

# ADDRESSING ENERGY SECURITY THROUGH LOCAL AND DEMAND SIDE ACTION



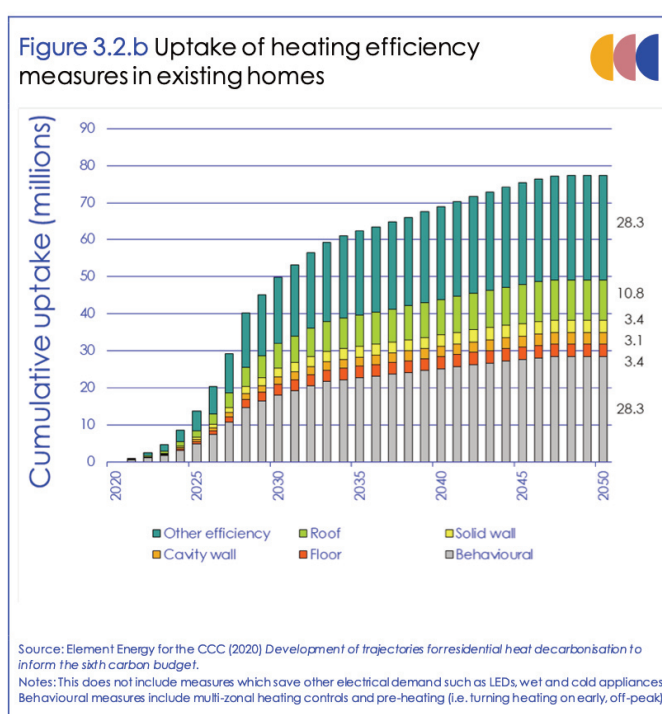
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**Growth of global demand for energy alongside changes in the wider political economy have led to prices of energy skyrocketing in the UK. Action on the demand side presents an important opportunity to address this, while also delivering wider household, community and UK wide benefits. Policy support for households, local authorities, and industry is key to unlocking this action.**

There are big changes underway in the UK's energy sector. The last 30 years have seen a move away from coal power generation, and a push toward renewables. In 2022, renewable and nuclear energy accounted for more than 48.5% of all electricity generated in Great Britain. At times, this means that the electricity grid is running on 100% clean power. December 2023 saw the UK break its 'green grid' record, running for 25 hours on only clean power.

But despite this progress and the positive news stories, the UK is still highly reliant on gas. This is true for the power sector where it accounts for almost 40% of electricity generation, as well as for use in heating and cooking. This has meant that the UK has been particularly affected by changes in global gas prices, which have increased steeply in recent years.

For households, one of the biggest knock-on impacts has been in the changes to their energy bills. With Ofgem's price cap changes, the average annual direct debit dual fuel bill has risen from £1200 in 2020, to £2500 in 2022. Despite support provided by the Government's



Energy Price Guarantee, households saw their energy bills double. Over the same period wages have risen by only 10%.

Amid the rising pressures faced by many households to simply keep on top of energy bills is the push for investment in energy efficiency and clean heating. Analysis from the Climate Change Committee<sup>1</sup> shows the scale of action required to upgrade all buildings to an Energy Performance Certificate band C.

Unfortunately, these measures are not being deployed anywhere near as fast as they need to be if we are to successfully deliver net-zero.

2021 saw just 1.48 heat pumps installed per 1000 households in the UK, far below the 15.3 installs per 1000 households required.<sup>2</sup> This is way below levels seen in some of our near neighbours, including France (17.3 installs per 1000 households), Denmark (25.03 installs per 1000 households)

and Norway (49.77 installs per 1000 households). If we had managed to match rates of install in Estonia (30.29 per 1000 households in 2021), our domestic gas use would have been 34% lower, cutting down gas imports by 19%<sup>3</sup> and helping reduce reliance on Russian gas.

Improving energy efficiency and installing clean heating also delivers financial benefits. If all homes below EPC band C were improved to this level, the aggregate saving would be £10.6bn each year<sup>4</sup>. Adding in heat pumps and electric vehicles allows homes to use energy

The first hurdle that needs to be addressed is financial. The cost per house to deliver these changes is insurmountable for many. It has been increasing in recent years and industry professionals suggest it could be upwards of £50,000<sup>8</sup>. Most households don't have access to this type of capital. Where they do, the payback periods are beyond individual investment horizons. We need to see innovative business models,<sup>9,10</sup> that overcome the upfront cost hurdle and tie the investment to the home. For example, through long term, low-interest loans with repayments via council tax.

the uneven uptake self-perpetuating. Those areas with higher levels of uptake, which tend to be more affluent, create supportive social conditions that enhances further uptake. Or, on the flip side, people who live in areas with lower levels of uptake become trapped.<sup>12</sup>

Local and community-based approaches can help address resource and capacity related challenges for households. They engage citizens to co-create a shared ambition for the future of their neighbourhood or city, and then bring appropriate experts together to develop solutions that meet people's needs. Local

Firstly, we need to attract more young people into the sector, encouraging a diversity of people and providing a diversity of training approaches to meet their needs.

Second, we need to do more to motivate the current workforce, many of whom are employed through small businesses, to take up available training and adopt modern building and retrofit practices.

Third, we need to find a way to navigate the transition path equitably in order to avoid obsolescence of sector workers. Strong leadership from government is crucial here, as long-term obligations, incentives and grants are essential for stimulating market confidence, scaling up training capacity, and reskilling workers<sup>17</sup>.

Considering these hurdles together leads to the following recommendations.

### 1) Address upfront costs

- Provide low-interest access to finance for households.
- Tie investment to the home, not the individual.
- Remove non-financial burdens to access funding, for example, through engaging trusted intermediaries in finance applications.

### 2) Engage not educate

- Engage people around their wants and needs for their home and community, for example, through citizens assemblies and other democratic approaches.
- Make it easy for people to engage, avoid jargon, and ensure opportunities are not systematically excluding certain groups.
- Focus on the wider outcomes rather than educating or upskilling people to input on technical or operational aspects.

more flexibly, which can create further economy wide savings of £1.7bn a year<sup>5</sup>. Further benefits accrue in other sectors, for example, positive health outcomes from warmer homes<sup>6</sup>. In addition, retrofitting programmes could sustain over 1.2 million direct jobs and 1.5 indirect jobs by 2050<sup>7</sup>.

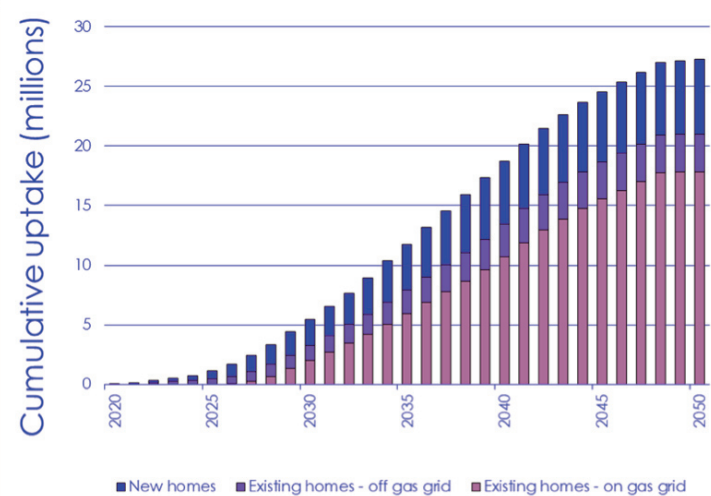
With the wealth of potential benefits, this begs the question of why the UK is experiencing inaction, and what can be done about this.

The second hurdle is one of exclusion. Research has shown that even when grant funding is provided to support the uptake of low-cost technologies, they are consistently adopted in higher-income areas<sup>11</sup>. This serves to widen the socio-economic inequalities prevalent in our current energy system. There is still a financial barrier to entry, and those who can afford to, benefit. On top of this, many people do not have the time, resources, or capacity to implement change. This makes

authorities, working with key community organisations in their jurisdictions, are in a prime place to deliver<sup>13</sup>. They are trusted, they have strong links into community, and they can cultivate the connections between diverse stakeholders that are needed to deliver change<sup>14</sup>. However, there are significant disparities in capabilities and resources between local authorities. These perpetuate inequalities and risk leaving already disadvantaged areas missing out on the benefits. Empowering local leadership is vital, and government has an important role to play to ensure local authorities have the necessary responsibilities to deliver and adequate resources and skills to respond.<sup>15</sup>

The third hurdle relates to the workforce. Our current workforce is not sufficient in size, diversity, or skills to deliver the changes needed in our homes and workplaces<sup>16</sup>. We are facing three interrelated challenges for addressing this and ensuring the availability of the skills and supply chains.

Figure 3.2.c Uptake of heat pumps in residential buildings



Source: Element Energy for the CCC (2020) Development of trajectories for residential heat decarbonisation to inform the sixth carbon budget.

### 3) Empower local authorities

- Establish long-term policy objectives and instruments, and devolve statutory powers and resources.
- Build capacity through investing in local authority skills and expertise.
- Embed net-zero and equity principles into evaluation of all local and regional public expenditure.

### 4) Build the industry

- Support people getting into the industry and the industry in growing, e.g., funding for training, incentives for employers, develop peer networks.

- Professionalise vocational education and maintain continuous education capacity, and formalise regulation to make specific qualifications a required prerequisite.
- Provide long term, evidence backed, and non-competitive funding to develop long-term markets and incentivise industry development.

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