

<sup>16</sup> NICE (2013) *Call for Evidence*, <http://bit.ly/1x3tvQ6>

## 1. The challenge

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further action on energy efficiency all current and future UK energy consumers will see continued energy price rises<sup>17</sup> as we struggle to heat our old, cold homes and distribute power with expensive fuels through an ageing infrastructure.

### Progress

The Fuel Poverty Advisory Group's 11<sup>th</sup> Annual Report to the UK Government<sup>18</sup> identifies a range of measures of affordability that also illustrate the issues faced by those in fuel poverty, and gives little indication of better times ahead:

- 3.5 million households in Britain struggle with fuel poverty.
- There were 31,100 excess winter deaths for England and Wales in 2012/13, an increase of 29 per cent from 2011/2. Scotland also saw an increase, albeit at a lower rate.
- Since 2005, consumer gas prices have risen by over 120 per cent, and retail electricity prices have risen over 75 per cent, and the cost of liquid heating fuels has more than doubled.
- Energy costs are increasingly cited as a worry by fuel poor and hard-working families.
- The National Audit Office (NAO) says utility bills will increase over the next 10 years to fund large-scale infrastructure spending, and carbon taxes will add £67 per year to the average household energy bill by 2020.

Looking to the future, the draft Fuel Poverty Strategy<sup>19</sup> for England provides welcome recognition of the role of fabric measures in combating fuel poverty through the proposed legal obligation for as many fuel poor homes as reasonably practicable to be raised to Band C energy efficiency rating by 2030. However, the draft strategy does not set out how this target will be delivered or how the potential loophole of 'reasonably practicable' will be defined. It does not appear that the current policy framework, particularly the Energy Company Obligation, will be sufficient.

The Welsh and Scottish Governments have similarly recognised the importance of energy efficiency to the fuel poor by investing substantial public funds in schemes. However, the resource remains substantially below that required to eradicate fuel poverty by the devolved nations' deadlines.<sup>20</sup>

### Secure energy

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A wide range of factors can, and do, affect the availability and therefore cost of energy. Ofgem's report on gas security to the UK Government<sup>21</sup> in 2012 noted the British market has been impacted by production problems in the Norwegian North Sea, a dispute between Russia and Ukraine over gas transit, tension and conflict in North Africa and the Middle East, and the consequences of the Fukushima nuclear disaster in Japan. The

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<sup>17</sup> Consumer Focus (2012) *Impact of future energy policy on bills*, <http://bit.ly/ZE7tZ1>

<sup>18</sup> FPAG (2013) *11<sup>th</sup> Annual Report*, <http://bit.ly/1x3tYlq>

<sup>19</sup> DECC (2014) *Cutting the cost of keeping warm: a new fuel poverty strategy for England consultation document*

<sup>20</sup> NEA (2014) *Fuel Poverty Monitor 2014*, <http://bit.ly/1sJCPYT>

<sup>21</sup> Ofgem (2012) *Gas Security of Supply report*, <http://bit.ly/1sJCYeJ>

## 1. The challenge

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impact and risk of such disputes is evidently heightening. Production costs, economic development and geopolitical factors will continue to put increasing pressure on gas security; visible to consumers through rising bills.

UK electricity security is exposed to the gas market, as around 27 per cent of electricity is generated from gas, but all energy sources carry risks and costs. The remainder comes from coal (36 per cent), and low carbon sources such as nuclear and renewables (35 per cent).<sup>22</sup> 20 per cent of this generation capacity is set to close by the end of this decade,<sup>23</sup> leaving a potential gap in reliable supply at peak times with a subsequent impact on energy prices.

The gap in supply results from higher demand alongside changes in the reliability of supply. Demand for electricity will increase due to the electrification of heat and transport sectors. Concurrently, there will be growing uncertainty in the reliability of supply as the necessary decarbonisation of electricity supply means a move to intermittent supply by wind farms and inflexible supply from nuclear power stations.

The way to close this gap, in the absence of scaled-up cost-effective heat and/or power storage, is additional 'flexible' capacity to meet peak demand. But this comes at a cost. Plants providing flexible supply (such as gas power stations) have higher operating costs than lower carbon options, and will be run less often to meet peak demand. This means that flexible generators may have to rely on receiving very high prices during short periods of peak demand to recoup their investment costs. But the uncertainty associated with when and how often this might occur may mean that investment in flexible capacity may be judged to be too risky and may not be forthcoming. This could create a possibility that supply will be insufficient to meet growing demand in the electricity market.

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<sup>22</sup> DECC (2013) *Energy trends section 5: electricity*, <http://bit.ly/SLitRf>

<sup>23</sup> DECC (2012) *Electricity Market Reform Policy Overview*, <http://bit.ly/1whoJPI>

## 1. The challenge

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### Low carbon

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Energy Saving Trust's Housing Energy Model shows that most homes will need to install most measures, at an uptake of 2.5 per cent a year,<sup>24</sup> if the UK is to meet its target of an 80 per cent reduction in carbon emissions by 2050 (on 1990 levels). But can this be delivered when consumers lack awareness and motivation and face a high upfront cost?<sup>25</sup>

Other models suggest that the challenge can be met more cost-effectively through carbon capture and storage (CCS), which the UK Government says 'is the only way that we can reduce carbon dioxide emissions and keep fossil fuels in the UK's electricity supply mix'.<sup>26</sup> However, CCS is not yet proven at commercial scale.

A further challenge to reducing carbon emissions is the rebound effect. This is where initial carbon savings are lost as consumers choose to spend them either on increasing demand on the same service (such as heating the home for longer or to a higher temperature, known as a direct rebound), or on other goods and services that have their own energy costs (indirect rebound). The level of losses has recently been estimated at around 5-15 per cent, as they generally relate to indirect effects and alternative goods and services are less greenhouse gas intensive than electricity or gas.<sup>27</sup>

### Progress

The Committee on Climate Change (CCC) reported on progress on carbon emissions in domestic buildings in its sixth statutory report to the UK Parliament.<sup>28</sup> Emissions have fallen in the building sector, due to a mix of energy efficiency improvement, the recession and changes in the electricity sector; but the Committee notes the sharp fall in insulation rates since the introduction of the Energy Company Obligation and the Green Deal in early 2013. The Committee's traffic light assessment is presented in its 2014 Progress report to the UK Government, reporting against the following indicators:

- Insulation of all remaining uninsulated lofts (10.5 million) and cavity walls (8.1 million) by 2015.
- Insulation of 2.3 million solid walls by 2022.
- Replacement of 12.6 million old inefficient boilers by 2022.
- 58 per cent of the stock of wet appliances rated A+ or better and 45 per cent of cold appliances rated A++ or better by 2022.

It reports a gap for 2025 between current projections and the Fourth Carbon Budget of 13MtCO<sub>2</sub> in the residential sector. Low carbon heat accounts for 11MtCO<sub>2</sub>.

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<sup>24</sup> EST (2010) Housing Energy Model briefing note 1, <http://bit.ly/1w0RnHo>

<sup>25</sup> EST cited in Consumer Focus (2011) *Access for All*

<sup>26</sup> Gov.uk (2014) Carbon Capture and Storage, <http://bit.ly/Kyph0q>









<sup>27</sup> Chitnis, M., S. Sorrell, A. Druckman, S. K. Firth and T. Jackson (2013). *Turning lights into flights: Estimating direct and indirect rebound effects for UK households*. Energy Policy 55: 234–250, <http://bit.ly/1yU8UII>

<sup>28</sup> CCC (2014) *Meeting Carbon Budgets – 2014 Progress Report to Government*, <http://bit.ly/1oWKvVJ>



## 1. The challenge

**Table 1: Buildings traffic lights – the CCC (2014) *Progress Report to Parliament***

Indicator	Traffic light	Comment
Uptake of solid wall insulation		Very low uptake numbers (170,000 cumulatively by the end of 2013, compared to 500,000 in the CCC indicator). Some success during 2012 (final year of CESP) but uptake numbers have fallen under ECO.
Uptake of loft insulation		Progress good until 2012 but very low in 2013 following change in policy framework. A cumulative 5.7 million lofts were insulated by end 2013, below the CCC indicator of 6.3 million.
Uptake of cavity wall insulation		Progress good until 2012 but very low in 2013 following change in policy framework. A cumulative 2.9 cavity walls were insulated by end 2013, significantly below the CCC indicator of 5 million.
Uptake of boilers		High uptake of new efficient boilers. A cumulative 7.7 million boilers were installed by end 2013, against the CCC indicator of 5 million.
Uptake of energy efficient appliances		Stock penetration for the most efficient appliances is low (9% of the stock versus 16% in the indicator). However, overall efficiency of the appliances on the market has improved significantly.
New energy efficiency financing mechanism		Green Deal introduced in 2013 but unattractive interest rates and very low uptake.
Post-CERT delivery framework		ECO started in 2013 but several changes proposed which lower ambition significantly.
Minimum standards for private rental homes		Commitment in 2011 Energy Act but actual proposals still outstanding.

## 2. The opportunity

The size of energy bills, their rising trajectory and the level of concern reported by consumers would suggest a market ripe for innovation. So what are the social and commercial opportunities?

### Technical potential

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The UK Government estimates that efficient use of energy in property and from appliances could reduce demand by 1,96TWh in 2020, equivalent to a 39 per cent reduction or the output of 22 power stations. Of this, the Department of Energy and Climate Change (DECC) estimates<sup>29</sup> that it could be cost effective to reduce energy demand in the domestic sector by 56TWh in 2020 (an 11 per cent reduction) and 62TWh in 2025, (12 per cent reduction), and that policies are already in place to tackle much of this (55TWh in 2020; 64TWh in 2025).

Domestic demand reduction policies  
Product policy  
Building regulations  
Green Deal and ECO  
Private rental sector minimum standards  
Zero carbon homes  
Smart meters and in-home displays

A study<sup>30</sup> of savings from behavioural changes suggests further significant savings, mostly from space and water heating, such as a 33TWh saving from turning thermostats down by 2 degrees from 20°C to 18°C. However, such changes would be inappropriate in some homes, undesirable in others, and time-sensitive or space-sensitive in most homes.

These differing needs and wants from consumers makes a focus on the supply-side far more attractive to the UK Government when addressing issues such as reducing carbon emissions or market capacity. Incentives such as Renewable Obligation Certificates (ROCs) or Feed-in tariffs can be paid against auditable output, and the administration costs of building carbon capture and storage facilities or additional generation capacity are lower due to the contained number of stakeholders, and the ability to place costs on consumers' bills.

The downside of focusing investment and subsidies on the supply-side is that Government policy fails to address ever-present and growing concerns about household energy bills and affordable heating. A concern which can only be met, ultimately, by improving the quality of the housing stock and reducing energy demand through smarter homes, products and services.

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<sup>29</sup> DECC (2012) *Annex E: the energy efficiency marginal abatement cost curve*, in <http://bit.ly/1COQqAJ>, p87

<sup>30</sup> DECC (2012) *How much energy could be saved by making small changes to everyday household behaviours?* <http://bit.ly/10h41F4>

## 2. The opportunity

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### Tackling the poverty premium<sup>31</sup>

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Alongside the benefits for the 'average' household, there are particular benefits to be had for those hit hardest by rising energy bills, provided policies target poor quality housing and power-guzzling appliances, alongside behaviours such as thermostat settings and appliance use.

People are put at significant risk of vulnerability because of cold homes and fuel poverty.<sup>32</sup> The risks can be extremely serious for people's physical and mental health, and their ability to afford other essential services and commodities.

There are measurable effects of cold housing on infants' and adults' physical health and well-being, in particular for those with existing health conditions. Infants may suffer significant negative effects of cold housing in terms of weight gain, hospital admission rates, developmental status, and the severity and frequency of asthmatic symptoms. The effects of cold housing for older people range from physical and mental health risks through to higher mortality risk. There have been 27,000 excess winter deaths in England and Wales per year since 2000 and fuel poverty is likely to be a significant contributor<sup>33</sup>.

A study of the effects of trying to cope with low incomes and cold homes, funded by eaga Charitable Trust, showed how people in these circumstances face harsh trade-offs between essentials such as fuel and food.<sup>34</sup> While people made savings on more discretionary items such as holidays and new clothes, cuts in spending on essential items were common. Spending on food had been cut back by 35 per cent in the previous year, and 32 per cent had cut back on heating.

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<sup>31</sup> Adapted from Consumer Focus (2012) *Tackling consumer vulnerability*, <http://bit.ly/1tHwpwP>

<sup>32</sup> Marmot Review Team for Friends of the Earth (2011) *Health impacts of fuel poverty and cold housing*

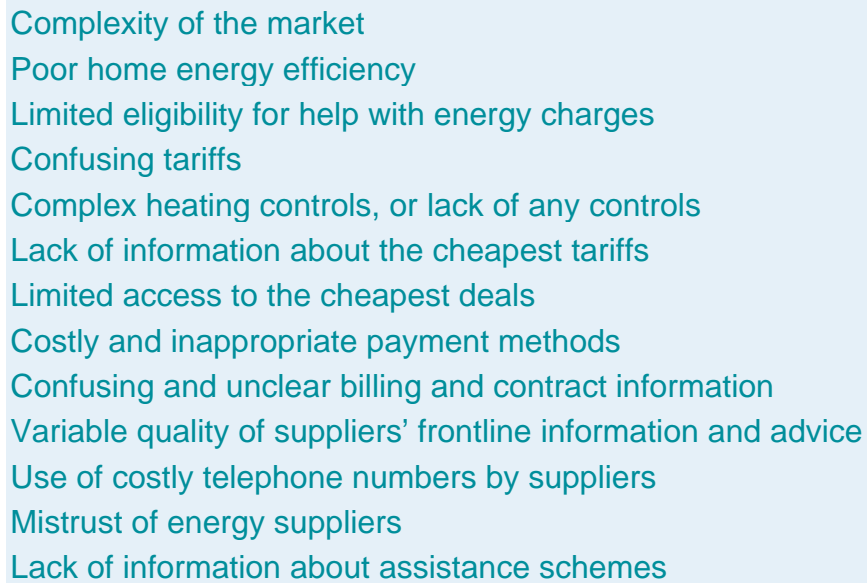
<sup>33</sup> Hills J. (2012) *Final report of the Fuel Poverty Review 'Getting the measure of fuel poverty'*, <http://bit.ly/1yIVThD>

<sup>34</sup> Centre for Sustainable Energy and University of Bristol Personal Finance Research Centre (2010) *You just have to get by: Coping with low incomes and cold homes*, eaga Charitable Trust, 2010

## 2. The opportunity

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**Figure 5: Barriers to taking control of energy bills**



- Complexity of the market
- Poor home energy efficiency
- Limited eligibility for help with energy charges
- Confusing tariffs
- Complex heating controls, or lack of any controls
- Lack of information about the cheapest tariffs
- Limited access to the cheapest deals
- Costly and inappropriate payment methods
- Confusing and unclear billing and contract information
- Variable quality of suppliers' frontline information and advice
- Use of costly telephone numbers by suppliers
- Mistrust of energy suppliers
- Lack of information about assistance schemes

The barriers to these consumers taking control of their energy use are multiple and overlapping (

## 2. The opportunity

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Figure 5), and can be tackled in two ways.

Firstly, Consumer Futures (now part of the Citizens Advice Service) identified ways to reduce the poverty premium, to prevent people in poverty paying more:

- Reduce price differentials through the introduction of smart meters, and easily comparable time-of-use tariffs.
- Banks and energy companies to work with the Citizens Advice Service to come up with cheap alternatives to Direct Debit or the charges incurred when Direct Debit payments lead to overdraft charges.
- Make tariffs easier to understand so people know what they are paying for, and therefore make it easier to switch.

Secondly, and the focus of this paper, is how Government policy can help consumers use less, waste less, and pay less.

### 3. What is demand reduction and why is it important?

## 3. What is demand reduction and why is it important?

Demand reduction encompasses a range of policies, processes and behaviours that deliver:

- reduced pollution, delivering on climate change mitigation and air quality targets
- a secure and reliable energy supply, in the face of the global financial crisis, tough environmental targets, increasing gas import dependency and the closure of ageing power stations<sup>35</sup>
- protection for consumers from rising costs.

Demand-side response (DSR) policies and processes could also support these outcomes.

**Demand reduction:** Using less power or heat to perform the same tasks.

Demand reduction is delivered through energy efficient products and consumer behaviour.

**Demand-side response:** action to reduce, flatten or shift peak electricity demand<sup>36</sup>

Demand response is also sometimes referred to as peak shifting.

Opportunities for reducing energy demand are numerous, overlapping and tend to require collaboration across the supply chain. Product designers and architects need to incorporate demand reduction at the first stages of a project; which must fit with Government requirements (whether that is ecodesign standards or building regulations); the savings from which will only be realised if the subsequent manufacturers, builders and installers implement the design in full; and if the salesperson adequately passes on advice on use.



At the end of that chain sits the consumer who, to date, has been a passive recipient of electricity, heat and the accompanying bills.

The principal reason for this passivity is that people do not actively choose to consume energy; they choose to do their washing, heat their homes, and relax. Energy use may

<sup>35</sup> The barriers to energy security cited by Ofgem when publicising its second report on electricity capacity (June 2013) <http://bit.ly/1whpqZn>

<sup>36</sup> Albadi, M. H.; El-Saadany, E. F. (2007). *Demand Response in Electricity Markets: An Overview*. IEEE

## 4. Energy use today

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have reduced over recent years but this is not purely down to rising bills, and active economising is only one element of the factors that shape behaviour.<sup>37</sup>

### **Rhythms and routines:**

energy load curve is driven by habitual routines and daily rhythms

### **Home economies:**

active energy management in many households, often based on 'know how' rather than formal knowledge and use of multiple resources (sun, radiators, electricity, gas)

### **Shadows of technologies past:**

people use new technologies with a memory of their old systems and how their families used energy in the past

### **Domestic transitions:**

household change, compaction and multiple living arrangements

Energy use is largely habitual and demand will only emerge when the benefits of change clearly outweigh the barriers<sup>38</sup>. At present the barriers clearly outweigh a saving on energy bills. Customers are generally disengaged in the energy market due to confusion about the complexity of the market, bills and tariffs; distrust of pricing; and a view that suppliers act as a pack.<sup>39</sup> Their ability and desire to fight back has been limited by the quality of housing and heating systems; a culture that sees insulation as a low priority; poor design of heating controls;<sup>40</sup> and unenforced or unclear energy performance regulations for products<sup>41</sup> and homes.<sup>42</sup>

We will explore those barriers, and appropriate policy responses, but first we need to understand the status quo.

## 4. Energy use today

### **Total use**

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In 2013 overall UK domestic energy consumption (not including transport) was 43.8 million tonnes of oil equivalent (ktoe), or 509 TWh, and total domestic energy consumption accounted for 29 per cent of the total use in the UK (Figure 6).<sup>43</sup>

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<sup>37</sup> Durham University (2013) *Engaging consumers in the smart grid*, Customer Led Network Revolution presentations, 1 October 2013.

<sup>38</sup> Consumer Focus (2012) *What's in it for me?* <http://bit.ly/1t3MafN>

<sup>39</sup> Consumer Focus (2013) *Switched on? Consumer experiences of energy switching*, <http://bit.ly/1vG7Zmq>

<sup>40</sup> Consumer Focus (2013) *Consumers and heating controls*, <http://bit.ly/1pwjVky>

<sup>41</sup> Consumer Focus (2012) *Under the influence*, <http://bit.ly/1s1rq2J>

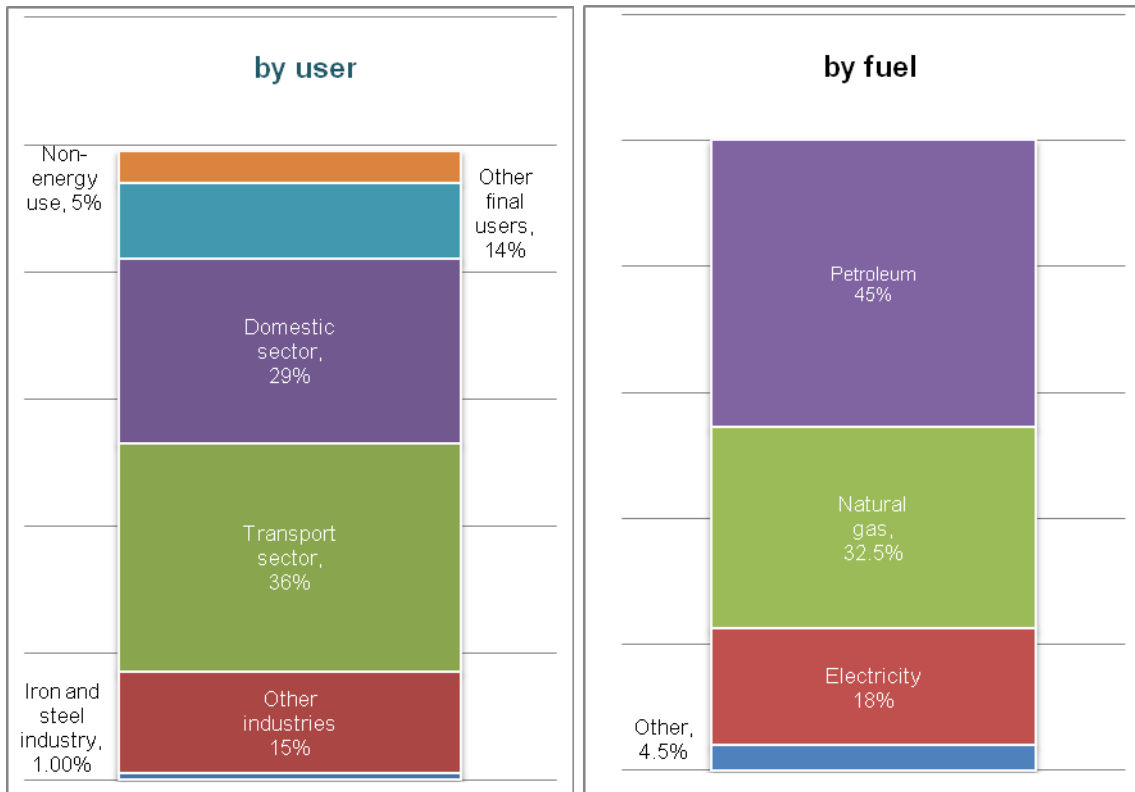
<sup>42</sup> Consumer Focus (2011) *Room for improvement*, <http://bit.ly/1b11YHH>

<sup>43</sup> DECC (2013) *Digest of United Kingdom Energy Statistics*, <http://bit.ly/1eKsZ2z>

## 4. Energy use today

On average, in an English or Welsh household gas makes up 74.6 per cent of the total energy consumption, with electricity at 25.4 per cent.<sup>44</sup> This does not take into account the use of alternative fuels by homes that do not get piped gas. The proportion of energy used for heating in Scotland tends to be higher for a number of reasons, including the nature of the housing stock, colder external temperatures and a greater proportion of consumers being off the gas grid.

**Figure 6: Final UK energy consumption 2013 (150.1 million tonnes of oil equivalent)**



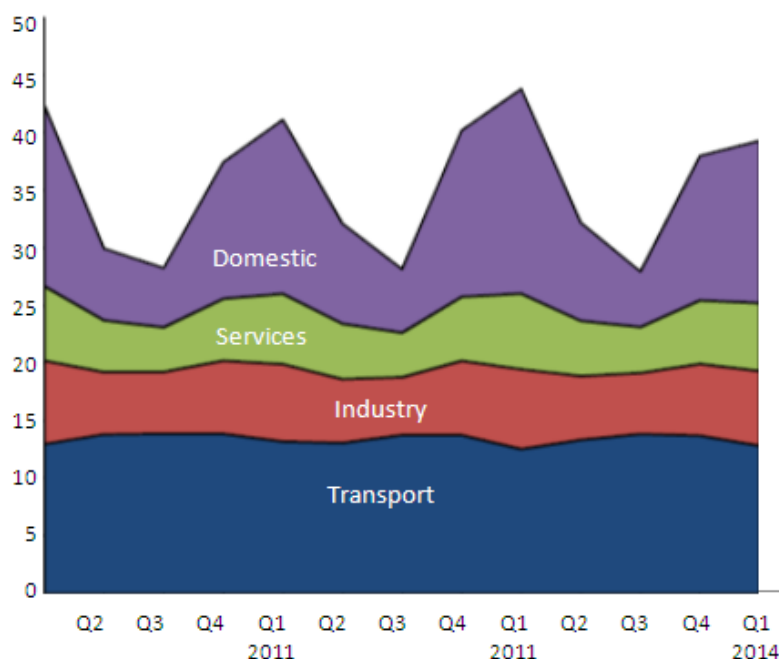
<sup>44</sup> ONS (2013) *Household Energy Consumption in England and Wales, 2005–11*, <http://bit.ly/1nxBTHG>



## 4. Energy use today

Energy use by the domestic sector is strongly related to the external temperature. Not only is there significant variation by season, but a warmer winter will result in significantly lower use. In the first quarter of 2014, domestic sector energy consumption fell by 20.7 per cent due to the warmer weather in comparison to a year earlier (Figure 7).<sup>45</sup>

**Figure 7: Final UK energy consumption by user<sup>46</sup>**



### Trends in total use

Average total household energy consumption in England and Wales decreased by 24.7 per cent from 2005 to 2011.<sup>47</sup> Across the UK, while absolute use increased in 2012, once adjusted for the colder weather, figures for 2012 show the downward trend continues, with consumption down 0.7 per cent.<sup>48</sup>

Energy consumption per unit of household disposable income has fallen by 35 per cent since 1990, energy consumption per household has fallen by 12 per cent and energy consumption per person fallen by 5 per cent (

<sup>45</sup> DECC (2014) *Energy Trends*, June 2014, <http://bit.ly/ZMk1y0>

<sup>46</sup> DECC (2014) *Energy Trends*, June 2014, <http://bit.ly/ZMk1y0>

<sup>47</sup> ONS (2013) *Household Energy Consumption in England and Wales, 2005–11* <http://bit.ly/1nxBTHG>

<sup>48</sup> DECC (2013) *Digest of United Kingdom Energy Statistics*, <http://bit.ly/1eKsZ2z>

## 4. Energy use today

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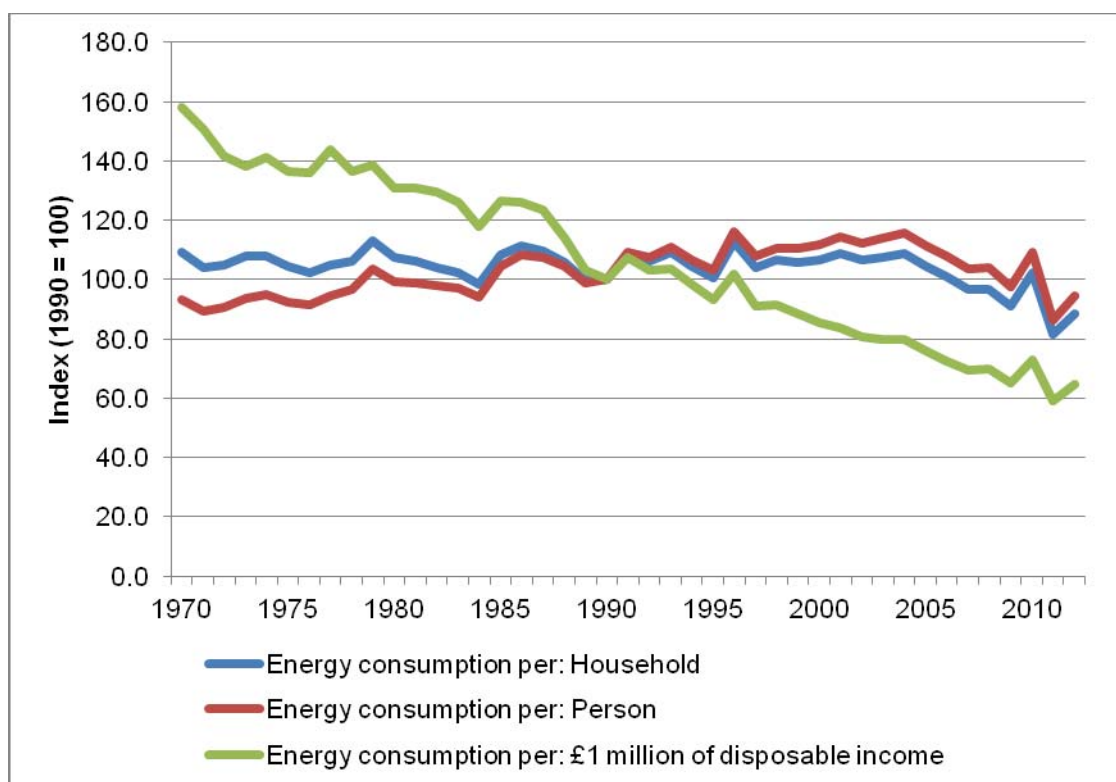
Figure 8).<sup>49</sup>

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<sup>49</sup> DECC (2013) *Energy Consumption in the UK* (2013) Chapter 3, <http://bit.ly/1FvicX3>

## 4. Energy use today

**Figure 8: Domestic energy consumption per household, per person and per unit of disposable income, UK (1970 - 2012)<sup>50</sup>**



The Office of National Statistics (ONS) finds that household energy consumption may have fallen in England and Wales in recent years for a number of reasons:

- Household improvements such as better loft and cavity wall insulation<sup>51</sup> have improved energy efficiency.<sup>52</sup>
- Introduction of energy rating scales for properties<sup>53</sup> and household appliances,<sup>54</sup> allow consumers to make informed decisions about their purchases.
- Improved efficiency of gas boilers and condensing boilers to supply properties with both hot water and central heating.<sup>55</sup>
- Generally increasing public awareness of energy consumption and environmental issues.<sup>56</sup>

<sup>50</sup> DECC (2013) *Energy Consumption in the UK* (2013) Chapter 3, <http://bit.ly/1FvicX3>

<sup>51</sup> According to data from DECC, the estimated proportion of homes with loft insulation in the UK increased from 44.0 per cent in April 2008 to 59.6 per cent in October 2011.

<sup>52</sup> For more information about the uptake of energy efficiency measures in homes, see the National Energy Efficiency Data-Framework summary of analysis.

<sup>53</sup> The European Parliament and Council's Directive on the energy performance of buildings came into force in 2002.

<sup>54</sup> The European Parliament and Council's Directive on the energy performance of household appliances was first introduced in 1992 and has been amended more recently.

<sup>55</sup> The European Parliament and Council's Directive on the energy performance of boilers was first introduced in 1992.

<sup>56</sup> In 2006, The European Commission published the *Action Plan for Energy Efficiency: Realising the Potential*, which cited "increased awareness and behavioural change" as an important driver of reducing energy consumption.

#### 4. Energy use today

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- The price of gas and electricity in the UK overall increased in all years apart from 2010, between 2005 and 2011.<sup>57</sup>

It appears in

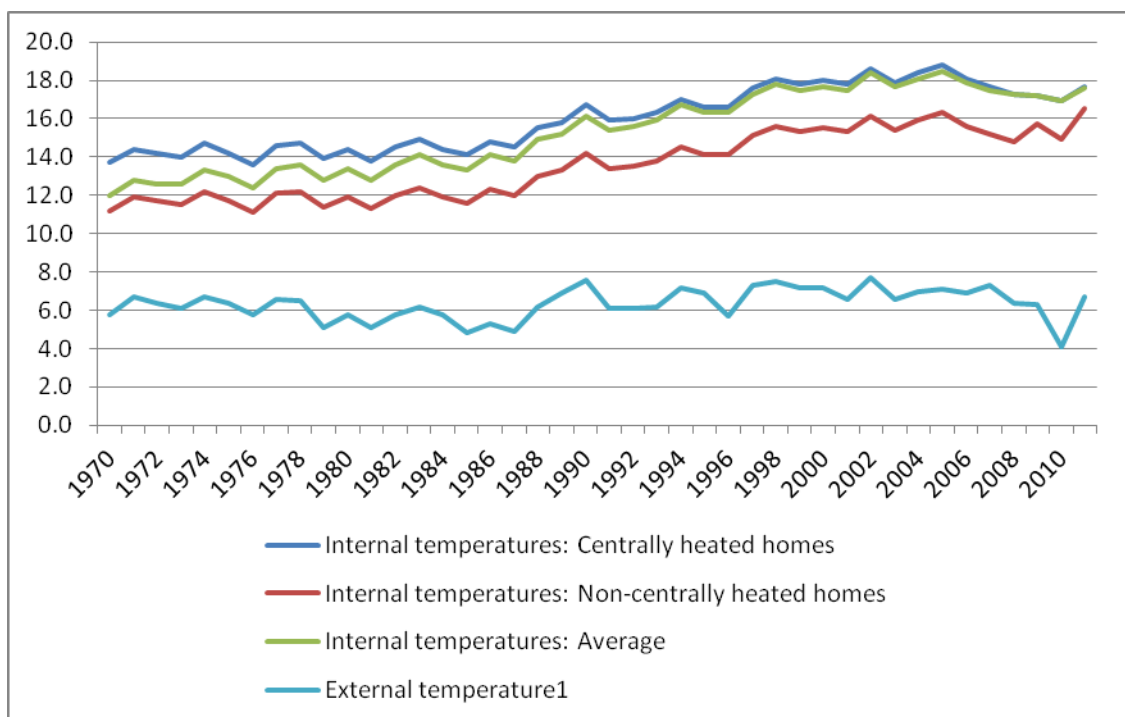
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<sup>57</sup> According to data from the fuel component of the Retail Prices Index, the price of domestic gas increased from an index 100 in 2005, to 201.4 in 2011. The price of domestic electricity increased from an index of 100 in 2005, to 166.1 in 2011.

## 4. Energy use today

Figure 8 that there was a turning point in behaviour in 2003/4, also evident in the downturn in internal temperatures throughout the 'Noughties' shown below,<sup>58,59</sup> with an exceptional peak in use to reflect the colder than average winter of 2010.

**Figure 9: Internal and external temperatures 1970 to 2012<sup>60</sup>**



### Gas

The UK used about 833TWhs of gas in 2012, of which about 3/8ths (339TWhs) was used by households.<sup>61</sup> Around 80 per cent of this is spent on space heating, with the majority of the remainder used for water heating and only around 3 per cent used for cooking.<sup>62</sup> Average unadjusted gas consumption per customer in 2012 was 15,281 kWh; this adjusts to 15,257 kWh once a temperature factor has been applied to the data.<sup>63</sup>

Due to the high proportion used for heating, gas use has a very strong relationship to the time of year and external temperatures.

**Figure 10: UK demand for natural gas<sup>64</sup>**

<sup>58</sup> Table 3.06 in DECC (2013) *Energy Consumption in the UK Data Tables*, <http://bit.ly/1COUdhp>

<sup>59</sup> The 2011 figures are affected by changes to the Cambridge Housing Model, including a change in the modelling of conservatories. This affects the gap between central-heated and non-central heated homes. The figures are also affected by slightly higher mean wind speeds in 2011 (5.2 m/s against 4.5 m/s in 2010).

<sup>60</sup> Table 3.06 in DECC (2013) *Energy Consumption in the UK Data Tables*, <http://bit.ly/1COUdhp>

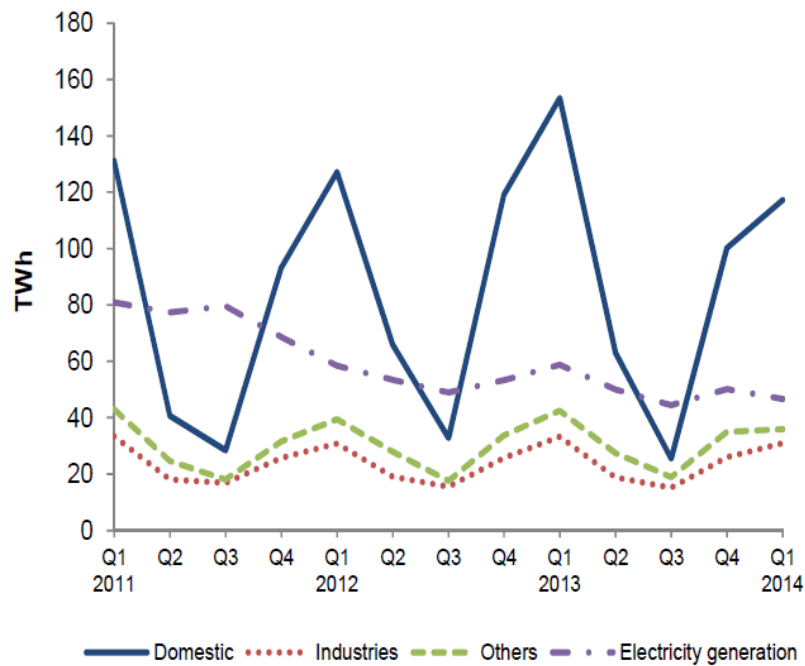
<sup>61</sup> DECC (2013) *Digest of United Kingdom Energy Statistics*, <http://bit.ly/1t7uPng>

<sup>62</sup> Table 3.05 in DECC (2013) *Energy Consumption in the UK Data Tables*, <http://bit.ly/1COUdhp>

<sup>63</sup> DECC (2013) *Digest of United Kingdom Energy Statistics*, <http://bit.ly/1t7uPng>

<sup>64</sup> DECC (2014) *Energy Trends*, June 2014, <http://bit.ly/ZMk1y0>

## 4. Energy use today



### Electricity

The average unadjusted electricity consumption per household in 2012 was 4,227 kilowatt hours (kWh).<sup>65</sup> This adjusts very slightly to 4,226 kWh once a temperature factor has been applied to the data.

### Time of use tariffs

Time of use (ToU) tariffs are chargeable to consumers with special multi-rate electricity meters that are able to record electricity use over different periods of the day.

There are three main types of ToU tariffs in GB at present: Economy 7, Economy 10 and protected or preserved tariffs.

<sup>65</sup> DECC (2013) *Digest of United Kingdom Energy Statistics*, <http://bit.ly/1t7uPng>

## 4. Energy use today

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6.3 per cent of electricity consumption in England and Wales is on an Economy 7 tariff.<sup>66</sup> Consumers need to consume 15-45 per cent of their electricity in off-peak hours to make it more cost effective than a standard tariff.<sup>67</sup> It appears over a third of TOU tariff users do not get any benefit from cheaper off-peak electricity. Consumer Futures found that only 24 per cent of TOU tariff users have electric storage heating and only half of all consumers on a TOU tariff take full advantage by using equipment other than space and water heating during off-peak hours.

### 'Off-gas'

In Britain, 83 per cent of homes are heated by mains gas but 3.9 million households do not have gas heating.<sup>68</sup> Of these, over half a million have a gas supply but do not have gas heating, 1.3 million are in close proximity to the gas network while the remaining 2 million are fully off-grid with little prospect of gas connection. Of the alternatives, electricity is the second most common heating fuel after gas in England and Scotland, whereas heating oil is the second most common in Wales. 2.3 million homes in Britain are heated by electricity (9.3 per cent), 1.1 million (4.4 per cent) by heating oil, 310,000 (1.2 per cent) by solid fuel and 170,000 (0.7 per cent) by Liquid Petroleum Gas (LPG).

Gas heating is least common in regions in which a large proportion of the population live in rural areas, reflecting the lack of penetration of the gas network into these areas, for example the South West and East of England, the Highlands & Islands and North East of Scotland and Mid Wales (see

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<sup>66</sup> Figure cited in ONS (2013) *Household Energy Consumption in England and Wales, 2005–11*, <http://bit.ly/1nxBTHG> It is unclear if this includes Economy 10 use.

<sup>67</sup> Consumer Focus (2012) *From devotees to the disengaged*, <http://bit.ly/1FvjfpR>

<sup>68</sup> Consumer Focus (2011) *Off gas consumers*, <http://bit.ly/1ziSiFn>

#### 4. Energy use today

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Figure 11). However, of the different property types, modern purpose built flats are the least likely to have a gas connection, for example, 70 per cent of post 1999 flats have no gas connection. Many of these properties are in areas on the gas grid, but have no gas connection (for example blocks of flats in high density urban areas).<sup>69</sup>

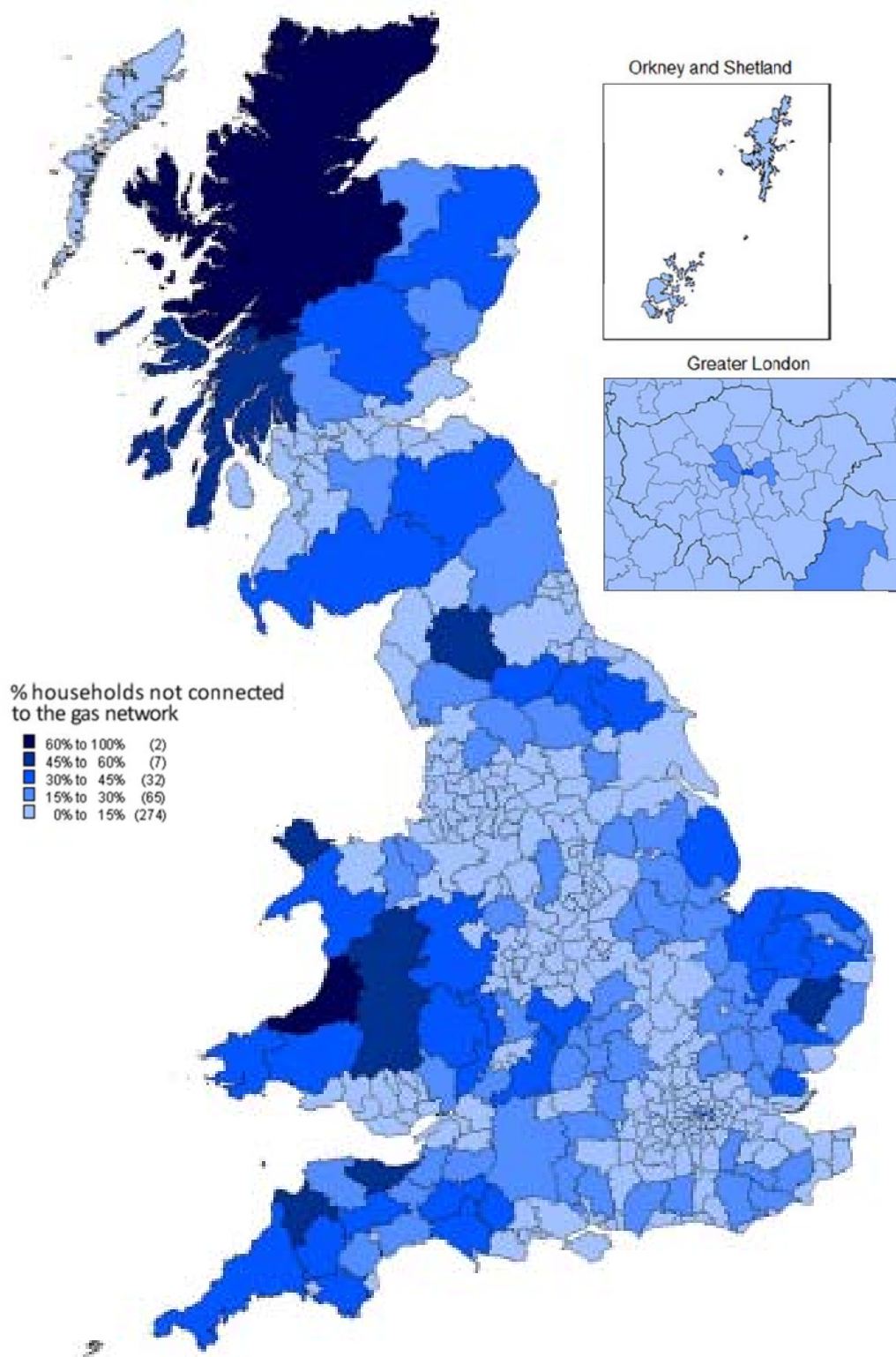
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<sup>69</sup> Excerpt from DECC (2013) *Energy Trends: December 2013 special feature article – Off gas properties*  
<http://bit.ly/122yrva>



## 4. Energy use today

**Figure 11: Proportion of properties without a gas meter by local authority (DECC sub-national estimates)**



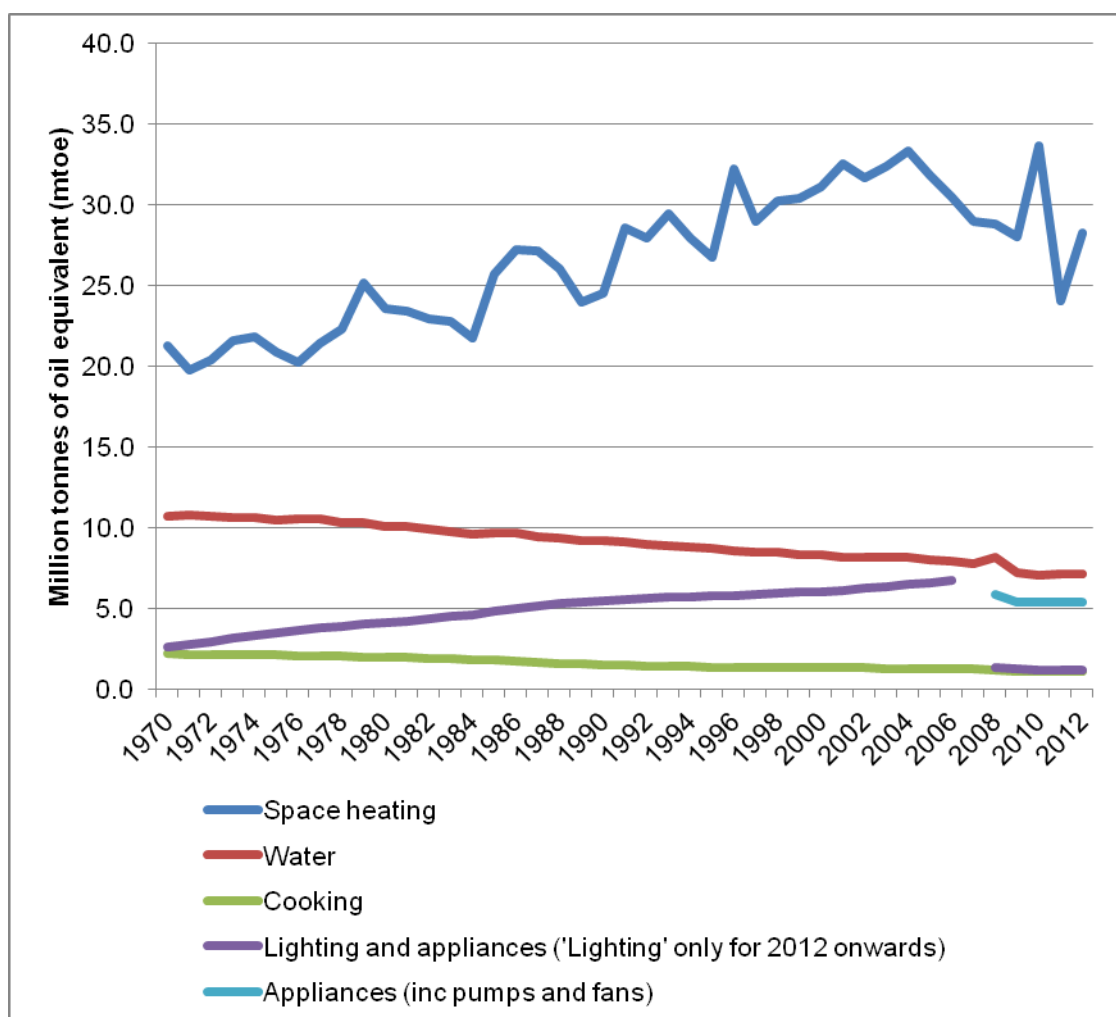
## 4. Energy use today

### End use

Space heating is responsible for 66 per cent of total domestic consumption in the UK, with water heating accounting for a further 17 per cent and lighting and appliances 15 per cent. Cooking is responsible for a further 3 per cent.<sup>70</sup>

Since 1970 energy use for water heating and cooking has fallen, alongside a continued increase in use for lighting and appliances. Space heating remained the primary use of energy in the home over the whole period.

**Figure 12: UK domestic energy consumption by end use 1970 to 2012<sup>71</sup>**



### End use by fuel

#### Heating

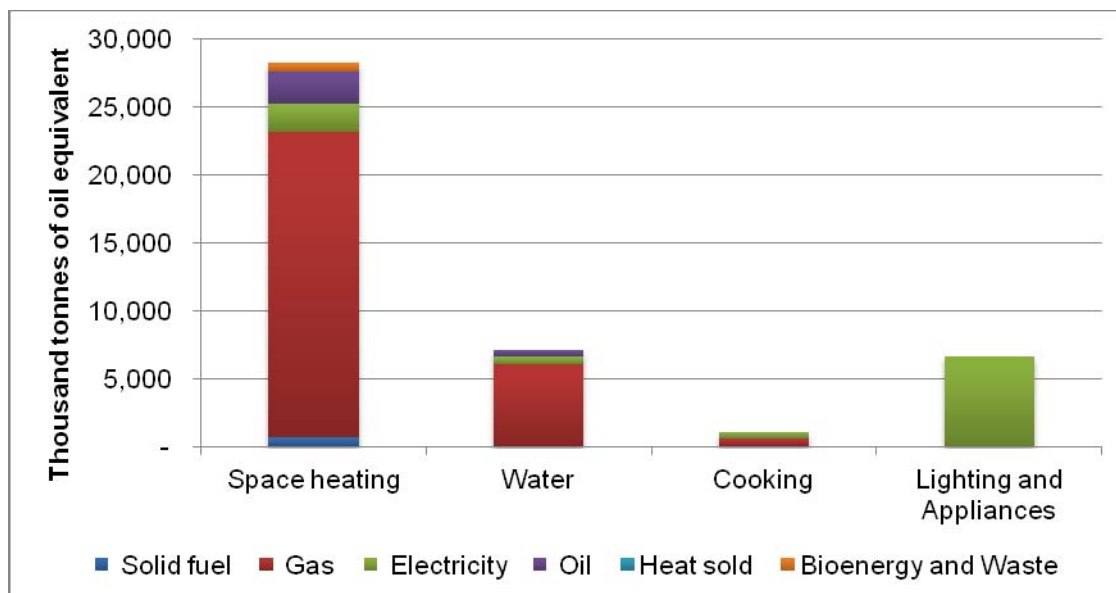
<sup>70</sup> DECC (2013) *Energy Consumption in the UK*, Chapter 3, <http://bit.ly/1FvicX3>

<sup>71</sup> Table 3.04 in DECC (2013) *Energy Consumption in the UK*, Data Tables <http://bit.ly/1COUdhp>

## 4. Energy use today

UK households use gas for 79 per cent of space heating and 84 per cent of water heating. Also notable from the Government statistics presented in Figure 13 is the similarity between the level of energy used for all lighting and appliances and that used for water heating.<sup>72</sup>

**Figure 13: UK domestic energy use by end use and fuel (2012)**



### Space heating

Space heating consumption is primarily driven by the external temperature and the thermal efficiency of a property's fabric, but fuel mix and technology also affect demand patterns. For example storage heaters enable use of electricity at off-peak prices, with the energy purchased during off-peak hours and emitted as heat over the subsequent hours. Heat pumps consume less electricity than standard convection heaters but do so over a longer period.

Most published work focuses on the time of use of electricity due to both its greater time sensitivity and the high costs of peak use in terms of generation capacity. The UK Government's *Household Electricity Survey* found that the main peak for space heating was between 7am and 8am for holidays and distributed between the morning and evening for weekdays.<sup>73</sup> However, in terms of overall demand reduction, an understanding of time of use of gas should be part of the policy development mix as consumers can save money, and carbon emissions can be reduced, by matching space heating to occupancy patterns to reduce the need for greater peak demand infrastructure and more polluting generation.

### Water heating

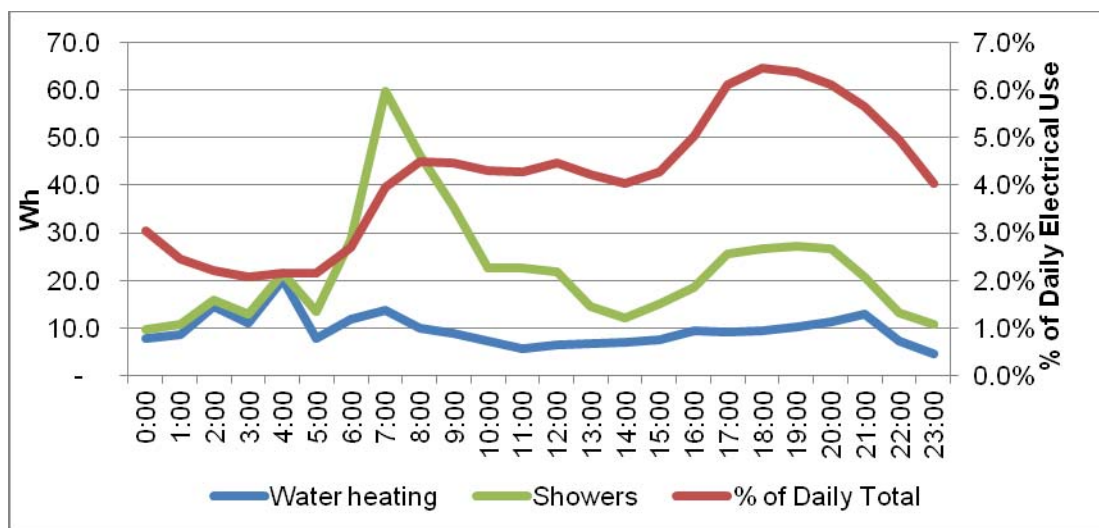
<sup>72</sup> Table 3.05 in DECC (2013) *Energy Consumption in the UK*, Data Tables <http://bit.ly/1COUdhp>

<sup>73</sup> Intertek (2012) *Household Electricity Survey*, A study of domestic electrical product usage <http://bit.ly/1nxCitM>

## 4. Energy use today

Since 1970 the proportion of energy use for water heating has decreased from 30 per cent to 18 per cent.<sup>74</sup> This is due to reduced heat losses from water storage, through better insulation of tanks and pipes, and through improved efficiency of boilers.

**Figure 14: Household daily electricity use for water heating and showers, UK<sup>75</sup>**



The move to condensing boilers, together with greater pressure on the ‘living space’ within homes, has seen a reduction in the use of hot water storage tanks. While the case for space reduces their value in the current market, there is the potential for such tanks to help people store energy as heat for use in later hours, days or even months, and take greater benefit from onsite renewable power, or heat generated from lower cost off-peak power.

### Appliance use

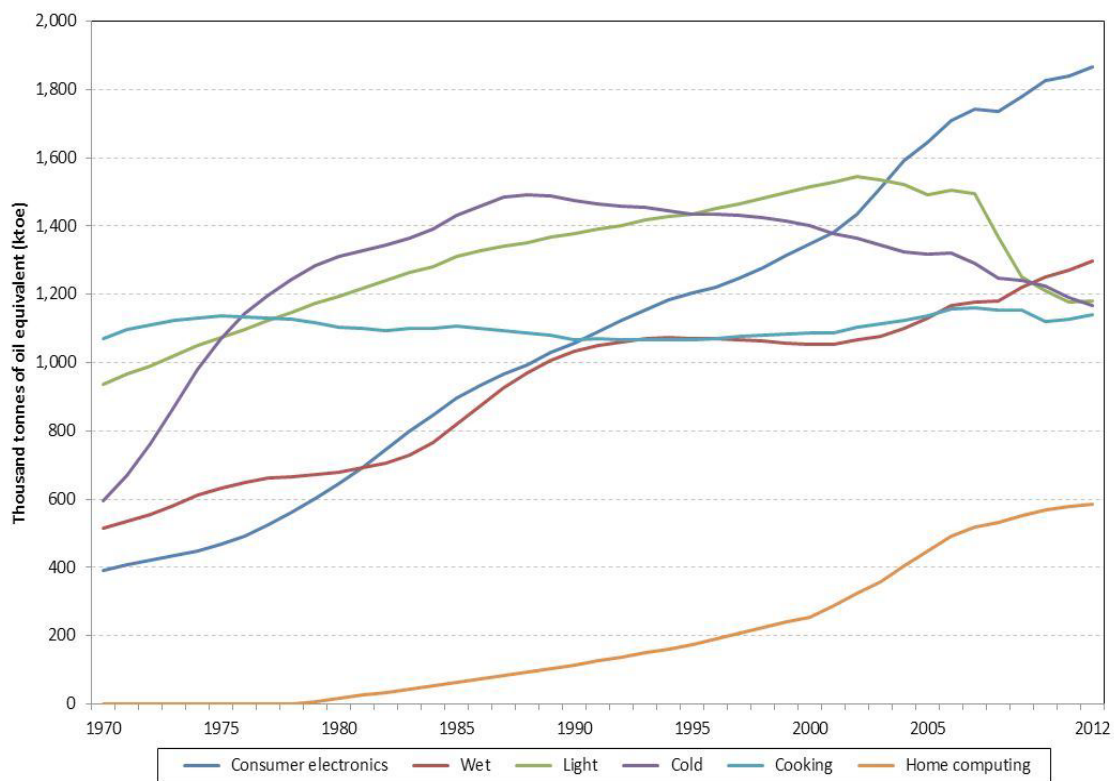
Consumption of electricity in the home since 1970 has grown at a rate of around 1.7 per cent each year. Figure 15 shows significant decreases have only been seen in lighting and cold appliances. Use of electricity for cooking is the most steady over the period, and it is worth noting at this point that not all reductions should be welcomed – for example a significant reduction in in-home cooking could be driven by higher use of ready meals or takeaways with the potential health-related implications.

<sup>74</sup> DECC (2013) *The Future of Heating*

<sup>75</sup> Table 3.11 in DECC (2013) *Energy Consumption in the UK*, Data Tables <http://bit.ly/1COUdhp>

## 4. Energy use today

**Figure 15: Electricity consumption by domestic appliance, by broad type, UK (1970 - 2012)<sup>76</sup>**



CONSUMER ELECTRONICS	WET	LIGHT	COLD	COOKING	HOME COMPUTING
TV	Washing Machine	Standard Light Bulb	Chest Freezer	Electric Oven	Desktops
Set Top Box	Washer-dryer	Halogen	Fridge-freezer	Electric Hob	Laptops
DVD/VCR	Dishwasher	Fluorescent Strip Lighting	Refrigerator	Microwave	Monitors
Games Consoles	Tumble Dryer	Energy Saving Light Bulb	Upright Freezer	Kettle	Printers
Power Supply Units		LED			Multi-Function Devices <sup>3</sup>

<sup>76</sup> DECC (2014) *Energy Consumption in the UK*, <http://bit.ly/1FvicX3>

## 4. Energy use today

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### The demographics of electricity use for appliances

Electricity usage will depend on the number and size of appliances in homes, the age (and therefore efficiency) of those appliances, and how they are used in the home. The UK Government's recent report *Powering the Nation 2*<sup>77</sup> on electricity use in owner-occupied homes gives helpful insights into these factors, including:

- Households typically purchase new appliances only when existing ones stop working, with notable exceptions
  - TVs tend to get reused elsewhere in the home
  - Faults in cold appliances, such as poor seals or a faulty thermostat are not always evident, and the survey found around a fifth of old freezers are faulty consuming 330kWh (£45) a year more than they should.
  - The size of all major appliances, other than dishwashers, is increasing; and is often more important than the energy rating in determining the overall energy use of the appliance.
- There are few links between household characteristics and energy labels, perhaps in part due to the higher price of more efficient appliances. Other factors are more significant:
  - Number of residents
    - Single person households use above-average energy per person (2480kWh)
    - Couples use 2,100 kWh a year per person
  - Working status
    - Retired households use a fifth less than average
    - People out of work but in working age use a quarter more than average
    - People in social grade A tend to use more electricity than other social grades.
  - Appliance ownership, such as a link between tumble dryer use and high electricity use
  - Dwelling size drives lighting use.

The Consumer-Led Network Revolution (CLNR) Project<sup>78</sup> found that income has the strongest association with total and 4pm to 8pm electricity demand, with higher income households consuming on average 2.9kWh per day in June and July and 4.7kWh per day in December more than lower income households.

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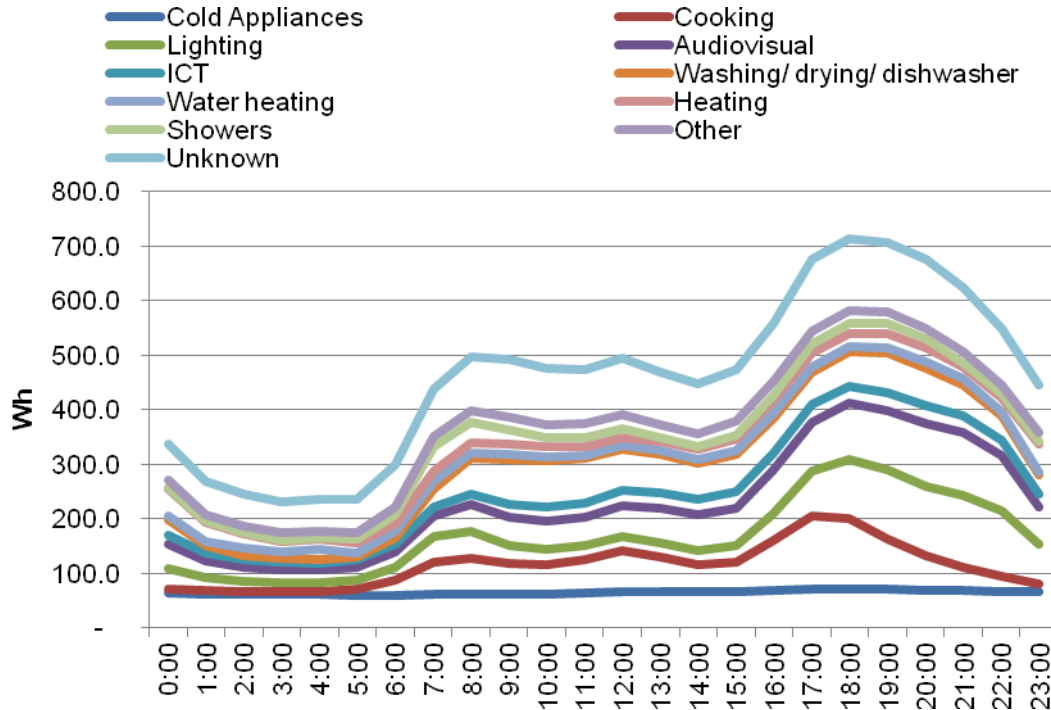
<sup>77</sup> DECC (2014) *Powering the Nation 2*, <http://bit.ly/1oQCMs7>

<sup>78</sup> CLNR (2014) *Briefing Note April 2014* <http://bit.ly/1whqVXH>

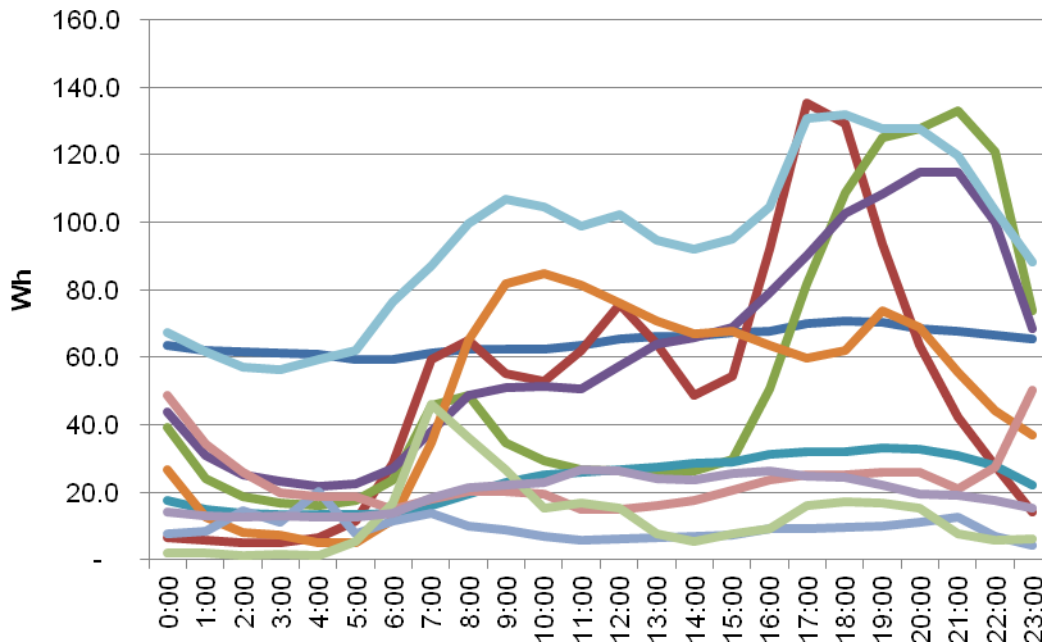
## 4. Energy use today

### The time of electricity use

**Figure 16a: Household average daily electrical use, by appliance type, cumulative<sup>79</sup>**



**Figure 17b: Household average daily electrical use, by appliance type, comparative**



<sup>79</sup> Table 3.11 in DECC (2013) *Energy Consumption in the UK*, Data Tables, <http://bit.ly/1COUdhp>

## 4. Energy use today

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Figures 15a and 15b present electricity use over a 24 hour period in a sample of 250 homes, the overall pattern of which tallies with a larger sample of 8,000 homes under the CLNR project under the Low Carbon Networks Fund.<sup>80</sup>

The overall demand profiles from both the DECC and the CLNR datasets show three defined periods within the day, with significant periods of transition between them in terms of growing or falling demand:

- Low demand: 00:00 to 05:00
- Medium demand: 07:00 to 15:00
- Peak demand: 17:00 to 22:00

What drives energy use in those periods?

Period	Appliances with significant use (where greater than 15% during at least one hourly period)
Low / night	Cold appliances Unknown
Medium / morning	Washing/drying/dishwasher Cooking (only at 12:00) Unknown
Peak / evening	Cooking Lighting Audiovisual Unknown

It is also worth noting that cold appliances are a significant baseload, with steady energy consumption through the day as shown in

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<sup>80</sup> CLNR (2013) *Customer Trials Knowledge Sharing Event, 1 October 2013* <http://bit.ly/1wls67z>



## 4. Energy use today

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### The time of electricity use

Figure 16b.

With pressure growing to decrease use across the day, but particularly at that peak time, we ask how that can be done in an affordable, accessible and safe way, with benefits for all consumers.

### 5. The policy response

Energy efficiency or demand reduction continues to offer the most cost-effective response to the pressures of rising wholesale prices; the UK's ageing energy supply infrastructure; and the potential impact of the electrification of heat and transport on demand for electricity and gas.

This section considers how the European and UK governments and industry, are responding to those challenges at present. The following sections then consider the detail of those policies, and how they work in practice. Are consumers able to take control of their bills by using less, wasting less and paying less; or will they continue to be the passive recipients of rising bills?

#### Energy efficiency and the EU

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The tension at European level, and indeed at national level, is between 'the defining challenge of our time' and the defining challenge of the day. Compromise is often sought between green campaigners and industrial vested interests, with the voice of consumers often lost in the debate.

In 2007 the European Council adopted three objectives for 2020:

1. greenhouse gas emissions 20 per cent lower than 1990
2. 20 per cent of energy from renewables
3. 20 per cent increase in energy efficiency.

By 2030, the European Union aims to cut greenhouse gas emissions by 40 per cent on 1990 levels, despite forecasts suggesting that the energy efficiency objective for 2020 is in doubt.<sup>81</sup> A Communication published by the Commission in late July 2014 suggested that the current 2020 target could be achieved with rigorous enforcement of already agreed EU legislation, but also called on national governments to bring in a new Energy Efficiency Target for 2030 of 30 per cent. This would be implemented alongside a binding target for energy consumed to comprise of at least 27 per cent from renewable sources in 2030.

The Commission estimates the increase of the target, from 25 per cent, increases the annual cost of the 2030 Framework by €20 billion, but cites the need to reduce the Union's import dependency alongside economic benefits. At the household level, the Commission estimates efficient appliances could save consumers €53 billion on their annual energy bills by 2030. It also reduces the risks and costs of energy insecurity: every 1 per cent in additional energy savings will cut gas imports to the Union by 2.6 per cent.<sup>82</sup>

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<sup>81</sup> European Commission (2014) *Communication from the Commission to the European Parliament and the Council*, 'Energy efficiency and its contribution to energy security and the 200 framework for climate and energy policy', <http://bit.ly/1pJDGWI>

<sup>82</sup> European Commission (2014) *Questions and answers on the Energy Efficiency Communication*, <http://bit.ly/1nfAh3l>

## 5. The policy response

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However, the EU Summit on 23/24 October 2014 is expected to confirm that the target will remain indicative (or non-binding) only.

The Commission will monitor member states' energy efficiency plans and assess the prospects for: achieving national/EU targets, the outlook for the EU's energy dependence and the effective functioning of the energy market, on the basis of 'appropriate' indicators.

In the run-up to 2020 further EU measures should emerge if progress is judged too slow, due to the concurrent geopolitical pressure to reduce the EU's dependence on gas imports from Russia. For example, the Energy Efficiency Directive 2012 seeks to support the delivery of the 'still existing great potential for energy efficiency'.<sup>83</sup> This Directive links with the obligations already set out in Directive 2009/125/EC on Ecodesign, Directive 2010/30/EU on energy labelling and Directive 2010/31/EU on the energy performance of buildings. All these legislative instruments are subject to review within the term of the incoming Commission (2014-2019). In turn, the Ecodesign and Energy Labelling Directives and the Energy Performance of Buildings Directive are both subject to review.

Half of the efficiencies expected to result from the Energy Efficiency Directive come from its Article 7. This 'requires Member States to establish energy efficiency obligation schemes or use alternative policy measures to achieve a certain targeted amount of energy savings amongst final consumers',<sup>84</sup> an article strongly influenced by learning from energy efficiency policy in Great Britain. Potential alternatives (that must reduce end-use consumption) are carbon taxes; financing schemes and fiscal instruments; public-backed national funds; regulations and voluntary agreements; product, building, service and vehicle standards; energy labelling schemes (in addition to those already required under the Energy Labelling Directive); and training and education schemes.<sup>85</sup>

The EU plays a more direct role in the energy efficiency of the UK's homes through the European Regional Development Fund (ERDF). This aims to strengthen links across the European Union by 'correcting imbalances' between regions (at sub-national level), through projects that invest in innovation and research, the digital agenda, support for small and medium enterprises, and the low-carbon economy.<sup>86</sup> This Fund is currently behind the Welsh Government's Arbed scheme<sup>87</sup> which will see £75 million of EU funding leveraging a further £32 million from energy suppliers and registered social landlords, to improve the energy efficiency of 10,800 homes to help eliminate fuel poverty.

The barriers to uptake of energy efficiency are numerous and substantial. The Citizens Advice Service is therefore supportive of the EU's broad approach to incentivising action and the freedom for member states to determine how targets are met.

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<sup>83</sup> Communication from the Commission to the European Parliament and the Council – *Implementing the Energy Efficiency Directive – Commission Guidance*, <http://bit.ly/1s1tBDv>

<sup>84</sup> *ibid*

<sup>85</sup> EC European Commission (2013) *Guidance note on Article 7: Energy Efficiency Obligation Schemes*, <http://bit.ly/1x3AwQN>

<sup>86</sup> European Commission (2014) *European Regional Development Fund*, <http://bit.ly/1tHzHAb>

<sup>87</sup> Arbed (2014) *Arbed 2 ERDF*, <http://bit.ly/1Fv11HF>

## 5. The policy response

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Obligations are helpful, whether they are on energy companies or public bodies, as they ensure measures are delivered; but are insufficient by themselves. If consumers are to change behaviour they need to believe the advantages outweigh the disadvantages.

It is not enough to have a free or subsidised offer, and in any case it is impractical, unfair and inefficient to subsidise improvements to all homes. Instead, while continuing direct financial support where it is needed to tackle fuel poverty or kickstart new technologies, behaviour change should be catalysed by a combination of measures that exemplify best practice and encourage, enable and engage the consumer<sup>88</sup> – an approach that is supported by Article 7 above.

### GB energy policy and energy efficiency

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There is cross-party consensus that energy efficiency can deliver benefits for the entire country on a range of counts. It is a major component in policies combating fuel poverty, is fundamental to delivery of the climate change legislation, and indirectly supports delivery of the legally binding renewable targets set by the EU. It also supports the maintenance of secure energy supplies, by reducing reliance on imported energy. Businesses can benefit from increased productivity and new opportunities and efficiency can deliver lower bills.

The 2012 Energy Efficiency Strategy<sup>89</sup> recognises the need for a dramatic increase in savings from energy efficiency if the UK is to cut emissions of greenhouse gases by 80 per cent by 2050, in line with the target set by the UK Climate Change Act. It identifies the potential for additional savings and ways those can be delivered.

The potential for savings from the UK's homes are presented in order of cost-effectiveness in

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<sup>88</sup> Consumer Futures (2011) *Green Deal or No Deal*, <http://bit.ly/122Awr5>

<sup>89</sup> DECC (2012) *Energy Efficiency Strategy*, <http://bit.ly/1vGcj55>

## 5. The policy response

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Table 2. Of these the UK Government believes there is the cost-effective potential to save 56TWh, 55TWh of which are expected to be delivered from current policies in the subsequent table.

## 5. The policy response

**Table 2: Potential energy savings by measure, as identified in DECC's 2012 Energy Efficiency Strategy**

Name of measure	Energy saving (TWh) in 2020
Best available technology – domestic lighting	1
Smart meters	8
Best available technology – domestic appliances	3
Community Energy Saving Programme	<1
Carbon Emissions Reduction Target (20% uplift and extension)	10
Building regulations for new homes 2010	2
Easy to treat cavity wall insulation	3
Building regulations for new homes 2013	3
Domestic loft insulation	1
Hard to treat cavity wall insulation	5
Building regulations for existing homes 2013	16
External solid wall insulation	3
Air source heat pumps	15
Internal solid wall insulation	10
Ground source heat pump	9
<b>TOTAL potential identified (TWh)</b>	<b>77</b>

Energy use in domestic buildings is affected by a range of energy efficiency policies, some differing by nation (Table 3).

**Table 3: Summary of GB energy saving policies<sup>90</sup>**

Policy area	Policy	Legislation and regulation	Energy saving in 2020 (TWh)
<b>Use less</b>			
Products policy	Minimum energy efficiency standards, energy labelling	Ecodesign for Energy-Using Products Directive 2009/125/EC, Energy Labelling Directive 2010/30/EU	4
Building	Design and installation of	Building Regulations	

<sup>90</sup> DECC (2012) *Energy Efficiency Strategy*, <http://bit.ly/1vGcj55>

## 5. The policy response

regulations	fixed building services in new and existing homes	Part L 2010; Building (Scotland) Act 2013	
Heating and ventilation controls	Building regulations	Building Regulations Part L 2010; Building (Scotland) Act 2013	4 – 33TWh <sup>91</sup>
Renewable heat and power	Renewable heat incentive, Feed-in tariff	Energy Act 2008	24 (heat only)
<b>Waste less</b>			
Energy Efficiency and existing homes	Green Deal, Energy Company Obligation, Decent Homes, Home Energy Efficiency Programmes (Scotland), Nest and Arbed (Wales, fuel poverty and area-based programmes respectively), Energy Performance Certificates, Minimum standards in the private rental sector in England, and in all private sector housing in Scotland	Energy Performance of Buildings Directive 2010/31/EU, Energy Act 2012; Sustainable Housing Strategy for Scotland	33
Building regulations and zero carbon homes	New-build homes to be 'zero carbon' from 2016 (though standards are being weakened in all nations), building renovations	Building Regulations Part L 2010	21
<b>Pay less</b>			
Simpler, clearer, fairer energy market	Simpler tariffs, switching	Licence modifications arising from Ofgem's retail market review	N/A
Smart meters	In-home displays, time-of-use tariffs		8
Less tax	Stamp Duty Relief for Zero Carbon Homes, Landlords Energy Saving Allowance (LESA), Reduced VAT for energy saving materials		Not referenced by DECC

<sup>91</sup> Savings from heating controls are not considered in the Energy Efficiency Strategy 2012

## 5. The policy response

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Energy efficiency in the domestic sector consistently offers many of the most cost-effective carbon savings, with direct benefits for residents, and societal benefits through reduced environmental costs and healthcare costs.

The following sections examine the related policies, their potential to help consumer use less, waste less and pay less; and the barriers to reaching that potential.



## 6. Use less

### Product policy

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The UK Government anticipates that increased energy efficiency of products will reduce average household bills by a net £158 by 2020 and play a key role in meeting our national carbon reduction targets.<sup>92</sup> However, increases in the number of appliances in homes and in the size of certain products have the potential to undermine this reduction.

Under the 2009 *EU Framework Directive for the Eco-Design requirements for Energy Related Products*, products policy includes legally binding EU minimum standards, which raise the minimum level of efficiency of energy using products available on the market. Households and businesses automatically comply with these standards when purchasing products sold within the EU.

For certain products, the Energy Labelling Directive also applies. 'A+++ to G' labels show consumers which are the most efficient products available.

Enforcement of the regulations remains an issue as Trading Standards resources are increasingly limited, but in other areas there is potential for improvement. The EU is reviewing the presentation of appliances' energy performance,<sup>93</sup> and John Lewis and DECC are partnering in the testing of the inclusion of running costs on labels.

Many consumers are interested in energy savings when buying products – only 11 per cent are not – but in 41 per cent of cases the energy rating does not influence their decision.<sup>94</sup> Lack of awareness and understanding are common reasons for not using the energy label, and there is good reason for being turned off by energy labels:

- By extending the rating system to 'A+++', rather than keeping 'A' as the highest rating, the EU made the rating system harder to understand.
- The label does not include running costs, making it difficult for absolute comparisons.
- Labels are weighted according to size, so do not reflect the extra energy a larger product will use.
- Many consumers research and make their shortlist for product purchases online, but compliance for online energy labelling lags behind in-store labels.<sup>95</sup>

The Government needs to address the gaps in compliance and ensure labels are meaningful to consumers. This requires action at local, national and EU levels.

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<sup>92</sup> DECC, 2013, *Estimated impacts of energy and climate change policies on energy prices and bills* <http://bit.ly/1w0AKZd>

<sup>93</sup> EU (2013) *Evaluation of Energy Labelling Directive and certain aspects of the Ecodesign Directive*, <http://bit.ly/10haiQY>

<sup>94</sup> Consumer Futures (2012) *Under the influence? Consumer attitudes to buying appliances* <http://bit.ly/1wsdaX0>

<sup>95</sup> NMO (2012) *National Measurement Office enforcement annual report 2011-12*, <http://bit.ly/10hapfq>

### Building regulations<sup>96</sup>

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Part L of the Building Regulations for England and Wales sets minimum standards of efficiency for the installation of new and replacement gas condensing boilers. It also sets minimum energy efficiency standards whenever building work is carried out on new and existing buildings, including windows, building fabric insulation, energy efficiency of fixed heating, domestic hot water systems, mechanical ventilation, air conditioning and lighting which can deliver further gas and electricity savings to domestic and non-domestic buildings in England and Wales.<sup>97</sup>

Building regulations seek to address a number of market failures, recognised by the UK Government as:<sup>98</sup>

- The externalised cost of carbon emissions emitted from buildings.
- Lack of information on future energy price rises.
- Energy use is a minor factor in property purchase or rental.
- A failure to set standards at the point of build will lock residents into higher energy consumption, with a limited scope for savings.
- Split incentives mean developers have little reason to build better performing buildings, as they do not benefit from energy savings and the value is not recognised in the sale or rental price.

By embedding higher standards of design and installation, building regulations reduce running and maintenance costs for consumers. Their role is often unseen and perhaps unvalued by consumers but must be protected against over-zealous deregulation. In fact, regulation at this stage can remove the need for later, more costly, interventions. For example, improved efficiency in boilers required under building regulations and the fairly regular and reliable rate of turnover has led the Committee on Climate Change to recommend that ‘the large number of boiler installations taking place every year suggests that no specific incentives are needed to promote new boilers in able-to-pay households’.

Minimum standards set a level playing field and ensure all consumers benefit as they take up new products, services and buildings. This is one way to reduce the cost of new technologies, as old inefficient approaches are unable to compete legally, and ensure efficiency is introduced for the whole market and not marketed as a premium service for wealthier consumers.

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<sup>96</sup> Excerpt from DECC (2013) *Estimated impacts of energy and climate change policies on energy prices and bills*, <http://bit.ly/1w0AKZd>

<sup>97</sup> Building Regulations are devolved to Scotland, Northern Ireland and now Wales but all now have minimum standards calling for high efficiency condensing boilers.

<sup>98</sup> DCLG (2013) *Impact Assessment for Part L*, <http://bit.ly/1t7w6uw>

### Heating and ventilation controls

Evaluations of energy efficiency schemes have provided increasing evidence of a 'performance gap' between predicted and actual energy use following installation of energy efficiency measures<sup>99</sup>. This is often blamed on 'user behaviour',<sup>100</sup> yet it is unlikely that people wilfully misuse buildings<sup>101</sup>. Instead it is likely that difficulties with using controls for both old and new technologies are causing unnecessary energy use and/or unnecessary discomfort.

In the absence of an EU energy label for controls, Energy Saving Trust Recommended (EST-R) is currently the only energy saving certification scheme for controls, although in the case of heating controls it has little scope for effectively discriminating between them.

Where controls are used, a DECC-sponsored study of energy saving potential from small behaviour changes found the following potential annual savings:<sup>102</sup>

- Turn thermostat down by 2 degrees from 20°C to 18°C (33 TWh)
- Turn thermostat down by 1 degree from 19°C to 18°C (16 TWh)
- Delay start of heating from October to November (11 TWh)
- Use radiator valves to turn off heating in unused rooms (4TWh)

The Department for Communities and Local Government (DCLG) believes the predicted savings from effective controls are moderate<sup>103</sup> but are cost-effective. At an estimated cost of £147 and annual savings of £43, the estimated payback is 3.4 years - significantly faster than some policy interventions under DECC's energy efficiency strategy.

70 per cent of consumers with boilers do not have a full set of heating controls<sup>104</sup>. Where they are in place, users are not getting the full potential benefit. Problems include difficult to read displays, difficult to use buttons, lack of intuitive design, poor positioning of controls and a lack of effective supporting information and advice. Furthermore, people who are elderly or in local authority housing are more likely to find their controls difficult to use and rented properties are less likely than owner-occupied properties to have full controls.

There is potential for improving the usability and therefore savings for users but at present the consumer has little choice in the controls installed. Energy efficiency policies for existing and new homes must encourage the building industry to provide engaging and intuitive controls.

<sup>99</sup> Marianne Heaslip, 2011, *Low carbon housing for non-experts: usability in whole house retrofit*

<sup>100</sup> Several sources, cited in *ibid*.

<sup>101</sup> Technology Strategy board, cited in *ibid*.

<sup>102</sup> DECC (2011) *How much energy could be saved by making small changes to everyday consumer behaviours*, <http://bit.ly/10h41F4>

<sup>103</sup> DCLG, 2006, *Review of the Sustainability of Existing Buildings*

<sup>104</sup> Consumer Focus (2012) *Consumers and domestic heating controls* <http://bit.ly/ZMkwbq>

## Domestic renewable energy generation

The UK is legally committed to meeting 15 per cent of its energy demand from renewable sources by 2020. In Scotland there is a target to meet a commitment to supply 100 per cent of energy demand from renewable sources by 2020.<sup>105</sup> Feed-in tariffs were introduced in April 2010 for systems up to 5MW, and may be extended to 10MW for community projects.

### Technologies

Solar PV

Wind turbines

Hydroelectricity

Anaerobic digesters

Micro Combined Heat and Power (CHP)

Those installing renewable electricity systems in their homes benefit from:

1. a payment per kWh generated
2. a much smaller payment per kWh exported to the grid
3. when using electricity generated onsite this is free and the household avoids the costs of importing power.

In the average scenario this should add up to a 5-8 per cent return on investment, with solar PV getting a return to the lower end of that scale due the lower barriers to its installation (for example, it has permitted development status in the planning process). Payments are made for 20 years and rise with the Retail Price Index (RPI).

In 2012 DECC introduced a rule that households can only receive Feed-in tariff payments for new solar PV installations if the property reaches EPC Band D or above.

The Feed-in tariff attracts criticism for its expense, but we continue to support its design principles for three reasons:

- It only pays out when systems deliver power. This is a much fairer and reliable output than incentivising proven technologies through grant schemes.
- It is an open system with simple rules – anyone can take part provided they can source the upfront costs.
- High uptake has a cost, but has in turn delivered substantial cuts in upfront costs. The average price of a typical 3.5kWh system has fallen to £6,750, down from £12,000 in 2012. This opens up the option to more consumers and communities.

The two principal issues for us are the high upfront cost, and the barrier that poses to low income consumers, and the cost-effectiveness of related carbon savings. Prior to its introduction we called for a much closer relationship between the tariff and the market cost indicators to avoid the risk of rent-seeking by the market, or over-payment to generators; a risk that was only addressed when it became an issue in late 2011.

<sup>105</sup> Scottish Government (2013) *Low Carbon Scotland*, <http://bit.ly/1s8ZBeQ>

The issue of high upfront cost can be overcome through third-party ownership, by private, public or community organisations. However, if on-site generation is to help combat fuel poverty, residents need assistance with aligning use to generation<sup>106</sup>. The question of the cost-effectiveness of carbon savings is more challenging.

Investment is needed to scale up technologies to compete with generation reliant on increasingly expensive fossil fuels; and investments are being made across the supply chain, with the Feed-in tariff more evident as it is levied by the UK Government. The nature of a return on the investment is not in itself a negative. The issue is the cost per kWh of low carbon electricity. These costs, particularly in the solar PV market, are reducing significantly as a result of investment in the UK and globally.

We also welcome measures to reduce the costs of delivery such as permitted development rights,<sup>107</sup> and support for community energy projects<sup>108</sup> such as the Community Energy Funds and (albeit at risk under the 2014 Budget) the Enterprise Investment Scheme.

We think additional support for community energy is appropriate in order to support the immature market; build social cohesion and action around the need to 'use less, waste less and pay less'; to recognise the range of benefits that community organisations are required to deliver; and the restrictions on the return on investment to investors in community energy schemes.

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<sup>106</sup> EAGA (2014) *Using solar PV to tackle fuel poverty*, <http://bit.ly/1s1uCLK>

<sup>107</sup> MCS (2014) *Planning information*, <http://bit.ly/1yUe0OR>

<sup>108</sup> DECC (2014) *Support available for community energy*, <http://bit.ly/1ytSLEI>

## Renewable Heat Incentive

There are about 3.9 million British households who use non-mains gas heating fuels, such as LPG, oil and electricity; evenly split between urban and rural areas. Those in urban areas tend to use electric heating, and rural homes off the gas grid mainly use heating oil.

The UK Government's Renewable Heat Incentive (RHI) could move 750,000 of these homes on to renewable heating systems in support of its carbon reduction target and the EU's renewable target.<sup>109</sup>

The domestic RHI, open to applicants from spring 2014, is a financial support scheme for renewable heat, targeted at, but not limited to, off gas grid households. The support is paid at a set rate per unit of renewable heat produced (kilowatt hour or kWh), for seven years, to the owner of the heating system, giving an overall return of 16 per cent to domestic consumers.<sup>110</sup> The support rates vary depending on the technology installed.

All applicants are required to complete a Green Deal Assessment as part of the application process and meet minimum energy efficiency requirements.

### Technologies

Air source heat pumps

Ground source heat pumps

Biomass systems

Solar thermal

The Citizens Advice Service considers two aspects of the RHI as cause for concern. While recognising the need to migrate to renewable sources of heat, we have concerns about the barriers to that migration, and the experience of consumers who make the move.

The barriers to the take-up of renewable heating systems in a domestic setting include:

- high up-front costs of installation
- lack of consumer familiarity with the technologies and their operation
- disruption associated with installation
- lack of understanding of the benefits, in terms of reduced running costs compared to off-gas alternatives
- reported poor experiences, perhaps related to some of the above.

We are particularly concerned about the upfront cost barrier. Ideally current policies aimed at the fuel poor, such as the Energy Company Obligation (ECO), should complement the RHI to help deliver affordable renewable heat for this consumer

<sup>109</sup> DECC (2013) *Domestic RHI Policy Statement*, <http://bit.ly/1wlsItI>

<sup>110</sup> CCC (2014) *Meeting Carbon Budgets – 2014 Progress Report to Government*, <http://bit.ly/1oWKvVJ>

group. However, it seems unlikely that Affordable Warmth ECO (the fuel poverty component of ECO) will support the installation of renewable heating measures due to their high upfront cost. DECC should clarify how RHI can interact with Green Deal and ECO and consider further steps to enable ECO to promote affordable renewable heat. They should also work closely with the devolved administrations to look for potential synergies with their Nest and HEEPS programmes.

Ensuring social housing is an active participant in the scheme will also help the RHI scheme have a wider socio-economic reach. Research by Consumer Focus Scotland<sup>111</sup> showed that renewable heating can and does provide affordable warmth for off-gas consumers living in social housing. However, the same research also showed that social landlords took some time to overcome the barriers above. Both landlords and tenants also highlighted the need for easy to use controls and for support for tenants to understand how to use their new systems on an ongoing basis; lack of such support was associated with confusion, inefficient use of the systems, and therefore higher costs.

Among middle income households, it would help if Green Deal finance could help spread the cost, and tie the installation of renewable heat in alongside fabric efficiency measures that in turn may help reduce the costs of installation by reducing heat demand. This shows, as we have previously noted in our consultation response to DECC's RHI consultation,<sup>112</sup> that the introduction of the financial support will not be sufficient to overcome these barriers in isolation. Other measures are needed to exemplify new technologies and enable and encourage their installation.

In terms of quality of service in the emerging market, complaints to the Citizens Advice consumer service during the first three months of the RHI can be categorised as misselling, pressure selling, delays in paperwork, poor quality installation, uncertainty about responsibilities between different parties, and running costs. Of most concern are the enquiries relating to companies that have claimed to be MCS-accredited, but consumers only find out they are not when their claim for the RHI is rejected.

The Citizens Advice Service wants a single, clearer badge for companies offering accredited energy services, making it easier for consumers to understand and advice agencies to communicate who consumers can trust.

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<sup>111</sup> Consumer Focus Scotland (2012) *21<sup>st</sup> century heating in rural homes*, <http://bit.ly/1opa3OC>

<sup>112</sup> Consumer Focus (2012) *Response to the DECC consultation on the RHI* <http://bit.ly/1sJL4UK>

## Electricity Capacity Market

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Older power plants are closing, and the business case for investing in reliable and flexible capacity is uncertain.<sup>113</sup> The Capacity Market aims to deliver security of supply by providing a reliable revenue stream to capacity providers. The level of revenue will be set by an annual, competitive auction, and in return for the certainty of revenue there will be penalties where providers fail to deliver the required capacity.

The following will be eligible to participate in the Capacity Market:

- New and existing generation capacity (including CHP)
- DSR (including embedded generation)
- Storage
- Permanent reductions in electricity demand (EDR) could also participate.

The inclusion of DSR and EDR will be subject to further research and pilots but the Capacity Market is the Government's preferred route to deliver a financial incentive for electricity demand reduction because it:<sup>114</sup>

- targets reductions at peak demand and so incentivises demand reduction at times when it is more valuable
- enables EDR to be delivered where the price reflects the value it provides to the system, competing directly with supply
- avoids the creation of a separate delivery mechanism, reducing deliverability risk
- enables DSR and EDR to be brought together in a single delivery vehicle enabling more effective, joined up delivery of both policies.

The Capacity Market is not a level playing field. It only values the cost of a kWh (either generated or saved). This means that the additional social value of reducing cold-related illnesses, (worth over £1 billion per year to the NHS in England and Wales), the potential for green jobs nationwide or the environmental value of reducing greenhouse gas emissions are ignored.

Further the administrative costs of aggregating savings by domestic consumers are likely to be significant and are the key barrier to participation in the scheme. DECC should explore the potential for a link to the ECO brokerage scheme, or occasional voucher schemes, to deliver lower administrative costs, and the Scottish and Welsh governments may be able to build links to their area-based energy efficiency programmes; meanwhile it appears unlikely that the Capacity Market will directly incentivise demand reduction among domestic consumers.

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<sup>113</sup> DECC (2013) *Electricity Market Reform: Capacity Market – Detailed Design Proposals*, <http://bit.ly/1Fvo82n>

<sup>114</sup> DECC (2013) *Government response to consultation on Electricity Demand Reduction*, <http://bit.ly/1tHBiGj>



## Gas security of supply

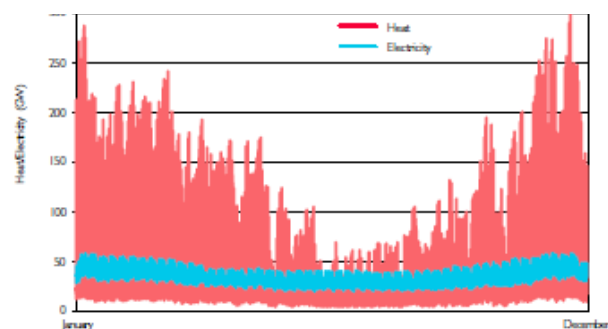
Since 2004, Great Britain has been a net importer of gas. Ofgem has observed that although international markets have worked satisfactorily to date, there is some uncertainty over supply in the future. Disruption has been, and will continue to be, caused by natural disasters, technical failure and the geopolitics of energy.<sup>115</sup>

Concerns about such disruption led a UK Government request for an Ofgem review of long-term security of supply. The resultant report<sup>116</sup> balances the significant impact of interruption of gas supplies on homes and businesses with the low probability of such an event. Ofgem considered options for addressing the risk, ranging from information provision to market participants to direct support for additional gas storage. A demand response option was considered, in the form of a tender process for large customers to offer volumes of gas demand reduction through a winter-ahead auction. However, the administration costs and focus on one part of the market affect this approach's cost-effectiveness and Ofgem's initial focus is on interconnector capacity and information provision.

Domestic and small business customers account for half of gas demand, so we have to question whether there is a potential for savings here to assist security of supply that has not been investigated by Ofgem. We understand that gas has a very different demand profile to electricity. So while networks are still built to meet peak demand, and the cost drivers for demand reduction remain, the focus of demand reduction policies will differ. Electricity use has very distinct peaks during the day, which are generally comparable through the year. Gas use is up to six times higher on a cold day in winter than a warm day in summer (see Figure 18), but there is surely potential for a reduction in demand to have a significant impact on investment requirements in the distribution network.

It appears peak demand reduction has a financial benefit that is not currently recognised by Ofgem, that could be delivered through existing technologies to improve the thermal efficiency of homes. The Citizens Advice Service would welcome investment in gas demand reduction to reduce investment costs.

**Figure 18: Comparison of heat and electricity demand variability across a year (domestic and commercial) – 2010**



<sup>115</sup> Ofgem (2012) *Gas security of supply report*, <http://bit.ly/1sJCYeJ>

<sup>116</sup> *ibid*

### 7. Waste less

In recent years the key government programmes to reduce the waste of energy by British homes through improving thermal efficiency have been the Carbon Emissions Reduction Target (CERT, 2008-12) and Community Energy Saving Programme (CESP, 2009-2012), which concentrated on carbon reduction, and the Warm Front Programme (2000-2012) which concentrated on fuel poverty. Warm Front was publically funded, while CERT and CESP were obligations on energy companies funded by energy consumers. These programmes concluded at the end of 2012, and were superseded by the Green Deal and Energy Company Obligation (ECO).

The Government ended a 30-year history of taxpayer-funded energy efficiency programmes across Britain. The ECO is Government-backed but is funded through energy bills and delivered by energy suppliers. The concept of energy companies offering services that go against their obvious commercial interests is potential confusing for consumers, and does not invite trust in their marketing offers.

Additional taxpayer-funded programmes remain in Wales and Scotland. In Scotland these have included the Green Homes Cashback Scheme and Home Energy Programmes for Scotland (HEEPS). The Welsh Government has two schemes, Nest (a demand-led scheme) and Arbed (an area based scheme funded through the European Regional Development Fund).

Waste arising from poor levels of insulation in electrically heated homes and other homes not on the gas grid is of particular concern to Citizens Advice as the fuels used by these homes are more expensive.

There is significant scope to improve the efficiency of Britain's electrically heated homes. 2.3 million homes in Britain are heated by electricity (9.3 per cent), including 22 per cent of rural homes in Scotland.<sup>117</sup> These properties tend to have a low standard of energy efficiency: only 32 per cent of electric-heated homes in England pass the Decent Homes Standard, compared to 72 per cent of gas-heated homes. It is not clear that Green Deal and ECO will be effective in delivering significant improvements to the energy efficiency of these households, which also pay disproportionately for policy costs as these tend to be levied on electricity bills.<sup>118</sup> Reducing heat demand for these households will also reduce the peak electricity demand and the need for costly grid and generation reinforcement.

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<sup>117</sup> Consumer Focus/William Baker, 2011, *Off-gas consumers: Information on households without mains gas heating*, <http://bit.ly/10hdaxq>

<sup>118</sup> Consumer Futures, 2013, *The hardest hit*, <http://bit.ly/1tHBUeY>

## 7. Waste less

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### Quality and trust

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Quality assurance is key to the fabric efficiency market because works:

- involve significant investment, either by consumers, or on their behalf, through supplier-led or taxpayer-funded schemes
- are often invisible to, or little understood by, the end consumer
- are largely delivered through government funding or targets, rather than a market led by consumer demand
- if not of sufficient quality, can cause long-term and structural problems that are costly and disruptive to remedy<sup>119</sup>

One of the government's stated aims with the introduction of the Green Deal in 2012 was to build confidence in the energy efficiency market<sup>120</sup> through a new package of quality assurance and other consumer protection measures, under a clear consumer-facing accreditation brand.

This clear brand has not emerged. Consumers and industry continue to face a patchwork of different acronyms, accreditation brands and quality assurance regimes across different low carbon and energy efficiency schemes. Different quality assurance regimes and consumer protection schemes exist for energy efficiency measures installed with the ECO, Green Deal and devolved schemes, and for microgeneration measures under the RHI and the Feed-in tariff. These sit within a wider landscape of standards and codes within the Renovation Maintenance Improvement (RMI) sector.

As a whole house retrofit could encompass heating, building, microgeneration and other works, there is a high potential for confusion among consumers, potentially weakening trust, for problems in the resolution of disputes, and for poor quality to go unreported.

The Citizens Advice Service is now scoping research into the potential for improving the quality assurance framework for energy efficiency works, to provide a stronger foundation for consumer trust.

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<sup>119</sup> Office of Fair Trading, 2012, *Home insulation: A report on the Call for Evidence carried out by the OFT*

<sup>120</sup> DECC, 2012, Final Impact Assessment for the Green Deal and Energy Company Obligation <http://bit.ly/1hnKvK4>

### Green Deal

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The three main barriers to energy efficiency measures in the home are high upfront costs, motivation and awareness.<sup>121</sup> The UK Government, with significant stakeholder input, sought to address the barriers with the Green Deal, but the result very much focuses on the cost barrier. This policy introduced a mechanism for funding energy efficiency measures through savings on energy bills. The key innovation was that the payment is tied to the property rather than the individual.<sup>122</sup> The Green Deal introduced a new package of quality assurance and other consumer protection measures, under a clear consumer-facing accreditation brand, with the intention of building confidence in the energy efficiency market.

The UK Government and devolved administrations have complemented the Green Deal with grant incentives, provided both directly for householders installing measures, and for local authorities to use to encourage households to install measures. For householders in England and Wales, an initial cashback scheme ran 2013-14.<sup>123</sup>

This was replaced by the £125 million Green Deal Household Improvement Fund (GDHIF).<sup>124</sup> which opened in June 2014. The first round of the Fund closed for new applications shortly after opening, once vouchers equivalent to the entire value of the fund had been committed; and a new round is to open in November. It is as yet unknown what proportion of the first round of vouchers will result in completed installations.

The Government made £20 million of capital funding available for Green Deal street or area-based proposals. Local authorities were strongly encouraged to work with other partners, and the first six schemes to gain funding represent a total of £19.5m and aim to deliver over 5,500 Green Deal Plans, to over 7,000 households.

For householders in Scotland, the Green Homes Cashback Scheme makes available to owner occupiers, private and social tenants and private sector landlords grants of up to £7,300 for energy efficiency measures that are recommended in a property's Green Deal Advice Report. The Home Energy Efficiency Programmes for Scotland (HEEPS) is a cluster of Scottish Government initiatives that together have been designed to tackle fuel poverty, reduce CO<sub>2</sub> emissions and increase energy efficiency in homes.

The Green Deal in its current (2013) incarnation is a financial service, offering a loan that compares well in the market for long-term fixed finance, particularly for people unable to borrow against the value of their home, but who meet a basic credit score. It has also driven the development of welcome consumer protections. However, these only apply where a Green Deal finance plan is in place; they do not, for example, cover measures funded through the Green Deal Home Improvement Fund (GDHIF).

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<sup>121</sup> Energy Saving Trust cited in Consumer Focus (2011) *Access for All*

<sup>122</sup> DECC (2013) *Green Deal Cashback*, <http://bit.ly/1vGfsBZ>

<sup>123</sup> *ibid*

<sup>124</sup> DECC (2014) *Green Deal Home Improvement Fund*, <http://bit.ly/1hQTaZE>

## 7. Waste less

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We do not expect the Green Deal itself to incentivise people to act because it is neither a carrot nor a stick. The grant incentives encourage installation of measures, but these are temporary measures with a cost to the public purse. It is far from clear that the GDHIF in particular represents value for money for the taxpayer, and the early closure of the scheme, which may have been preventable with better administrative processes, will undermine consumer confidence in future initiatives.

The Citizens Advice Service wants the UK governments to clearly commit to a long-term vision for the housing stock, driving up standards in the property market backed up with incentives that have near zero cost to the taxpayer; for example by minimum standards for certain properties, and reframing council tax or stamp duty to reward energy efficiency.

### Energy Company Obligation

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The ECO places a requirement on larger energy suppliers to deliver energy efficiency saving measures in homes. It was intended to work alongside the Green Deal so that consumers contribute what they can afford due to related bill savings but there has been little such interaction in practice. Midway through the programme the UK Government introduced changes intended to reduce the cost of the obligation, most notably cutting the largest target (the Carbon Emissions Reduction Obligation) by a third. The obligation is delivered through three distinct targets:<sup>125</sup>

- **Carbon Emissions Reduction Obligation (CERO)** – was designed to concentrate efforts on hard-to-treat homes and measures that cannot be fully funded through the Green Deal, in particular solid wall insulation and hard-to-treat cavity wall insulation. However, the UK Government has, through the recent changes, allowed the inclusion of easy-to-treat measures, particularly cavity wall and loft insulation. A sub-target for solid wall insulation was introduced to ensure that some support for this measure remained.
- **Carbon Saving Community Obligation (CSCO)** – Under this obligation, energy companies must focus on the provision of insulation measures and connections to domestic district heating systems supplying areas of low income. This target has a sub-target, which states that at least 15 per cent of each supplier's CSCO must be achieved by promoting measures to low income and vulnerable households living in rural areas.
- **Home Heating Cost Reduction Obligation** – Under this obligation, energy suppliers are required to provide measures which improve the ability of low income and vulnerable households (the 'Affordable Warmth Group') to heat their homes. This includes actions that result in heating savings, such as the replacement or repair of a boiler for example.

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<sup>125</sup> Ofgem (2012) *Energy Companies Obligation*, <http://bit.ly/1whsxk3>

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In its 2014 report to UK Government, the Committee on Climate Change noted the potential to go further on loft and cavity wall insulation, and the benefits that this would bring in terms of cost-effective emissions reduction and energy affordability. It noted the slow progress on fabric efficiency and called for the UK Government to increase the ambition in the ECO to 2017 and introduce additional measures for fuel poor households. Beyond 2017, it identified three options for the ECO but did not state a preference: focus on delivering more difficult options for all households; focus on the fuel poor; reduce its scope and develop an alternative approach to fuel poverty.

Energy efficiency is the only certain way for consumers to control their energy bills in the long-run, and ECO is currently the only programme supporting this installation of energy efficiency measures across Britain.

The Government ended 30 years of public funding for energy efficiency schemes in England but, in Scotland and Wales, publicly-funded programmes continue to provide help to low income households to help them improve the energy efficiency standards of their homes. Where these programmes leverage ECO resources, their effectiveness can be undermined by sudden changes in Government policy (for example 2014 Autumn Statement) and flaws in the design of ECO policy.<sup>126</sup>

The recent cuts to ECO reduce the potential carbon and bill savings and the already inadequate resources available to tackle fuel poverty. In aiming to reduce bills, the UK Government has further restricted the support available to those most in need. ECO should support households who need it most, as the policy was originally intended; the recent move to allow ECO to support low cost and short payback measures for able-to-pay consumers is unfair on energy consumers who foot the bill and weakens the potential of pay-as-you-save schemes, such as the Green Deal.

We agree that cost-effective measures should be pursued, but only if targeted towards low income consumers. DECC should also explore other ways to reduce ECO costs without reducing the level of ambition, by making it easier to find low-income consumers (for instance through better use of data already held by government) or increase consumer demand for solid-wall insulation (for instance through fiscal or regulatory incentives).

Under the current ECO system, provision of support is at the discretion of obligated parties, so consumers cannot get a clear idea of help available at the first point of contact. It can result in eligible consumers being refused measures, or receiving single

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<sup>126</sup> The following reports give details of these flaws: IPPR (2012), *Help to heat*, IPPR; Baker W (2014), *Raising standards, cutting bills*, Citizens Advice and Centre for Sustainable Energy (2014), *The ECO: an evaluation of Year 1*, CSE

## 7. Waste less

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measures rather than whole-house retrofit. A deemed savings system should be introduced along with other measures to simplify the scheme and improve consumer access.

Given the UK's varied housing stock, developing the market for solid wall insulation remains an important challenge. Support should remain, but any obligation should be proportional to demand, and encourage area-based delivery to deliver economies of scale and ensure the bulk of funding goes on installation rather than marketing costs. Improved monitoring and enforcement of consumer protection issues in ECO, as well as Green Deal and related markets, is essential. ECO should have a clear consumer-facing brand and redress process, which it currently lacks, as part of a simplified consumer protection framework across the energy services sector (energy efficiency, heat, microgeneration, smart systems), and government communications on Green Deal and ECO must be improved.

So far delivery of the ECO has been skewed towards urban areas and homes heated by gas, despite rural and off-gas households having higher rates of fuel poverty.<sup>127</sup> The UK Government has taken steps through the recent reforms to address this imbalance, but the impact of this needs to be monitored, and further steps taken where necessary.

One potential problem with a supplier obligation is that costs can't be capped. Suppliers have to complete their obligations, whatever the cost, or face significant fines. And this cost is passed on to consumers' bills. However, commercial pressures, and now improved transparency, keep costs down with CERT delivered at £3.4 billion against an estimate of £5.2 billion.

Finally, putting costs on energy bills hits poorer consumers harder, and taxation is likely to provide a more equitable way of funding the energy efficiency measures consumers so badly need. However, such a policy would have to pass a test in terms of efficacy and efficiency: the advantage of a supplier obligation is that the work will get done, and it is in suppliers' interests to keep costs low.

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<sup>127</sup> Centre for Sustainable Energy (2014) *The ECO: an evaluation of year 1*, <http://bit.ly/1CP0GJc>

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### Wales: Nest and Arbed

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There are two major schemes currently available to consumers in Wales, funded via the Welsh Government, which provide grants for improving home energy efficiency:

- Nest – a centrally funded, demand led scheme<sup>128</sup>
- Arbed – an area based scheme<sup>129</sup>

Eligibility for Nest is dependent on being in receipt of means tested benefits and living in a home with an energy efficiency performance certificate (EPC) rating of F or G.

Nest has delivered measures to around 13,400 households since it began in 2011. Its predecessor, the Home Energy Efficiency Scheme (HEES), delivered measures to 13,739 homes per annum from 2008-2011.

Arbed is an area based project. Any properties in a specific street identified as experiencing deprivation under the Welsh Index of Multiple Deprivation (WIMD), often social housing, are eligible to receive a package of funded energy efficiency measures. It takes advantage of efficiencies of scale to deliver measures to a larger number of properties in one area. Arbed is funded by the ERDF.

There have been two phases of Arbed. The first, in 2009-2011 reached 7,500 households, the second began in 2012 and is still in progress. It aims to reach 4,800 households by the end of 2015. Current Arbed work is focused on four areas in Nantlle, Rhyl, Conwy, and Holywell.<sup>130</sup>

Citizens Advice Cymru has welcomed the continued commitment to these energy efficiency programmes. In contrast to ECO, Nest represents a fixed resource to be spent, rather than an obligation to be met as cheaply as possible. Therefore the potential allocation to each household via Nest is much greater (between £8,000-£12,000 depending on whether the household is on or off gas), and allows more flexibility in the package of measures, and potentially a whole house solution.

Notwithstanding this, we have concerns about the monitoring of fuel poverty more generally in Wales, and whether this facilitates effective targeting of Nest. There is no housing survey in Wales which is comparable to those in England and Scotland, so detailed analysis of where demand reduction policies might be most effective is more challenging.

Arbed, in its second phase, will use £45 million of ERDF funds to install energy saving measures in properties in deprived areas in North Wales, in partnership between local authorities and private contractors. It provides a potential model for area based schemes elsewhere in the UK, should a decision be made to pursue this approach.

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<sup>128</sup> For more info see <http://nestwales.org.uk/>

<sup>129</sup> For more info see the Welsh Government website, <http://bit.ly/1sJMmPw>

<sup>130</sup> For more info see the Arbed website, <http://bit.ly/1sJMr5J>



## 7. Waste less

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However, we believe there is scope for more detailed follow-up with both Nest and Arbed clients in the medium term to ensure they understand how to manage their energy use, and are experiencing the full benefits of the measures received. The Welsh Government has also committed £70 million of additional funding to leverage ECO money to Wales over two years. Delivery of this has been complicated by changes to ECO, made unilaterally without considering the impact on delivery in Wales – compounding the issues with policy design outlined above.

### Scotland: Home Energy Efficiency Programmes for Scotland

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Home Energy Efficiency Programmes for Scotland (HEEPS) is a cluster of initiatives designed to tackle fuel poverty, reduce CO<sub>2</sub> emissions and increase energy efficiency in homes. These include:

- Affordable Warmth
- Area Based Schemes (HEEPS-ABS)
- Energy Assistance Scheme.

Affordable Warmth is a national scheme funded by energy suppliers for home insulation and heating packages to low income and households vulnerable to fuel poverty. It is open to those who are in receipt of certain benefits and who own their home or rent privately. A range of support is on offer, including the installation of heating and hot water measures, as well as home insulation, draught proofing, window glazing, and boiler replacement.

HEEPS-ABS is a 10-year Scottish Government scheme designed to tackle fuel poverty and increase energy efficiency in people's homes. By prioritising fuel poor areas it has been designed to leverage in around £120 million of ECO funding per year, with the Scottish Government also allocating £60 million in 2014/15. The HEEPS-ABS scheme is delivered by local authorities, and funds energy efficiency improvements on an area wide basis to make homes warmer and cheaper to heat. Typically measures installed include solid wall or under floor insulation.

The Energy Assistance Scheme is the national fuel poverty scheme funded by the Scottish Government and is for the most vulnerable home owners and private sector tenants not eligible for the Affordable Warmth scheme. As an extension of stage 4 of the previous Energy Assistance Package, it focuses on reducing energy costs and making the homes of the most vulnerable households warmer.

Typical measures include:

- New central heating system or boiler
- Air source heat pump
- Draught proofing
- Internal or external wall insulation
- Cavity wall insulation, loft insulation
- Room thermostats and heating controls
- Hot and cold water tank and pipe insulation.

## 7. Waste less

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Citizens Advice Scotland supports the Scottish Fuel Poverty Forum's final report on the review of the Scottish Government's fuel poverty strategy.<sup>131</sup> This welcomed the Scottish Government's commitment<sup>132</sup> to eradicating fuel poverty by way of support and funding to tackle the problem. However, while the allocation of dedicated resources for improving the energy efficiency of the Scottish housing stock and for tackling fuel poverty among the most vulnerable households in Scotland is to be embraced, we remain concerned about recent changes to ECO and how current and future schemes interact with one another. Despite challenges, we welcome the Scottish Government's ongoing commitment to fund energy efficiency measures on an area basis, along with supporting schemes that can help protect those current and future consumers in Scotland most at risk of fuel poverty.

### Social housing schemes

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The Decent Homes Standard, Welsh and Scottish Housing Quality Standards and Scottish energy efficiency standards for social housing all applied minimum standards as a policy instrument to improve the quality of housing.

Social housing schemes have two lessons for energy efficiency policy. Firstly the potential for minimum standards as a policy mechanism, with the tangential benefit of falling unit costs through economies of scale. Second, the experience gained suggests social housing providers could play a major role in carrying out energy efficiency improvements in all tenures, particularly when part of existing social housing improvement programmes. Social housing providers have to meet high quality standards, can reduce costs through operating at scale and are generally trusted by residents.

### Local delivery mechanisms

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In 2012, Consumer Futures, now part of the Citizens Advice Service, commissioned the Institute for Public Policy Research (IPPR) to investigate the delivery of energy efficiency programmes and suggest reforms. The report of IPPR's research, *Help to heat*, proposed decentralising the delivery of programmes, away from suppliers and towards local agencies. It proposed delivering Green Deal and ECO through an area approach involving systematic, house by house assessment of housing and household circumstances. The research showed that the proposed reforms would improve both consumer experience and cost effectiveness, with respect to the current level of resource spend at the time of research.

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<sup>131</sup> Scottish Government (2014) *Fuel Poverty Forum final report*, <http://bit.ly/111AiG4>

<sup>132</sup> Scottish Government (2014) *Warm homes: fuel poverty*, <http://bit.ly/1CP11f1>

## 7. Waste less

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In 2014, Citizens Advice published a follow-up report, *Raising Standards, cutting bills*, that showed how the *Help to heat* delivery model could transform housing in England<sup>133</sup> by providing free grants to all low income households and low or zero cost loans to middle/higher income households. Modelling carried out for the research was based on improving homes to a minimum energy efficiency standard of Energy Performance Certificate band C. The proposals entailed a significant increase in expenditure above current levels; however, the report suggested a range of possible sources of revenue for the ambitious programme proposed.

A central proposition of both *Help to heat* and *Raising standards, cutting bills* is that local leadership and delivery is much more likely to encourage consumer trust than the current fuel company-led model. Local delivery should also encourage social norms around the benefits of energy efficiency, help make sure the most vulnerable households are reached, improve cost effectiveness and allow integration with other relevant locally led programmes, such as public health and urban and rural regeneration.

The Citizens Advice Service is now undertaking research to learn lessons from local delivery models in England, Scotland and Wales; to explore the potential for using such approaches to boost demand; and to develop detailed proposals for a local delivery model.

### Energy Performance Certificates

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The Energy Performance Certificate (EPC) is a document that by law must be provided by a seller or landlord when marketing their home.<sup>134</sup> This requirement is driven by the EU Directive on the Energy Performance of Buildings 2007, and was subsequently recast in 2013.<sup>135</sup>

The EPC shows the energy efficiency of a dwelling and rates it on an A-G scale, along with recommendations for improving the dwelling's rating. These EPCs cost property sellers around £50 to get completed.

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<sup>133</sup> The research methodology was based on analysis of English Housing Survey data. Some data was provided on GB-wide impact through simple pro rata estimates based on respective population sizes. The analysis was not able to take account of differences in housing and household circumstances in the devolved nations.

<sup>134</sup> Exemptions include listed buildings and residential buildings or holiday homes used for less than four months a year.

<sup>135</sup> Directive 2010/31/EU EPBD recast

## 7. Waste less

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DECC research finds that property buyers value more energy efficient homes<sup>136</sup> but research by Consumer Focus found EPCs do not influence consumer decision-making when it comes to buying or renting a home, nor are they used to negotiate purchase prices.<sup>137</sup> There are two barriers to this: awareness and motivation.

At present EPCs are provided for 95 per cent of house or flat sales, but only for 75 per cent of social housing and just 26 per cent of private rental properties.<sup>138</sup> This low level of compliance is poor in itself; a further barrier comes from the lack of requirement to explain the content and either the benefits of a high rating, or the potential for improvements.

The impact of a revised format<sup>139</sup> and the requirement to include ratings in adverts is yet to be seen, but is likely to be low without enforcement of related regulations and complementary policies that link a clear financial incentive to the EPC rating.

Some parties have called for more openness of EPC data<sup>140</sup> but discussions tend to focus on use by public and private sector. We would prefer to see a greater focus on how consumers can use the data, and ensure it is fit for that purpose. This would require:

- third-party websites to be able to host the EPC Adviser app<sup>141</sup>
- the RdSAP method to be revised so it recognises the 2.3 million homes built since 1983 with clear cavities and no insulation.<sup>142</sup>
- EPC updates after Green Deal accredited measures and prior to marketing for sale or rental, rather than maintaining the 10-year validity period

Overall, the Citizens Advice Service supports the use of energy performance data to inform policy and consumer decision-making. Both DCLG and DECC need to refocus on using this valuable data to full advantage, without compromising an individual's right to privacy.

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<sup>136</sup> DECC (2013) *Energy saving measures boost house prices*, <http://bit.ly/1kMRVZa>

<sup>137</sup> Consumer Futures (2011) *Room for Improvement*, <http://bit.ly/1uygBam>

<sup>138</sup> DCLG (2013) *Freedom of Information Request – Energy Performance Certificates Compliance*, <http://bit.ly/122GY1a>

<sup>139</sup> DCLG (2011) *Information note: improved and redesigned energy performance certificate*, <http://bit.ly/1t7Y7AQ>

<sup>140</sup> Open Data User Group (2013) *Energy Performance Certificate Data – A case for Open release* <http://bit.ly/1t7yJfJ>

<sup>141</sup> Directgov, *EPCadviser*, <http://bit.ly/122HigE>

<sup>142</sup> Excerpt from Consumer Futures (2012) *Filling the Gaps*, <http://bit.ly/1ziU4pS>

### Minimum standards in the private rental sector

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Poor energy efficiency is a particularly common problem in the private rental sector (PRS). Of the main types of tenure, the sector has the highest proportion of EPC band G homes and second highest of EPC band F homes. The 2011 Energy Act mandated introduction of legislation aimed at improving energy efficiency of this sector in England and Wales:

- From 2016, landlords must comply with a reasonable request for energy efficiency improvements from their tenant (this will apply to properties of all EPC ratings).
- From 2018, landlords will be prevented from renting out a property with an EPC rating of F-G, where they can be improved using Green Deal, ECO or other specified funding sources.

Scotland is currently considering its own proposals for regulating minimum standards of energy efficiency in both owner occupied and private rented housing. Regulations are currently being drafted that will be consulted on in spring 2015 with any regulation following in 2018.

A specific barrier to energy efficiency improvements in the PRS is the split incentive: if landlords invest in improving properties, tenants get the benefit. The Green Deal provides a mechanism for tenants to pay for measures, but the proposed regulations will be essential in ensuring that standards in the sector are improved.

The 2018 regulation further addresses this barrier but is undermined by the proposal from the UK Government that there should be no upfront or net cost to landlords. The regulations as drafted have the potential to exempt almost all landlords from the minimum standards, and there is a particular risk that low income tenants and those in particularly poor quality properties will not benefit. This opportunity<sup>143</sup> to address the poor quality of this sector must not be lost through poor regulation or enforcement.

### Decent Homes

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In England the Decent Homes Programme introduced in 2000 set a minimum standard for housing conditions in the public sector, including council housing and housing association homes. One of the four key criteria was a reasonable degree of thermal comfort, defined as individual heating controls, at least 50mm roof and cavity wall insulation, as appropriate. By 2009 over one million homes had been improved, and a Decent Homes Backlog Programme is managed by the Homes & Communities Agency with funding allocated to 2015 to make a further 127,000 homes decent.

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<sup>143</sup> DECC (2014) *Consultation on private rented sector energy efficiency regulations*, <http://bit.ly/WB8sc6>

## 7. Waste less

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In Scotland, the Scottish Government's principal measure of housing quality is the Scottish Housing Quality Standard (SHQS), introduced in February 2004. The SHQS is a set of five broad housing criteria which must all be met if the property is to pass SHQS.

In Wales, the Welsh Housing Quality Standard (WHQS) places requirements on all social landlords to reach certain standards by 2020, including in respect of energy performance.

The thermal efficiency criterion has led to a significant improvement in the energy performance of the social housing stock in England.<sup>144</sup> Energy efficiency has a natural fit with local authorities' skillset, but there is scope for sharing skills, knowledge and information between local authorities, and consideration needs to be given to the potential economies of scale of working across local authority boundaries.<sup>144</sup>

### Zero Carbon Homes

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The Zero Carbon Homes policy for England was announced in 2006, due for implementation from 2016, and the UK Government believes this policy is compatible with the EU requirement for all new buildings to be 'nearly zero energy' from the end of 2020.<sup>145</sup> The Zero Carbon Homes policy is made of three parts, with the first two subject to minimum thresholds to limit the use of off-site 'allowable' solutions:

- **Energy efficiency** – High levels of energy efficiency built into the fabric of the home, requiring properties to have high quality insulation and the right balance of air-tightness and ventilation.
- **Carbon Compliance** – On-site renewable energy and low carbon heat can further reduce on-site carbon emissions.
- **Allowable solutions** – Off-site investments can be made to offset remaining onsite emissions.

The Government limited the calculation of onsite carbon emissions to heating, lighting and ventilation, omitting other energy uses such as appliances, limiting the effectiveness of the policy. It consulted on the detailed definition of allowable solutions in autumn 2013, including the potential for developers to meet their carbon commitments through investment in fabric efficiency in existing homes. In 2014 it announced that small housing developers<sup>146</sup> and new starter homes on brownfield land will be exempt from 'zero carbon' regulations.<sup>147</sup>

Further work is underway to understand and address the current gap between designed and completed building or as-built (post-completion) performance. This gap between design and built performance is an issue across fabric-based energy efficiency, in both new and existing homes.

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<sup>144</sup> HCA (2012) *Local authority action for energy efficiency in housing stock*, <http://bit.ly/1t3Mye8>

<sup>145</sup> DCLG (2013) *Allowable Solutions Consultation Document*, <http://bit.ly/1DvALbM>

<sup>146</sup> Cabinet Office (2014) *Queens Speech*, <http://bit.ly/1ljVxDF>

<sup>147</sup> Poole Conservatives (2014) *Starter homes for first time buyers*, <http://bit.ly/1t7zsxD>

## 7. Waste less

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Citizens Advice (England & Wales) welcomes this intervention to cut running costs for consumers. The presentation of any upfront cost could be eased by property taxes and mortgages that reward low carbon choices, and potentially through comparisons of running costs with similarly sized but leaky old, cold homes.

We are opposed to the weakening of the standard, as it will mean higher running costs for residents in the long-term, equivalent to an annual £1,000 saving over a Victorian equivalent for the sake of £3,000 on the build cost<sup>148</sup>. Our review of heating controls shows the important role of housebuilders and renovators.<sup>149</sup> Priority should be given to passive measures, and additional inputs such as heating or ventilation systems should be automated wherever possible to reduce consumer hassle, energy bills and discomfort.

### Adaptation to a changing climate

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Climate science predicts temperature rises with an increased risk of heat waves. The elderly and those with existing medical conditions are particularly vulnerable to rising temperatures because their body's basic temperature control mechanism may not work as well as it should, or because of the presence of drugs that interfere with normal function. This was found to be the case during the 2003 summer heat wave, which caused more than 2,000 deaths in the UK, mostly among the elderly.<sup>150</sup> Infants and people with existing medical conditions are also at risk, with the Urban Heat Island effect exacerbating thermal discomfort in urban areas, keeping buildings hotter during the night, thus increasing the risks for consumers living and working in our cities.

The policy focus on increasing the building's capacity to retain heat during the winter has driven uptake of insulation and double glazing, but adequate ventilation is also necessary to reduce risk of overheating, and related discomfort and heat stress.<sup>151</sup> The Citizens Advice Service believes that adaptation to a changing climate may require the incorporation of cooling needs and measures in domestic energy assessments and advice, with a priority given to passive measures such as shading and thermal mass rather than the installation of air-conditioning.

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<sup>148</sup> UKGBC (2014) *New Conservative homes plan shows "short term and counter-productive thinking"*, <http://bit.ly/1sJO8Ai>

<sup>149</sup> Consumer Futures (2012) *Consumers and heating controls*, <http://bit.ly/1pwjVky>

<sup>150</sup> Consumer Focus (2009) *Adapting to a changing climate*, <http://bit.ly/1yUhDnY>

<sup>151</sup> TRCCG (The Three Regions Climate Change Group) (2008) *Your home in a changing climate: Retrofitting existing homes for climate change impacts*, <http://bit.ly/1sJP081>

## 8. Pay less

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In areas at risk of floods, a link should also be made between assessments or work on a home's energy performance and the flood resilience of the property.

## 8. Pay less

There are a number of different policy areas that focus on encouraging consumers to pay less for their energy. Switching supplier and using less energy are the two main ways that consumers can bring bills down and 'pay less'. Not all consumers will benefit from these actions – for example many prepayment meter (PPM) users don't switch despite incentives such as the debt assignment protocol,<sup>152</sup> perhaps in part due to the lack of prepayment tariff options in the market.<sup>153</sup> Indeed some consumers could potentially be harmed by using less energy as self-rationing can mean homes are not heated or lit to meet even basic needs, impacting health, wellbeing and children's educational attainment.

For many consumers a primary concern about paying less is more specifically about managing the accrual or repayment of debt. In 2012, Ofgem found that customers are using a variety of payment methods to repay their debt, which indicates that suppliers are offering customers a range of repayment methods rather than installing a PPM as the default method of recovering debt. It also found that suppliers are allowing customers to spread the repayment of their debt over longer time periods while, on average, repayment rates have either reduced or remain at similar levels to previous years.<sup>154</sup>

Smart meters could potentially help consumers to manage debt with opportunities to introduce different tariffs and mixed payment methods (moving easily between prepay and credit functions) and making payment via prepay easier which should address some of the stigma associated with prepay. Displaying a real time balance will also play a key role in managing debt build up/ emergency credit usage and help to manage payments.

### Tariffs and energy bills

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The Government had an explicit objective to get the best deal for consumers, and the delivery of the retail market review promises simpler tariff choices and clearer information. Clearer, credible and comparable information helps consumers make decisions.

- **Simpler choices** – a limit of four core tariffs for gas and electricity from each supplier (for each meter type or mode),<sup>155</sup> a single standing charge, and advanced notice of when your fixed deal ends
- **Clearer information** – consumers get clearer bills and an annual statement showing what they have used, paid and what they owe.

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<sup>152</sup> Ofgem (2012) *Qualitative research into awareness and experiences of the Debt Assignment Protocol amongst pre-payment customers in debt*, <http://bit.ly/1wlv2ku>

<sup>153</sup> Citizens Advice (2014) *Fair play for prepay*, <http://bit.ly/1ocvken>

<sup>154</sup> Ofgem (2012) *Domestic suppliers social obligations 2012 annual report*, <http://bit.ly/1lsxIMt>

<sup>155</sup> The reforms propose four tariffs per 'meter type or mode,' and since a smart meter can be switched between modes (single-band, two-band etc.) remotely by the supplier, it would appear that any consumer with a smart meter installed can effectively still be offered up to 20 tariffs.



## 8. Pay less

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Information does not in itself deliver savings, although greater transparency could affect companies' pricing decisions. Two factors have a significant impact of the amount paid for the same amount of energy. Householders can save:<sup>156</sup>

- £90 a year on average by switching to Direct Debit payment.
- £158 a year by switching supplier and switching to Direct Debit payment.

In addition to getting the best deal, financial support is available for people in older properties and those on benefits or low incomes through the Warm Home Discount and Winter Fuel Payments.

- Winter Fuel Payments of between £100 and £300 are available to pensioners as well as a cold weather payment of £25 for each seven day period of very cold weather.
- In the winter of 2013/14 over 1.2 million of the most vulnerable pensioners were expected to receive £135 off their electricity bill through the Warm Home Discount.

Energy bills have risen much faster than inflation<sup>157</sup> and are consumers' number one concern.<sup>158</sup> But despite there never being a greater need for engagement, switching rates are declining<sup>159</sup> and nearly two-thirds of consumers have still never switched.<sup>160</sup> The loss in competitive pressure is resulting in steadily expanding margins<sup>161</sup> and the ability for suppliers to pass through increases in costs more readily than they pass through decreases in costs.<sup>162</sup>

Policies such as encouraging switching, putting people on the cheapest tariff, and financial support may help reduce bills,<sup>163</sup> but not necessarily demand. In fact, we welcome the potential these offer to those who are currently underheating their homes, in allowing them to turn the thermostat up. However, thermal efficiency through insulation or a more efficient heating system remains the more sustainable answer for the individuals concerned, future residents and those funding the policy.

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<sup>156</sup> DECC (2013) *Guidance: Helping consumers with energy*, <http://bit.ly/ZMlzlq>

<sup>157</sup> Our analysis shows that the average dual fuel household bill increased by 112 per cent between January 2005 (£594) and January 2014 (£1,257) even after allowing for reductions in the average level of consumption in that time, <http://tinyurl.com/khdh22r>

<sup>158</sup> The Which? Consumer Insight Tracker shows that 75 per cent of consumers are worried about energy prices (April 2014) – more than any other category of consumer concern, <http://tinyurl.com/k2vz8lu> YouGov polling in September 2013 found that consumers felt that energy prices were the biggest threat to the UK economy. <http://tinyurl.com/qbjq3jg>

<sup>159</sup> There was a sharp jump in switching in the last quarter, but a steady and pronounced decline in switching can be seen since 2008 in DECC's quarterly tracking statistics. <http://tinyurl.com/o2ux9mb>

<sup>160</sup> Ofgem (2014) *State of the Market Assessment*, <http://bit.ly/1yXov42>

<sup>161</sup> The trend line – both historic, and projected – in Ofgem's Supply Market Indicators suggests steadily widening supplier margins over time, <http://tinyurl.com/on67bk7>

<sup>162</sup> Ofgem (2014) *State of the Market Assessment*, <http://bit.ly/1yXov42>

<sup>163</sup> Some consumers may be worse off as energy companies are likely to remove their current lowest tariffs in order to maintain their overall income, as their costs will not change.

## 8. Pay less

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### Collective switching

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The Government was keen to explore the opportunity for community approaches, from collective switching to comparative billing. Collective switching is cutting an average of £131 off participants' bills,<sup>164</sup> though it may not leave everyone better off.

In Wales, the 'Cyd Cymru' (Wales Together) scheme, is a collective energy buying scheme funded by Welsh Government and Cardiff and Vale of Glamorgan councils. As well as facilitating regular collective switches via a commercial switching website, the scheme aims to offer financial incentives for local partners to promote switching.

Collective switching<sup>165</sup> is a welcome innovation to inject buyer power into the energy retail market, with upwards of 170,000 consumers saving in the region of £25 million through collective switches since May 2012. Crucially, these schemes have helped deliver savings to consumers who would not have otherwise engaged in the energy market.

The key opportunity facing this market in our view is encouraging participation among vulnerable consumers, who respond more positively to face-to-face engagement which is sometimes used by these schemes and may respond more positively to an offer tailored to their community and situation.<sup>166</sup>

### Comparative billing

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Comparative billing has had some success driving demand reduction of 2-3 per cent at scale in the United States<sup>167</sup> and the Government planned to ensure energy bills provide information on how each household's energy usage compares to similar households.<sup>168</sup> Such information is shown to be most effective when provided alongside personalised feedback on energy use and tailored suggestions on how to waste less energy.<sup>169</sup>

Every household has different needs, different energy-saving potential, and different responses to the concept of competition. The Citizens Advice Service does not want energy use to be a source of guilt but of aspiration. We know that too many consumers do not have the controls necessary to take action even if they are motivated by information.

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<sup>164</sup> DECC (2013) *Collective switching schemes around the country*, <http://bit.ly/1yUjiKf>

<sup>165</sup> *Collective switching revisited*, blog by Richard Bates, <http://bit.ly/1uyme8s>

<sup>166</sup> Citizens Advice (2014) *Response to Ofgem's consultation on protecting consumers in collective switching schemes*

<sup>167</sup> Darby, S. (2006). The effectiveness of feedback on energy consumption. Environmental Change Institute, University of Oxford.

<sup>168</sup> Coalition Government (2010) *our programme for government*, <http://bit.ly/Ublpr6>

<sup>169</sup> Cabinet Office (2011) *Behaviour Change and energy use*, <http://bit.ly/1FvVOSf>

## 8. Pay less

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Research commissioned by the UK Government found a range of interest in comparative billing among consumers, from active interest to scepticism about its veracity.<sup>170</sup> While it may not be appropriate to be a regulated component of hard copy energy bills, it certainly has a role in helping people understand and manage their use.

### Prepayment meter customers

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To date, Government backed initiatives to support energy consumers to take action and save money on their bills have primarily targeted credit customers and those paying by monthly Direct Debit. Around 16 per cent of energy customers use PPMs – we estimate 10.8 million people live in homes that pay for their energy via a PPM.

The number of PPM users is on the rise – on average 2,278 PPMs are installed every working day and there was an increase of PPMs installed for reasons other than debt recovery in 2012.<sup>171</sup> This potentially reflects customers seeking greater control over their bills as household budgets tighten, although the installation of the majority of new PPMs remains largely driven by debt recovery arrangements.

There are a number of key issues that consumers with PPMs face:

- PPM users pay on average £80 more than Direct Debit customers.
- Lack of competition, with fewer tariffs available to switch to.
- PPM users often experience problems managing their energy use which credit customers do not face for example lost or faulty keys or metering equipment, inconvenient availability of places to top up and there is limited innovation in top up methods, with the vast majority of users continuing to top up with cash via shops or post offices.
- Vulnerable PPM users sometimes miss out on existing financial support such as the Warm Homes Discount sent as a cheque in the post from suppliers.
- Citizens Advice evidence also reveals that 16 per cent of PPM users are cut off over the winter: either because they cannot afford to buy more energy or because they are unable to top-up their meter.

Despite these issues it is not clear that PPM users will be early beneficiaries of smart meters with the much needed improvements in customer service and cost this could bring. Experience from other markets, such as mobile telecommunications, as well as customer research suggests it is not unrealistic to expect up to one third of consumers will be on some kind of prepayment offering once smart meters have been rolled out.

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<sup>170</sup> DECC(2011) *Empowering households*, <http://bit.ly/1wsfoWj>

<sup>171</sup> Ofgem (2012) *Domestic suppliers' social obligations: 2012 annual report*, <http://bit.ly/1lsxIMt>

## 8. Pay less

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The Citizens Advice Service wants energy companies to give their customers a better price, put them in control of their own energy use and make it easy to pay-as-you-go. Smart meters are an opportunity to improve the service we currently receive; and we don't want those who prepay for their energy to be the last to benefit. In September 2014 we launched a related Consumer Demand<sup>172</sup> to call on energy suppliers to deliver:

### 1. A better price

- Pay-as-you-go is the cheapest payment method available.
- Free access to near real time electricity use, account information in pounds and pence, details of standing charges and debt repayments to help customers budget and become more energy efficient.
- An equal amount of pay-as-you-go tariff options compared to other payment methods.

### 2. More control

- A choice of ways to top up such as by phone, text, or online in addition to cash top-ups over the counter at a convenient location.
- Switching supplier to/from pay-as-you-go is made easier and free of charge – no more security deposits and fees for meter exchanges.
- Free low credit alerts – a text or alarm on the smart energy display to warn when credit is low.
- A 'lifeline' supply of electricity or gas at all times, even when a customer has been unable to top up their meter.

### 3. Easier use

- No more misdirected payments.
- No more cards or payment keys that need to be inserted in the meter which can be lost, stolen or broken at a cost and inconvenience to the customer.
- A free 24 hour helpline for mobiles and landlines.

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<sup>172</sup> Citizens Advice (2014) *Fair play for prepay*, <http://bit.ly/1ocvken>

## 8. Pay less

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### Smart meters<sup>173</sup>

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The UK Government wants all of us to have our gas and electricity meters replaced with smart meters by 2020. Rollout will be a major undertaking, costing £11.3 billion and involving visits to every home in Great Britain and many small businesses. By 2020, once the rollout is complete, the UK Government expects an average dual fuel customer to save £23 a year on their energy bills. However, these savings won't happen straight away, meaning that in the short term Government estimates that bills will increase by £7 a year for the average dual fuel customer in 2015.<sup>174</sup>

The benefits for suppliers of the programme amount to £9 billion, and for consumers are estimated to be around £7.3 billion over the next 20 years, once the costs of the rollout are covered. Of this consumers are expected to benefit from:

- **More accurate bills** – new two-way communications technology should end estimated and inaccurate bills, which are a major source of consumer complaints.
- **Less inconvenience** waiting in for the meter reader to arrive, or having to submit your own readings.
- **Ability to change from a prepayment to a credit meter**, and vice versa, without needing to physically replace the meter.
- **A standard in-home energy display**, at no additional cost – to help consumers keep track of their energy usage and budget more easily.

The in-home display and new TOU tariffs are expected to have the most significant financial impact on Britons' wallets.

The Citizens Advice Service welcomes accurate bills, less inconvenience and better information, but does not think bill savings are a quick or easy win, particularly in vulnerable households. Nor do we take risks such as data privacy lightly. We track concerns raised by consumers through our helpline to make the case for better protections and better service across the piece.

While many Citizens Advice Service clients are often highly energy literate, the barriers to taking control of their energy use are high – a mix of high upfront costs, uncertain benefits,<sup>175</sup> complex finance or grant mechanisms, and disinterested landlords.<sup>176</sup> We think similarly vulnerable consumers should get extra help as part of the rollout, to ensure they share the benefits of the programme they are helping to fund<sup>177</sup>.

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<sup>173</sup> Unless otherwise stated, figures in this section are taken from NAO (2014) *DECC: preparations for the rollout of smart meters*, <http://bit.ly/1x3Jca5>

<sup>174</sup> Consumer Focus (2012) *About smart meters*, <http://bit.ly/1t3MICd>

<sup>175</sup> Consumer Focus (2012) *What's in it for me*, <http://bit.ly/1t3MafN>

<sup>176</sup> Consumer Focus (2011) *A private green deal*, <http://bit.ly/1w1eP7m>

<sup>177</sup> Citizens Advice (2014) *Extra help scheme for vulnerable smart meter customers*, <http://bit.ly/1s1FbhP>

## 8. Pay less

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### In-home displays

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An in-home energy display (also known as an IHD) is a small device with a screen that will show the customer how much electricity and gas they are using at any time. It will also give some information about how they have used electricity and gas in the past. This information may be given in pounds and pence (as well as kilowatt hours) and could help them understand how their home is using energy at a given point, information they can use to save money on their energy bills.

DECC has now set minimum standards for IHDs. All domestic energy customers should be provided with an IHD when their smart meter is installed.

According to the UK Government's Life Opportunity Survey (LoS) almost one third of adults in GB have some kind of impairment.<sup>178</sup> As the population continues to increase and age the number of people with a disability is also expected to increase. Today in the UK:

- 2 million people have some form of sight loss
- 10 million people have arthritis, the most common cause of a manual dexterity impairment
- 10 million people have some form of hearing loss.

Features that make products usable for people with disabilities can often make them easier to use for everyone. This is particularly helpful when people have to cope with short term impairments.

Encouragingly, Consumer Focus' review of the IHDs available in 2012 found that no single design element was poor across all devices, but did find evidence of good practice that was shared through the publication of a Good Practice Guidance for industry.

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<sup>178</sup> Consumer Focus (2012) *Making energy use visible*, <http://bit.ly/1pwsxrp>

## 8. Pay less

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### Time of use tariffs

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Some consumers manage their electricity bills through a TOU tariff, typically an Economy 7 tariff which offers seven hours of cheaper 'off-peak' power overnight. Using off-peak electricity is cheaper as it reduces the pressure on generation and distribution networks at peak times, typically between 3pm and 8pm. The UK Government's business case for the smart meter rollout assumes economic benefits from 20 per cent of consumers taking up static TOU tariffs, in addition to those already on Economy 7 tariffs.

Further innovation in DSR could lead to a more secure and lower carbon supply of energy, enabling greater exploitation of renewable energy sources and less reliance on the increasingly expensive fossil fuels that generators require to meet peak demand. But moving from a regime where consumers use the electricity they need when they need it, under a simple tariff structure, to one where they can play an active role helping energy companies balance the system, is not without risks.

Consumers with smart meters may be able to reduce their bills either by shifting demand (DSR) or reducing overall use. Economy 7 is a simple DSR tariff which has been around for years, but in the future we expect there to be a greater range of TOU tariffs available, with pricing dependent on demand and supply.

Our report *From devotees to the disengaged*<sup>179</sup> suggested that nearly 40 per cent of consumers on Economy 7 are on the wrong tariff, and may be getting no benefit from it. This indicates a strong likelihood that many will be left worse off by new TOU tariffs, and savings envisaged by the smart meter programme will not be achieved, so we recommend:<sup>180</sup>

- The introduction of DSR should be phased, starting with simple offers that build on present opportunities presented by storage and energy efficiency.
- The comparability of DSR offers will be key and more work is needed to provide consumers with the tools they need in order to choose whether to engage.
- When it comes to the risks presented by DSR, attitudes of 'wait and see' or 'buyer beware' will not be enough. Proactive protections need to be put in place around financial liability and accountability.

The impact on different vulnerable consumer groups needs to be considered, to ensure that they share in the benefits of DSR, and are not left worse off.

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<sup>179</sup> Consumer Futures (2012) *From devotees to disengaged*, <http://bit.ly/1x3KkKE>

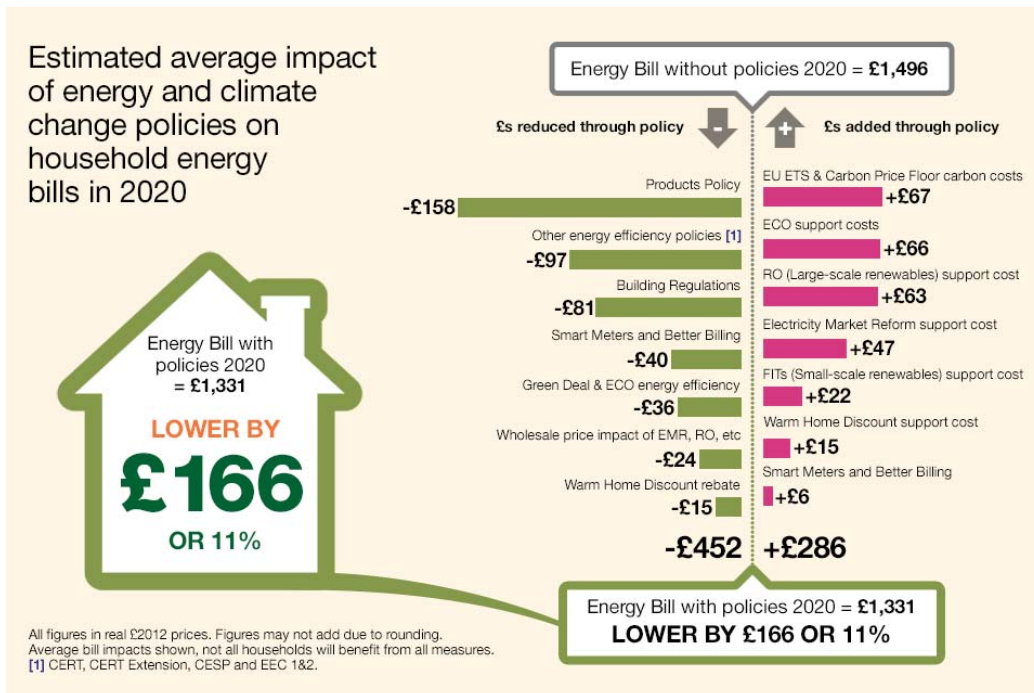
<sup>180</sup> Citizens Advice (2014) *Take a walk on the DSR side, Making electricity demand side response work for domestic and small business consumers*

## 8. Pay less

### Policy costs

The costs of energy policies that are applied to bills range from payments to help disadvantaged consumers, to funding energy efficiency measures for all consumers, to payments to encourage the development of renewable energy. Other policy costs are embedded in the design and manufacture of products and buildings.

**Figure 19: Policy impact on energy bills**



The 11 per cent of households with electric heating are most affected by the cost of UK Government policies. These households tend to have lower incomes than those with other forms of heating but pay 19 per cent of the total cost of energy policies in return for only 7 per cent of the benefits. Only 27 per cent of consumers with electric heating receive some form of benefit, compared to 40 per cent of all consumers. Those who do not receive any benefits face an average annual bill increase of £282 in 2020.<sup>181</sup>

The most progressive approach to funding energy efficiency is through product standards as the beneficiary of the energy savings pays for their provision. This principle is also evident, and welcome, in the Green Deal finance offer and private sector initiatives that recognise responsible decision-making, such as 'eco' mortgages. However, financial support is necessary where consumers are in, or at risk of, fuel poverty, as in the case of low income homes with electric heating, which are particularly adversely affected by UK Government policies.

<sup>181</sup> Consumer Futures (2013) *The hardest hit*, <http://bit.ly/1tHBUEY>



## 8. Pay less

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### Carbon taxes

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One of the principle levies in future will result from the UK Government taxing big companies for pollution from carbon emissions. There are two main carbon taxes: the European Emissions Trading Scheme (EU ETS) and the Carbon Floor Price.

The EU ETS, as set out in the EU ETS Directive<sup>182</sup> and accompanying UK regulations,<sup>183</sup> limits the amount of emission permits auctioned to participants. This cap is reduced over time, and participants are able to trade emission allowances to drive cuts where it is most cost-effective to do so.

The Carbon Floor Price is a further tax on fossil fuels used to generate electricity in the UK. It is designed to give certainty to low carbon investors but has drawn criticism as it may simply push up prices while driving heavy energy users out of the UK. This criticism has led to action on the costs for energy intensive users and a cap on the payable rates, but no action to reduce the impact on domestic consumers' bills, even those who are hit hardest by additional costs.

Families are suffering huge financial hardship, and one in four households can't afford to heat their homes. Cold homes are damaging the health of our most vulnerable citizens, including children and older people.

The Energy Bill Revolution<sup>184</sup> coalition has proposed the use of the revenue from these taxes to reduce fuel poverty. From 2013 the EU ETS and Carbon Floor Price will raise over £2 billion in carbon tax revenue every year, rising to £4 billion by 2020. If this revenue was used to help make homes highly energy efficient our research<sup>185</sup> shows it could eliminate fuel poverty and deliver a range of economic and environmental benefits:

- Lift up to nine out of ten households out of fuel poverty, reducing energy bills in all treated homes by at least £200 per year
- Generate up to 71,000 jobs and boost GDP by 0.2 per cent by 2015 and create up to 130,000 jobs by 2027.
- Cut household energy consumption by 5.4 per cent by 2027 and quadruple the impact of the Green Deal and ECO
- Cut overall carbon emissions by 1.1 per cent, including household emissions reduced by around 5.6 per cent by 2027.

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<sup>182</sup> ETS Directive, <http://bit.ly/1whvmij>

<sup>183</sup> UK Parliament (2012) *Greenhouse Gas Emissions Trading Scheme Regulations*, <http://bit.ly/1ziVK2B>

<sup>184</sup> <http://www.energybillrevolution.org>

<sup>185</sup> Consumer Focus (2012) *Jobs, growth and warmer homes*, <http://bit.ly/1DvFom3>

## 8. Pay less

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### Infrastructure costs

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The opportunities for demand reduction are not isolated from supply-side opportunities to decarbonise or deliver efficiencies. Policy development must be neutral in the sense that it continually compares the cost-effectiveness of supply and demand-side options in an unbiased way. It must also recognise that some opportunities will span both sides of this conceptual divide – those reliant on smart metering or decentralised generation are good examples – meaning there will be a need for collaboration between energy companies, consumers and other stakeholders if they are to affect demand.

There is also a unique opportunity for the networks to harness demand reduction to reduce the costs of delivering gas and electricity to our homes and businesses.<sup>186</sup> For example, there will be circumstances where, at an energy system level, it is more cost effective for a network to invest in a demand reduction project rather than the more usual practice of reinforcing the network by installing new poles and wires, to cater for load growth. Such demand reduction projects could take the form of fabric or appliance efficiency measures, or take a scaled up approach and reduce demand on the grid by supplying heat through an alternative means such as a district heating network. This will require local authorities, energy services companies, and their customers to cooperate in ways that they have not traditionally done before.

But one of the biggest, and sadly most neglected, opportunities to increase the efficiency and therefore reduce the costs of the UK's electricity and gas networks is by reducing losses – the gas that leaks from pipes and the electricity that is lost as heat as it travels along wires and through transformers. Total losses of around 7.2 per cent are made up of three components:<sup>187</sup>

- Transmission losses (6.4 TWh) from the high voltage transmission system, which represented about 24 per cent of the figure in 2013.
- Distribution losses (19.6 TWh) occur between the gateways to the public supply system's network and customers' meters, and account for about 73 per cent of losses.
- Theft or meter fraud (1.0 TWh, around 4 per cent).

The planned electrification of heat and transport sectors and new forms of supply and demand are necessary to deliver the goals of secure, affordable and decarbonised energy but they put significant pressure on the existing network infrastructure. With electricity use set to double by 2050,<sup>188</sup> smarter ways of using the existing grid must be found if the costs of additional physical grid capacity are to be minimised.

The Low Carbon Networks Fund (LCNF) sees the electricity distribution network operators (DNOs) trialling new technologies and commercial arrangements to understand how they can deliver low carbon, affordable and secure energy in the low carbon economy.

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<sup>186</sup> The regulator, Ofgem is also now required to report on such opportunities under Article 15.2 of the Energy Efficiency Directive.

<sup>187</sup> DECC (2014) *DUKES – Chapter 5: Electricity*, <http://bit.ly/122QJg1>

<sup>188</sup> DECC (2012) *Electricity Market Reform: policy overview*, <http://bit.ly/1DvFv0Y>

## 8. Pay less

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Our interest in the potential for energy reduction through infrastructure investment is two-fold. Firstly we want consumer-facing services to be developed that deliver benefits for energy consumers, and not simply follow technological possibilities. Secondly, we expect the rollout of smart meters to improve the efficiency of the networks.

The LCNF needs to go beyond proof of technologies and address the impact on and learn lessons from the consumer experience if it is not to repeat the weaknesses of the Energy Demand Research Project.<sup>189</sup> At present there is no consistent and comparable capturing of impacts on consumers. Investment in smart grids and the smart meter rollout will not deliver the benefits stated in the business case for smart meters if consumers do not, as a result, change their energy use behaviour. Pilots and other research must incorporate social research to identify opportunities and barriers to behaviour change, and any detriment resulting from those changes. The Citizens Advice Service is therefore undertaking a systematic review of learning to date across the consumer-facing innovation projects.

In terms of network losses, the regulator has had mixed results from its attempts to incentivise networks to reduce losses. In the latest price control framework for electricity distribution Ofgem decided to rely on a licence condition that requires networks to implement a loss reduction strategy. How effective this, largely reputational measure, will prove to be is unclear. What is clear is that the rollout of smart meters means that the networks arguments about poor consumption data being a major barrier to action on losses will fall away.

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<sup>189</sup> Policy Exchange (2013) *Smarter, greener, cheaper*, <http://bit.ly/1yUkRaR>

## 8. Pay less

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### Tax relief

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Three forms of tax relief have been used in recent years to encourage investment in energy efficiency:<sup>190</sup>

#### **Stamp Duty Relief for Zero Carbon Homes**

To support the move to zero carbon homes, the UK government announced in the 2007 Budget that from 1 October 2007 all new homes meeting the zero carbon standard costing up to £500,000 would pay no stamp duty, and that zero carbon homes costing in excess of £500,000 would receive a reduction in their stamp duty bill of £15,000.

#### **Landlords Energy Saving Allowance (LESA)**

This policy, announced in 2004, provides an incentive for private landlords to improve the energy efficiency of the residential properties that they let. The policy provided upfront relief (up to £1,500) for capital expenditure on investment in cavity wall and loft insulation. In 2005, it was extended to cover solid wall insulation, in 2006 to include draught proofing and hot water system insulation, and again in 2007 to include floor insulation. Also in 2007, the programme was extended to 2015, and the government also sought state aid approval to extend its availability to corporate landlords.

#### **Reduced VAT for energy saving materials**

By virtue of a policy announced in 2000, a reduced rate of Value Added Tax (VAT) of 5 per cent – the lowest VAT rate allowed under EU agreements – is charged on certain energy saving materials, provided that they are professionally installed in a residential or charitable property (such as non-business or village hall). The reduced rate covers:

- all insulation, draught stripping, hot water and central heating controls
- installations of solar panels, wind and water turbines
- ground-source and air-source heat pumps and micro-CHP
- wood/straw/similar vegetal matter-fuelled boilers.

Grant-funded contractor installations of central heating systems and heating appliances; and grant-funded installations of factory-installed hot water tanks, domestic CHP units, and heating systems that use renewable energy also benefit from the reduced rate when installed in sole or main residence of a person over 60 or in receipt of certain benefits.

The Citizens Advice Service supports the use of tax relief as one way to engage, enable and encourage demand reduction measures. However, it needs to be used appropriately.

Tax relief is a carrot but is unlikely to be sufficient by itself. Do the target audience know about it? Is it sufficient to drive action? If not, and consumer detriment is measurable, as in the case of the PRS, we expect regulations to follow.

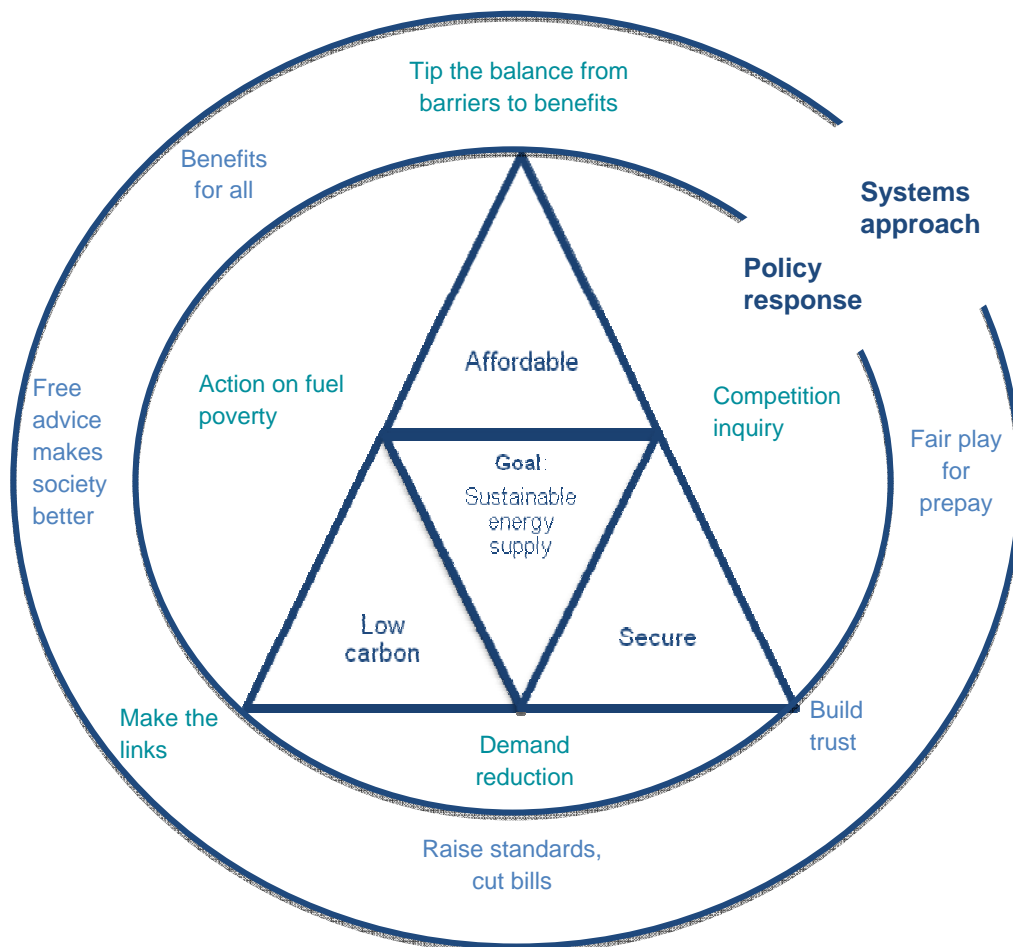
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<sup>190</sup> Definitions extracted from IEA (2014) Energy efficiency: Policies and Measures Databases

## 9. Taking a strategic approach

Our original intention with this paper was to develop criteria for the development of consumer policies. Our review suggests that quantitative methods are not appropriate at this stage. They do not necessarily identify the gaps through which consumers fall; they do not consider the consumer experience; and too often they have failed to consider why consumers would get involved. Instead we have identified our vision for 21<sup>st</sup> century energy services, a framework that helps consumers take control of their bills, and a strategy map to make the link between today's experience and that vision.

First we need to put consumer behaviour in context. Problems in the marketplace have dented consumer trust and have led to the current competition investigation; and rising energy bills are exacerbating the problems faced by those in fuel poverty. Those rising bills cannot simply be blamed on supplier behaviour: production costs, economic development and geopolitical factors affect the affordability and security of fuel supplies; and carbon emission reductions are necessary to reduce climate change risks. This complexity demands a systems approach, or responses risk being incomplete.



### Vision

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#### **Energy services are affordable, accessible and safe for all.**

Our vision is of an energy services market that is affordable, accessible, safe and fair. These principles can be assessed in multiple ways, financial and non-financial, quantitative and qualitative. Citizens Advice recognises that the balance may change for individual policies if they are to be effective, but Government must balance the overall system and deliver opportunities for all consumers to take control of their bills.

#### **Principles**

##### 1. Affordable

Energy is an essential service. Keep it affordable by giving consumers the ability to control their energy use, and minimizing the costs that are passed on by industry and government through bills. Profits need to be earned; and today's hard-pressed consumers cannot carry the full costs of lack of investment in the past and the high upfront cost of low carbon generation.

##### 2. Accessible

Customers need simplicity. Ensure access to advice, supply, products and services is hassle free and quick. If products and systems are not easy to use, energy and cost saving potential is quickly lost.

The energy services market itself needs to be accessible – whether that is to new generators and suppliers in the energy market or to products and services used in the home. Innovation is key to answering the challenges of the 21<sup>st</sup> century.

##### 3. Safe

There have been a myriad of industry scandals. Customers should not be mis-sold to, misled or face requests for unreasonable fees or demands. Regulations must be enforced, and when things go wrong there must be an easy way to get resolution and redress.

Consider also the needs of future consumers. The upfront costs of moving to a low carbon economy are a vital investment for long-term benefits. The indirect benefit of mitigating climate change is more than matched by the direct benefit of healthier, cheaper-to-heat homes that could eliminate fuel poverty.

##### 4. Fair

Energy services must meet the needs of all consumers including those who are vulnerable because of their particular circumstances such as income, health, heating system or housing. This means calls for cost-reflectivity must be tempered by the need to ensure all consumers can meet their basic needs, now and in the future.

## 9. Taking a strategic approach

### A framework for consumer confidence

To identify where policies and programmes do not support the consumer journey we have developed a system diagram that sets out the journey and policy levers that help build consumer confidence.

**Figure 20: Demand reduction – a framework for consumer confidence**



The core of this framework is formed by the steps a consumer will need to take to save money on their bills, for example:

- What triggers action?
- Can they get good quality free advice online, via a phone service, or face-to-face?
- Are there relevant choices: which product or service to use, from which provider, and how will they pay for it?
- Is the service easy to arrange or install?
- And is it affordable?
- And finally, will the consumer really benefit from it, or can they easily seek redress if something has gone wrong?

These steps need supporting where consumers are not taking the steps that would enable them to take control of their bills. For example, what intervention could bring forward demand for energy efficient housing? How could the Government make it easier for consumers to navigate the complexities of advice provision in the energy market? How does the consumer know who to trust to install measures, and why charge them an interest rate on energy efficiency measures that have such a benefit for society?

These supporting elements are represented above and below the core steps. Some of them are relevant only to one step, but many give consumers confidence across multiple steps, or more indirectly, in the case of management information, provide feedback to improve service through the market.

## 9. Taking a strategic approach

### Mapping strategic objectives

The challenges and opportunities behind both the vision and the consumer confidence framework can be, and frequently are, considered at great length and in multiple layers of complexity. This can at times lose sight of the basic requirement that consumers engage with bill-saving measures if policies are to deliver the benefits expected for individuals and society. Citizens Advice has therefore mapped the key objectives which it believes could pave the way from today's challenges to tomorrow's confident marketplace.

These objectives are expressed in generic terms, albeit with illustrative examples, to encourage policy-makers to consider how they may apply to their bill-saving product or service.

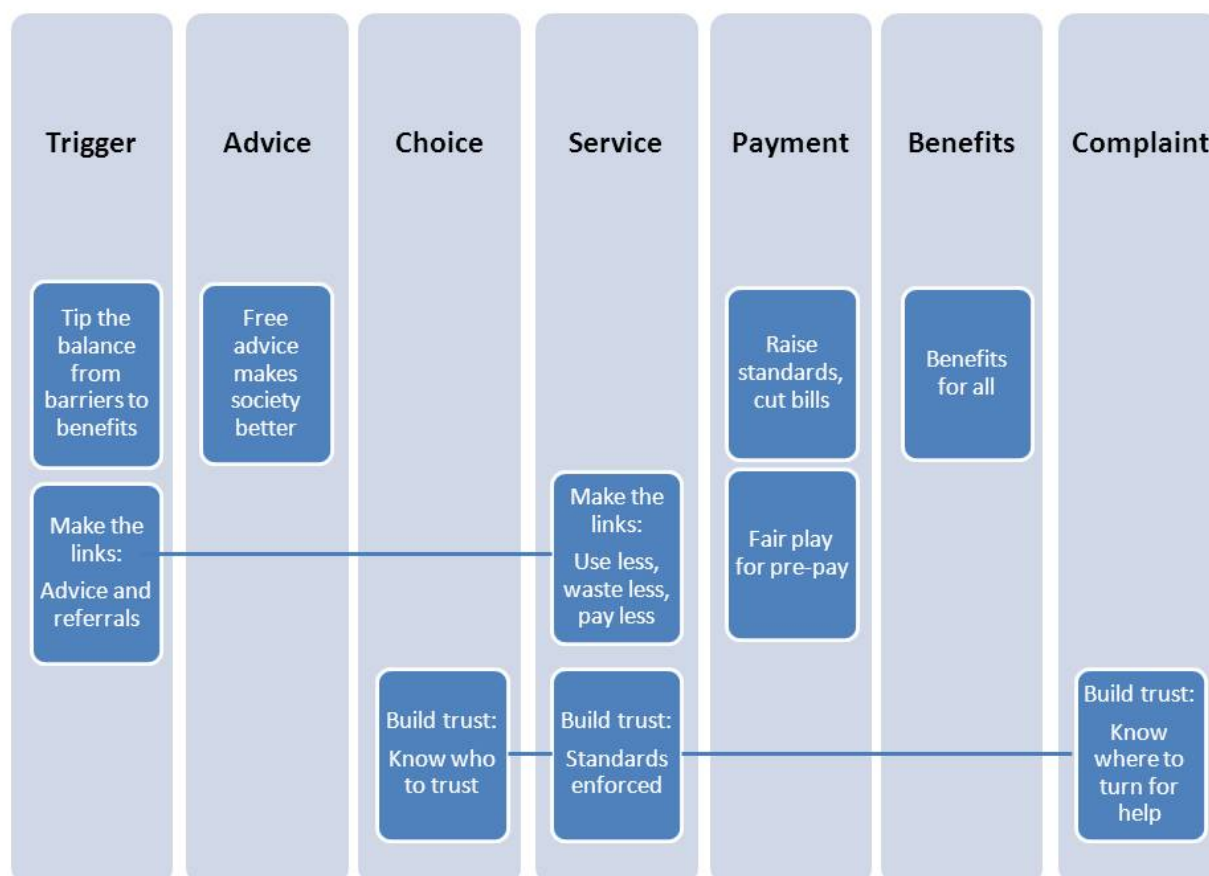


Figure 21: Strategy map for improving a consumer's ability to take control

#### Tip the balance from barriers to benefits

Consumers weigh up what's on offer. Exchange Theory claims that consumers will take an action if the perceived benefits outweigh the perceived costs of, or barriers to, taking that action. Exchange needs to be understood from the consumers' perspective as the benefits they seek and the barriers they experience may be different from the ones experts consider to be important. Furthermore the exchange of benefits and barriers will be different for various audience groups, or segments.



## 9. Taking a strategic approach

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Consumer Focus's 'What's in it for me?' research reviewed a number of projects that focussed on this exchange to ensure the offer would appeal to the target audience. It found customers' needs, motivations and concerns need to be at the centre of planning to increase response rates, reduce costs and avoid wasted effort.

Government has researched and promoted the role of 'energy behaviour' models<sup>191</sup>. We now need to see them put into practice with much clearer consumer offers.

### **Make the links**

It is hardly a ground-breaking recommendation, but whilst the low carbon transition affects every aspect of a consumer's energy use and their bills, top-down delivery fails to make the links from the consumer perspective. This affects both the cost of delivery and the consumer experience, which in turn affects the reputation of bill-saving measures, potentially pushing the cost of the transition up further.

For example, the £11 billion smart meter rollout does not currently link up to the Energy Company Obligation that is costing energy consumers a further £1.4 billion each year, despite the obvious links of energy efficiency advice provision and extra help for vulnerable consumers.

A range of private and third sector partners have signed up to the Big Energy Vision<sup>192</sup>, which will help consumers make the link between different bill-saving measures. We want Government to actively support those links by embedding them in policy and programme design.

### **Free advice makes society better**

We're going through a big period of change in the UK. From welfare reform to the payday lending market, the cost of housing to rising energy bills, life is getting increasingly complicated.

This means it's even more important that people can access relevant, impartial advice, can get help to make complex decisions and have the confidence and opportunity to act on the issues that concern them.

In energy services, Citizens Advice and Energy Savings Trust provide free, impartial advice in their areas of expertise but to deliver significant energy, and bill, savings, in-home assessments are needed. By funding the delivery of these for free by local organisations<sup>193</sup>, there is scope to improve uptake of advice and subsequent measures, focus savings where they are most needed, make the link to area-based energy efficiency programmes, and deliver those programmes more cost-efficiently through increased uptake and geographical density.

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<sup>191</sup> DECC (2011) *An introduction to thinking about 'energy behaviour': a multi model approach* <http://bit.ly/1t4DW74>

<sup>192</sup> Energy Control (2014) [www.energycontrol.com](http://www.energycontrol.com)

<sup>193</sup> Research commissioned by Consumer Futures, undertaken by IPPR (2013) *Help to Heat*, <http://bit.ly/1wbmHTN>

## 9. Taking a strategic approach

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### Build trust

The public has lost confidence in the energy market<sup>194</sup>. Consumers overwhelmingly distrust energy suppliers to tell them the truth<sup>195</sup> and don't understand what goes in their bills<sup>196</sup>. Too often basic customer service processes go wrong and complaint volumes are rising<sup>197</sup>, and consumers in distress contact us in ever greater numbers<sup>198</sup>.

The causes of this loss of trust are multiple, with supplier behaviour and transparency among the major causal factors. Poor face-to-face sales standards resulted in mis-selling, an issue that eventually became so toxic that it resulted in a voluntary end to doorstep sales by most major suppliers, multiple enforcement penalties and one supplier facing court convictions. Badly explained and configured tariffs made switching decisions difficult. Complaint handling standards remain variable and, in some cases, unacceptably poor. The sector is starting to make progress in some of these areas, but it will take time to rebuild consumer confidence.

These issues were not isolated, were reported by consumer watchdogs, and could have been avoided. We want lessons learned for the wider energy services market in terms of the role of energy companies, and how standards are assured.

There is a fundamental question to be answered in the development of the successor to the Energy Company Obligation: who should deliver programmes that are fundamentally for social benefit and/or to address decades of poor quality housing design and maintenance. Such schemes can create competitive distortions, diminish trust and transparency, and fundamentally are a conflict in interest. Further, suppliers cite them as a cause of price inflation, undermining the reputation of the schemes and the benefits they offer.

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<sup>194</sup> YouGov polling in September 2013 found that 56% of people agreed that “energy companies treat people with contempt” while only 7% disagreed. 83% felt energy suppliers maximise profits at the expense of customers <http://tinyurl.com/qbjq3jg>. Subsequent YouGov polling published in April 2014 suggested only 7% of consumers trust the utilities industry to focus on the best interests of its customers and wider society <http://tinyurl.com/ol9amsq>. In a February 2013 uswitch poll, 45% suggested their levels of trust in energy suppliers had decreased in the preceding two years, while just 10% suggested it had improved. <http://tinyurl.com/op59g23>

<sup>195</sup> In December 2013 YouGov reported that only 3% of the public fully believed suppliers' explanation for price rises, while 30% only partially believed it, and 57% did not believe their justification. <http://tinyurl.com/nucmfom>

<sup>196</sup> Polling conducted by MVA for Consumer Focus in 2012 suggested that 67% of the public were unaware that social and environmental obligations were paid for through their energy bills (sample size: 798) Consumer Focus (2012) *Who Pays?* <http://tinyurl.com/k372rrc>

<sup>197</sup> The Energy Ombudsman received 17,960 complaints in 2013 – a 59% increase on the preceding year (11,283). It reports that complaints in the first three months of 2014 are 224% up on the equivalent months in 2013. <http://tinyurl.com/lco7any>. Citizens Advice analysis of supplier complaints at the Big 6 suggest these increased by more than half in 2013 from 54.4 (January) to 88.7 (December) per 100,000 customers. <http://tinyurl.com/mqnk2x5>

<sup>198</sup> Citizens Advice Bureaux received 49,142 contacts in relation to fuel issues in 2013/14, a 21% increase on the preceding year. There were increases in price and tariff issues (+14%), switching (+35%), billing/meter issues (+25%) and selling methods (+16%).

## 9. Taking a strategic approach

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Taking a look at the wider market, a newcomer would look to accreditation schemes as a proxy for quality. To be effective, any such scheme must be easily identifiable, enforce standards and provide help when things go wrong – potentially in the context of complex works where multiple measures and installers are involved. The complexity of the current quality assurance regimes across Government energy efficiency and low carbon schemes makes it difficult for consumers to understand, for organisations like ourselves to provide clear and concise advice, increases the scope for consumer detriment and appears likely to limit consumer engagement.

### **Raise standards, cut bills**

High energy bills are not purely a function of the retail market. Energy price rises, in part driven by geopolitical risks, are exacerbated by the quality of British housing.

Investment in home energy improvements must be a priority for future Government spending, whatever the source of funds. There could not be a better investment opportunity: jobs and economic growth at both the local and national level; reduced pressure on health services; improved energy security and reduced carbon emissions; and most importantly affordable fuel bills and warm, healthy homes for all consumers.

It is not appropriate for all such improvements to be funded through energy bills. This would be inefficient, due to the administration cost; and unfair, due to the likelihood that wealthier households (in terms of income or assets) would benefit at the expense of those less well off. Instead, we support the idea that the beneficiary pays where possible with a recognition that a) there are societal benefits to action being taken and b) consumers face competing demands for their time, attention and money.

We also recognise the question asked by the Committee on Climate Change as to where the Energy Company Obligation is best focused: on low-cost measures for all households, fuel poverty initiatives, or more expensive measures, particularly solid-wall insulation<sup>199</sup>. The Welsh Government is similarly considering how best to target its own Nest scheme in future. Where funding comes from energy bills, in particular, fuel poverty measures should be given priority, given the regressive funding mechanism used and the clear additionality this provides.

To support the needs of vulnerable consumers, Citizens Advice continues to advocate rigorously enforced regulation of the private rented sector to overcome the primary barrier of tenure; and has identified funding options for ending fuel poverty whilst providing help to all consumers to improve the energy standards of their homes through zero or low cost loans.

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<sup>199</sup> CCC (2014) *Meeting Carbon Budgets – 2014 Progress Report to Government*, <http://bit.ly/1oWKvVJ>

## 9. Taking a strategic approach

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### **Fair play for pre-pay**

Despite paying on average £80 a year more than direct debit customers, energy prepayment meter users get a second class service including limited top up options, little or no choice of tariffs, faulty keys or meters, and poor customer service.

Citizens Advice evidence also reveals that 16 per cent of prepayment meter users are cut off over the winter: either because they cannot afford to buy more energy or because they are unable to top-up their meter.

As the statutory consumer watchdog for energy customers, Citizens Advice is demanding the energy companies offer a better price, more control and easier use, and will continue to monitor all aspects of the energy market to identify and address the particular problems facing vulnerable consumers.

### **Benefits for all**

Provided consumers want to act, can afford to act, and barriers such as tenure are overcome, there are multiple benefits to be had from the policies and programmes reviewed in this report. The smart meter rollout alone should deliver:

- Accurate bills – ending problems with estimated and inaccurate billing
- Customers having more control over their energy use, including the ability to make savings on energy bills and budget more easily
- Improvements in customer service and prepayment; increased security of supply; and relatively lower costs.

Citizens Advice wants maximum benefit and minimum inconvenience for energy consumers, and nobody left behind. All customers should be able to access improvements from new smart technology that they are funding, and all households must have a pathway to access energy efficiency measures regardless of their income, payment method, location, dwelling or personal circumstances. This requires distributional impact assessments during policy development, monitoring during delivery, and feedback loops to adjust delivery to ensure the original objectives are met.

### 10. Conclusion and next steps

This paper examines policies that should save consumers money on their energy bills. It pulls together the Citizen Advice Service's policy positions, drawing on the evidence base gathered by its predecessors as the statutory energy consumer watchdog: Consumer Futures and Consumer Focus.

It shows that too many policies are incomplete from the consumer perspective. There is no compelling reason for consumers to invest in energy efficiency measures now. The UK Government funds its fuel poverty programme through energy bills, putting more pressure on those already struggling with bills. And a further £400 per household will be spent on the rollout of smart meters, without consideration of how that should link up with fuel poverty programmes.

But there is also much to take heart from. The provision of a free IHD with smart meters will ensure consumers get the information they need to monitor their energy spend, and may unlock significant bill savings. Action on private landlords will give tenants the control they need over their living conditions. And the UK is leading EU members in its research on how energy labels can be made meaningful to shoppers.

The consumer element in these policies undoubtedly makes benefits more difficult to deliver. Demand reductions cannot be imposed on consumers. Specific needs and motivations differ by household, and for each of these households, policies need to add up to an offer where the benefits outweigh the costs, financial and otherwise, making energy saving the default choice.

Our original intention with this paper was to develop criteria for the development of consumer policies. Our review suggests that quantitative methods are not appropriate at this stage. They do not necessarily identify the gaps through which consumers fall; they do not consider the consumer experience; and too often they have failed to consider why consumers would get involved.

Instead we identify a vision for 21<sup>st</sup> century energy services that is affordable, accessible, safe and fair. We then transpose this into a practical framework for building consumer confidence, and then map the key strategic objectives that will start moving us from today's incomplete policy offer to a supportive and coherent consumer offer. These objectives relate to a number of practical policy interventions and can be summarised as:

- Tip the balance from barriers to benefits
- Free advice makes society better
- Make the links
- Build trust
- Raise standards, cut bills
- Fair play for pre-pay
- Benefits for all

In summary we want a confident marketplace that engages, encourages and enables consumers to take up energy- and bill-saving measures and behaviours, with government interventions focussed on those most in need.

## 10. Conclusion and next steps

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### Next steps

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The Citizens Advice Service will continue to research the development of the energy market to identify opportunities and avert potential detriment for consumers. It uses its evidence base to:

- Inform Government and regulator-led working groups such as the ECO Steering Group and the Smart Grid Forum, and advisory non-departmental public bodies such as the Fuel Poverty Advisory Group
- Make formal representations in response to Government and regulator consultations and select committee inquiries
- Promote consumer needs to industry and other parties active in the energy and property sectors.

The Citizens Advice Service will also continue to encourage and assist consumers to take control of their energy bills, by:

- Providing advice through our online adviceguide, our telephone support service and through Bureaux
- Working with partners to help people make the links between different offers
- Communicating opportunities via the media.

Working with partners and promoting energy and bill-saving practices does not prevent us calling out bad practice. To take control, consumers need full information about relevant aspects of the energy, appliance and property markets, and the ability to act on that information.

## Aims and principles

The Citizens Advice service provides free, independent, confidential and impartial advice to everyone on their rights and responsibilities. It values diversity, promotes equality and challenges discrimination.

The service aims:

- to provide the advice people need for the problems they face
- to improve the policies and practices that affect people's lives.

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