The role of energy efficiency in the battle against climate change
Action on climate change has never been more prominent in our minds. From reducing our dependency on single-use plastic, to switching to renewables, people want to do what they can to make a difference. But there’s one vital piece being overlooked, and without it, Great Britain will not be able to meet its climate change commitments. That piece is energy efficiency.

It’s why we have launched The Missing Piece campaign, in conjunction with the University of Salford. Our campaign is designed to raise awareness of the impact of energy efficiency in helping the nation reach our climate change targets and to encourage everyone to take a small step to help fill in the missing piece by getting a smart meter installed.

This report reveals that less than three per cent of all media and social media conversations on climate change in the last two years made any reference of energy efficiency. However, if every household took action on energy efficiency now, we could achieve 11 per cent of the UK’s 2050 carbon target. As a nation, we need to achieve a 51 per cent reduction in our carbon emissions by 2025 and a 57 per cent reduction by 2030, relative to our emissions in 1990. These targets were originally designed to help the UK bring down its emissions by 80 per cent by 2050. The Government, under Prime Minister Theresa May, also upped the ante, promising the world that Great Britain will be carbon neutral by 2050 – a 100 per cent reduction.

The UK has so far been a world leader in decarbonisation, exceeding its own targets and reducing emissions faster than any other major advanced economy in the G7. Yet, meeting our 2050 targets means reducing our domestic emissions by at least three per cent (based on 2018 emissions). That’s 50 per cent more than our previous 2050 target.

Is this impossible to achieve? Far from it. These targets are ambitious, but as The Missing Piece report shows, a combination of technology upgrades and collective action can create a smart energy system, where every household and individual plays their part in helping Great Britain become cleaner, greener and more sustainable.

The first step is getting a smart meter installed. Yes, they help reduce the cost of energy bills, but much more importantly, establishing a national network of smart meters allows us to know exactly what energy we need and when. With this knowledge, we can help Great Britain to become more efficient in the way we generate, distribute and use energy, maximising the value of renewable energy sources.

It’s a domino effect of advantages. We can become a smarter, cleaner, greener country with every household making a collective difference to our nation’s climate change targets.

I hope you’ll join the conversation and help fill in the #missingpiece.

1 Looking at the volume of references of energy efficiency in climate change conversations in the sources of information that the public sees daily news sources (2.61%), Twitter (0.12%), tweets specifically posted by MPs (0.27%) and documentaries (0%). See methodology for further detail.
2 Statistics provided by The Energy Saving Trust. Full information on methodology, and assumptions used, can be found in the Appendix.
4 ibid
5 https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/173004.htm
8 https://www.delta-ee.com/front-page-news/delta-ee-and-smart-energy-gb-research-suggests-big-savings-for-smart-meter-users.html
Since 2011, when we, as part of the School of the Built Environment at the University of Salford, created the Energy House, we’ve been researching how to tackle the problem of wasted energy in and from our homes. There are 29 million existing homes in the UK, and the government plans to build 1.5 million more by 2022\textsuperscript{2}. Yet our homes contribute massively to our carbon emissions as a country – in 2017, for example, they directly emitted 64 million tonnes of carbon dioxide\textsuperscript{10}.

The Energy House was the beginning of our journey. It is the only fully climate-controlled research facility in the world with a fully functioning home inside. This two-bedroom, terraced house inside an environmental chamber includes sensors that monitor how the house responds to weather conditions. A multi-disciplinary team are using it to research energy use – an important endeavour given 30 per cent of all the energy consumed in the UK is used in our homes\textsuperscript{11}.

Our research is about showing how it’s possible for ordinary people to make significant changes to the climate, by taking small steps in their homes such as installing a smart meter. The Missing Piece campaign highlights the absence of energy efficiency in the debate on climate change, despite the impact it could make on the UK achieving its 2050 carbon reduction targets.

Energy efficiency is a subject we are dedicated to, and it is our hope that our work will inspire you to make the changes that could save the climate from irretrievable global change – all from the comfort of your own home.

Professor William Swan and Dr Richard Fitton
School of Science, Engineering and Environment
University of Salford

\textsuperscript{2} ibid
\textsuperscript{10} https://www.salford.ac.uk/built-environment/laboratories-and-studios/energy-house
Understanding energy efficiency

Energy efficiency is a crucial component for meeting our national carbon targets and for tackling climate change. It reduces energy waste across all areas of the economy. Our homes offer significant potential for reducing energy demand on a national level. This can be through connecting homes into a smart energy system via smart meters; the national rollout of building fabric improvements so that homes use less energy for heating and cooling; and improvements to the efficiency of the appliances we use or smarter controls for our heating and appliances.
THERE IS NO PLANET B
Climate change, and the impact we can have as individuals on saving the planet, is at the forefront of our minds as a nation. In a recent OnePoll study, 96 per cent of Britons said they care about protecting the environment and 71 per cent are worried about climate change. 62 per cent of people believe it is consumers’ responsibility to tackle climate change and are already trying to play their part – with the most common action being recycling or reusing products (75 per cent). 

There is a correlation between the actions people take, and the importance they believe this has on reducing the impact of climate change. Reducing single use plastic (49 per cent), reducing our CO₂ emissions (46 per cent) and recycling (45 percent) are the top three measures identified as being the most important in protecting the environment. However, there is also consensus that if people were equipped with more knowledge about climate change, more could be done. 61 per cent of those surveyed agreed that if they better understood how to prevent climate change, they’d be more inclined to try.
Since 1990, the UK has achieved significant progress in reducing emissions and decoupling economic growth from increasing carbon emissions\(^\text{17}\). The Committee on Climate Change sets five-year carbon budgets to measure our progress towards the national 2050 carbon target. While the country has successfully reached its first (2008-2012) and second carbon (2013-2017) budgets\(^\text{18}\), our current policies and plans are insufficient to meet the fourth (2023-27) and fifth (2028-2032) carbon budgets\(^\text{19}\).

Similarly, our greatest achievements in emissions reduction to date – attributed to the power and waste sectors\(^\text{20}\) – have arguably been the “low hanging fruit” interventions. The Committee on Climate Change is clear that we now need to start delivering major cuts in energy demand – by changing the way we use energy in our homes, businesses, industry and transport - if we’re to keep on track with carbon budgets into the 2030s and hit our overall 2050 target\(^\text{21}\).

To reach our bold net zero emissions target by 2050 means as a country we need to reduce our CO\(_2\) emissions by 15 million tonnes a year, every year\(^\text{22}\), starting now.

With the Committee on Climate Change confirming that our 2050 targets are possible with known technologies\(^\text{23}\), we need to arm people with knowledge on all the areas that will help to achieve our climate goals, and the steps we can take to help us get there.

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\(^\text{21}\) ibid.
\(^\text{22}\) ibid.

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Achieving net zero emissions

“As the first country to legislate for long-term climate targets, we can be truly proud of our record in tackling climate change... Now is the time to go further and faster to safeguard the environment for our children.”

Theresa May announces legal commitment to end UK’s global warming contributions by 2050, June 2019\(^\text{16}\).

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Change in emissions 2012-2017

- Power
- Waste
- Industry
- Agriculture & LULUCF
- Buildings
- F-gases
- Transport

Source: Progress Report to Parliament (CCC 2018)
According to the Energy Saving Trust, the energy we use at home accounts for more than a quarter of all the energy we use as a country. It also accounts for 15 per cent of our greenhouse gas emissions.

One of the best chances we have of reaching our national targets on climate emissions, is by working together to make ourselves more energy efficient as a nation.

We know people are conscious about their energy use and have already taken individual action – the OnePoll study found that 58 per cent of people have already taken measures such as putting on a washing load on a cooler setting. And 88 per cent believe energy efficiency has an important role to play in tackling climate change.

However, there is a gap in our knowledge about how to stop wasting energy at a national level and how science technology and engineering can help tackle climate change. Almost three quarters (72 per cent) of people had never heard of a smart grid. And only just over half (56 per cent) of those who had heard the term, believe they understand what it is.

Yet by updating our infrastructure with existing technologies such as smart meters, we have the potential to make a much greater impact. This is because having a smart meter in our homes can help households become more aware of their energy consumption and take steps towards reducing it. Additionally, the information smart meters feedback to suppliers can enable us to plan how much energy to produce and when, and to make use of renewable energy sources more effectively. The result is that we can create a smart energy system that will make us smarter, cleaner and greener as a country.

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“The we have carried out many in-depth studies on energy saving technologies in controlled conditions and out in the field. These contribute to the large amount of evidence which support the fact that energy efficiency measures are key to delivering on our carbon targets. One of the ways we can make better decisions about energy efficiency in our homes is through a smart meter.”

Dr Richard Fitton
The University of Salford

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24 https://www.energysavingtrust.org.uk/sites/default/files/reports/PoweringthenationreportCO332.pdf
25 Ibid.
26 Nationally representative poll of 4,000 respondents, conducted between 14.08.2019 – 19.08.2019
27 Ibid.
28 https://www.energysavingtrust.org.uk/home-energy-efficiency/smart-meters
29 Looking at the volume of references of energy efficiency in climate change conversations in the sources of information that the public sees: daily news sources (2.61%), Twitter (0.12%), tweets specifically posted by MPs (0.27%) and documentaries (0%). See methodology for further detail
A missing piece

So, why is there a knowledge gap? Our research found that people don’t know how great an impact energy efficiency could have on our climate change goals because our media, politicians, and influencers simply aren’t talking about it.

Less than three per cent of all media and social media conversations on climate change in the last two years make any mention of energy efficiency\(^30\). We think this is a vital missing piece in our national discourse, and one that needs to change.

Mind the gaps

Energy efficiency was covered in just 2.61 per cent of all climate change articles by national news sources between July 2017 and July 2019\(^31\).

Our research found editorial coverage in national news sources began to gain pace following the publication of a high-profile report by the Intergovernmental Panel on Climate Change (IPCC), which urged unprecedented changes to the way society consumes energy, travels and builds in order to limit global warming to 1.5°C\(^32\) in October 2018. The report highlighted the risk of more heatwaves, flood-causing storms, drought and the loss of species. That same month, the Chancellor’s budget was criticised for not including green initiatives or investments\(^33\).

Yet in the 24,429 climate change stories in national news sources between 28 July 2017 and 28 July 2019, just 2.61 per cent of those articles focused on energy efficiency\(^31\). Articles that did reference energy efficiency tended to focus on how technology can be used to monitor and distribute energy resources, or its relationship with the Government’s commitment to net zero carbon emissions by 2050.

Mentions of energy efficiency in regional newspapers between 28 July 2018 and 28 July 2019 were higher at 3.38 per cent\(^34\). However, these figures are not directly comparable to those of national daily news sources because they only provide a picture for one year.

This is also the case for UK broadcast channels. Seven per cent of all climate change conversations on TV and radio stations between 28 July 2018 and 28 July 2019 mentioned the role of energy efficiency, but data sources do not allow a comparison across the full research period\(^35\).

National news sources

24k news stories on climate change

2.61% of climate change discussions mention energy efficiency

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Many of us learn about important subjects through television documentaries. Measuring the impact of the BBC’s Blue Planet II documentary presented by Sir David Attenborough alone, Waitrose’s 2018 Food and Drink Report found **88 per cent of viewers** changed their behaviour around plastics after watching.

Reviewing the number of documentaries produced between July 2017 and July 2019 against January 2019 IPSOS Mori Issues Index, there is a clear discrepancy between the documentaries being released and the issues the public are most concerned about. For example, almost 30 documentaries about crime aired during the research period, despite crime/law and order/ASB being the seventh most important issue for the public.

Out of the 19 documentaries released in the research period that did focus on environmental matters, none of them investigated energy efficiency in enough detail for it to feature in their synopses.

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**Energy efficiency received zero mentions in the IMDb synopses of television documentaries released in the UK between July 2017 and July 2019.**

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<table>
<thead>
<tr>
<th>Issue</th>
<th>Change since Dec %</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Market/Brexit/EU/Europe</td>
<td>63%</td>
<td>-4</td>
</tr>
<tr>
<td>NHS/Hospitals/Healthcare</td>
<td>-4%</td>
<td>-2</td>
</tr>
<tr>
<td>Education/Schools</td>
<td>21%</td>
<td>+4</td>
</tr>
<tr>
<td>Poverty/Inequality</td>
<td>20%</td>
<td>-1</td>
</tr>
<tr>
<td>Immigration/Immigrants</td>
<td>19%</td>
<td>+3</td>
</tr>
<tr>
<td>Housing</td>
<td>19%</td>
<td>0</td>
</tr>
<tr>
<td>Crime/Law and Order/ASB</td>
<td>17%</td>
<td>-3</td>
</tr>
<tr>
<td>Energy</td>
<td>17%</td>
<td>0</td>
</tr>
<tr>
<td>Pollution/Environment</td>
<td>12%</td>
<td>+1</td>
</tr>
<tr>
<td>Lack of faith in politics/politicians/government</td>
<td>11%</td>
<td>0</td>
</tr>
</tbody>
</table>

*Source: Ipsos MORI Issues Index*
Earlier this year, a new resource called Planet Placement was announced by BAFTA and albert to look at how film and television content can help to raise awareness about climate change by introducing sustainability messages into the content we see on our screens. Its purpose is to challenge the creative community and inspire them to create world-changing content.

The organisation’s ‘Subtitles that can save the World’ launch report analysed a year’s worth of subtitling data to see how often words associated with key sustainability topics were mentioned.

They found the words mentioned most frequently were not those that contribute most significantly to an individual’s carbon footprint. Notably, energy efficiency was not included as one of the climate change related search terms, further demonstrating its lack of prominence as an important element in the climate change debate.

“Never before has the climate and environmental emergency been on so many people’s lips. Having campaigned for many environmental issues, I know the impact that TV programming, public debate and media coverage can have on awareness levels and positive behaviour change. We’re reducing our consumption of single use plastics and we’re making our homes more eco-friendly.

“Now we’re calling on politicians, the media and the public to help fill in the missing piece by including energy efficiency in the climate change debate. But, talking alone is not enough. One small step we can all take today to become more energy efficient, individually and as a nation, is by getting a smart meter installed – they’re the foundation of a smart energy system.”

Chris Packham
Conservationist, TV presenter and campaigner

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“Food
12%

“Travel
22%

“Energy
24%

“Resources
20%

“Government Spend
22%”

By examining Hansard for the House of Commons and House of Lords debates, The Official Report for the Scottish Parliament, and The Record for the Welsh Assembly, it’s possible to see that political debates on climate change have been on the rise over the past year.42

When looking at the January 2019 IPSOS Mori Issues Index, the top three issues debated in Parliament are in line with those that the public are most concerned about – Brexit and Europe has 50,029 mentions; schools, 17,397 mentions; and the NHS, 13,696 mentions.43 However, looking at these topics side-by-side, there is a strong argument for climate change discussions to receive more prominence given Parliament has approved a motion to declare an environment and climate ‘emergency’.44

Yet, while climate change debates are increasing, energy efficiency is still a relatively small part of this wider discussion. Only 466 mentions were specifically on the topic in Parliament, compared with 2,354 mentions of climate change and 4,553 mentions of sustainability between July 2017 and July 2019.45

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41 Social listening using Brandwatch • Channels: Twitter • Country: UK • Inputs: • Author list of MPs Twitter handles as provided by https://www.mpsontwitter.co.uk/list • Keywords: Climate change – (“climate change” OR climatechange OR hashtags:climatechange) – Energy efficiency filter: (energy OR gas OR electri*) NEAR/5 effici* • Time period: 28th July 2017 to 28th July 2019

42 Searching Hansard (House of Commons and House of Lords), The Official Report (Scottish Parliament) and The Record (Welsh Assembly) to obtain the frequency of references to climate change and energy efficiency. Time period – 28th July 2017 to 28th July 2019. It is not possible to search for two terms/phrases at the same time on The Official Report website, therefore it is difficult to discover mentions of energy efficiency that appear within climate change debates.

43 Searching Hansard (House of Commons and House of Lords) for keywords related to issues identified in IPSOS Mori January Issues Index 2019 e.g. Brexit, NHS, education, crime, immigration etc. Time period – 28th July 2017 to 28th July 2019

44 https://www.bbc.co.uk/news/uk-politics-48126677

45 Searching Hansard (House of Commons and House of Lords) for keywords including climate change, energy efficiency, energy efficient, efficient use of energy, sustainability, plastics, recycling etc. Time period – 28th July 2017 to 28th July 2019
The Scottish Parliament and Welsh Assembly debate climate change, and energy efficiency. For example, energy efficiency received 7,433 mentions in Holyrood compared with Westminster’s 466 in the same period. This is unsurprising – the Scottish Parliament is expecting to legislate to reduce greenhouse gas emissions to net zero by a more ambitious target of 2045.

While the fact that MPs, MSPs and MLAs are debating among themselves about climate change is encouraging, most of their constituents will be unaware of the fact.

This is because energy efficiency remains low on the agenda of what elected officials tweet about to their followers. Analysing the 4,064 tweets made by 324 MPs about climate change between July 2017 and July 2019, only 0.27 per cent mentioned energy efficiency. Most of the social conversation about energy efficiency during the research period was driven by one MP, Sarah Newton, and her work around the Domestic Energy Efficiency Plan Bill and Big Energy Saving Week.

Given how little prominence energy efficiency receives across media, documentaries and politics, it is therefore perhaps not surprising that it only makes up 0.12 per cent of the public’s 3.2 million Twitter posts about climate change in the past two years.

Less than one per cent of over three million tweets on climate change between July 2017 and July 2019 mentioned energy efficiency.

0.12% of climate change discussions mention energy efficiency.
The impact of taking action on energy efficiency

“Energy efficiency represents an untapped potential for meeting our national 2050 targets.”
The Energy Saving Trust

This glaring absence in the debate on climate change has left a missing piece in the nation’s bold efforts to reach net zero carbon emissions by 2050. This is because there are 29 million households in the UK and in 2017 they directly produced 64 million tonnes of carbon dioxide emissions.

However, if every household took action on energy efficiency now, we could save up to 54 million tonnes of carbon dioxide. This would help us achieve 11 per cent of the UK’s 2050 target. This is equivalent to the amount of carbon emitted from the energy used in 24 million homes.

Filling in the missing piece

It’s clear that the public cares about climate change. Awareness of the impact of recycling, single-use plastic reduction and meat consumption is at an all-time high. Quite rightly so – the result is that the country is making positive changes for the future. A recent GlobalWebIndex study, for example, found that 53 per cent of UK consumers have reduced the amount of disposable single-use plastic they have used in the past 12 months.

But now it’s time to broaden the conversation. It’s time that energy efficiency gained its rightful place in our climate change discourse. That change will help people understand the role energy efficiency plays in helping Great Britain reach its climate change goals – and how their small steps can ladder up to make a big difference.

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46 Searching Hansard (House of Commons and House of Lords), The Official Report (Scottish Parliament) to obtain the frequency of references to climate change and energy efficiency. Time period – 28th July 2017 to 28th July 2019
48 Social listening using Brandwatch • Channels: Twitter • Country: UK • Inputs: • Author list of MPs Twitter handles as provided by https://www.mpsontwitter.co.uk/list • Keywords: Climate change - (“climate change” OR climatechange OR hashtags:climatechange) – Energy efficiency filter: (energy OR gas OR electr*) NEAR/5 effici* • Time period: 28th July 2017 to 28th July 2019
49 ibid.
50 Tool: Brandwatch • Channels: Twitter • Country: UK • Keywords: (“climate change” OR climatechange OR hashtags:climatechange) – Energy efficiency filter: ((energy OR gas OR electr*) NEAR/5 effici*) • Time period: 28th July 2017 to 28th July 2019
51 ibid.
53 ibid.
54 Statistics provided by The Energy Saving Trust. Full information on methodology, and assumptions used, can be found in the Appendix.
The Committee for Climate Change believes we already have the technology to reach our national carbon targets and part of that is by understanding that our homes are themselves part of our energy system – the energy demand they create, the information they provide on supply, the network connection, and the opportunity they represent to deploy new technology.

We already know smart meters can help households manage their energy bills by becoming more efficient with how they use gas and electricity. But they can also relay this data on energy use to help tackle waste at a national level.

The Government has predicted that £650 million of energy goes to waste in the current distribution system – travelling from where energy is generated to the point it gets to our homes. Because smart meters assist with forecasting demand, homes can then become part of the smart energy system, supporting the use of more low-cost and renewable energy sources and reducing unnecessary waste. This will become even more relevant as small-scale renewable energy, batteries, electric heating and cars become widespread.

The National Infrastructure Commission also found that with better balance between supply and demand in the national system, and the ability to store energy, consumers could save up to £8 billion a year by 2030, and better still, help the UK meet its 2050 carbon targets, as well as securing our energy needs for future generations.

One Smart, Green Nation

As a country we need to have an efficient energy infrastructure which will help us reduce energy waste, and deliver reliable, clean and affordable energy for the country, now and for generations to come.

Technology can do a lot – the Committee of Climate Change’s Net-Zero Technical Report 2019 predicts it can get us 38 per cent of the way to reaching our bold target of being carbon net zero by 2050. To go the whole way, we all need to get involved in making the small changes that will transform our nation into a smarter, cleaner and greener society.

Smart meters are the foundation of this system. They do not just have the potential to improve our individual energy efficiency. Smart meters help to upgrade our outdated energy infrastructure, so that our homes become part of a smart energy system – which is vital for energy efficiency.

Your action on energy efficiency could be one of the pieces that changes the big picture on climate change. To help us begin to fill in the missing piece, join the conversation using #missingpiece.

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ASK NOT WHAT YOUR PLANET CAN DO FOR YOU.
ASK WHAT YOU CAN DO FOR YOUR PLANET.
The Missing Piece campaign was inspired by the hypothesis that while there is high level awareness about climate change, there is little discussion about energy efficiency and the role it can play in helping Great Britain achieve its climate commitments.

Two strands of research were undertaken: the prominence of energy efficiency and the impact of energy efficiency.

Prominence research

The prominence research looks at the frequency of climate change conversation and the extent such discussions also refer to energy efficiency across four areas:

1. Mainstream media in UK. Daily news sources, regional newspapers, news broadcast coverage (TV and radio) and magazines,

2. Documentaries by reviewing the synopses of UK documentaries released between July 2017 and July 2019 on IMDb. This was supplemented by ‘Subtitles to save the World’ BAFTA albert research released in May 2019,

3. Politics through searches of debates carried out in the House of Commons and House of Lords (Hansard), Scottish Parliament (The Official Report) and Welsh Assembly (The Record). An analysis of MPs tweets was also conducted,

4. Social media through analysis of UK Twitter mentions.

Across all channels, the starting date range for analysis were 28 July 2017 to 28 July 2019, using the same keywords to maintain consistency.

However, consistency in date ranges was not possible for regional newspapers, news broadcast coverage and magazines as only one year’s worth of analysis was possible due to data restrictions. These channels have therefore been removed from final analysis.

It was also not possible to search for two phrases at the same time on The Official Report (Scottish Parliament) and The Record (Welsh Assembly). It is therefore difficult to discover mentions of energy efficiency that appear within climate change debates. For this reason, only the frequency of keywords - and not the level of energy efficiency mentions within climate change debates - was reported.

A survey of 4,000 UK adults was also carried out to explore the gap between people’s awareness of climate change, their willingness to engage in measures to reduce carbon emissions and understanding of energy efficiency as a crucial element in the fight against climate change.

The statistic that “less than 3% of conversation that the UK public sees about climate change references energy efficiency” was created by reviewing the volume of references of energy efficiency in climate change conversations in the sources of information that the public sees within the two year research period: i.e. daily news sources (2.61%), Twitter (0.12%), tweets specifically posted by MPs (0.27%).
Impact research

The overarching aim of the ‘impact’ research conducted by the Energy Saving Trust was to “understand the extent to which energy efficiency in homes will play a role in meeting the UK’s carbon targets, and how easy it is to make positive changes”. The research included a literature review of the existing, publicly available resources to extract and compile the most relevant and reputable information sources.

To generate the 54 million tonnes carbon savings, the following methodology and assumptions were applied:

- The total electricity and fuel savings in Terawatt hours for the measures available for improving the energy efficiency of existing UK housing stock were taken from the Rosenow et al 2018 study “The remaining potential for energy savings in UK households”60. This study looks at the potential energy savings for implementing energy efficiency, projected out to 2035.
- The fuel savings were calculated by taking the proportional fuel mix of energy used in UK households (e.g. what percentage is gas, electricity, oil etc) to weigh against the fuel savings total. This step was required as we do not have the exact breakdown of the “fuel” mix used in the study.
- The Terawatt hours were converted to Kilowatt hours in order to calculate the carbon emissions.
- A carbon factor for the different fuels (e.g. gas, oil) was not applied to the energy saving of each fuel.
- For the electricity savings, a carbon factor averaged over 2017 to 2050 was applied to reflect the decarbonisation of the grid over time61.
- This provided values in million tonnes of carbon dioxide equivalents.
- By combining the electricity and fuel savings we arrived at 54 million tonnes of carbon dioxide equivalents and compared this to the current carbon emissions in order to calculate the percentage contribution towards meeting the net zero target by 2050.
- For the equivalency statement, the total of the household carbon emissions was divided by the number of homes in the UK and apportioned to the savings calculated.

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