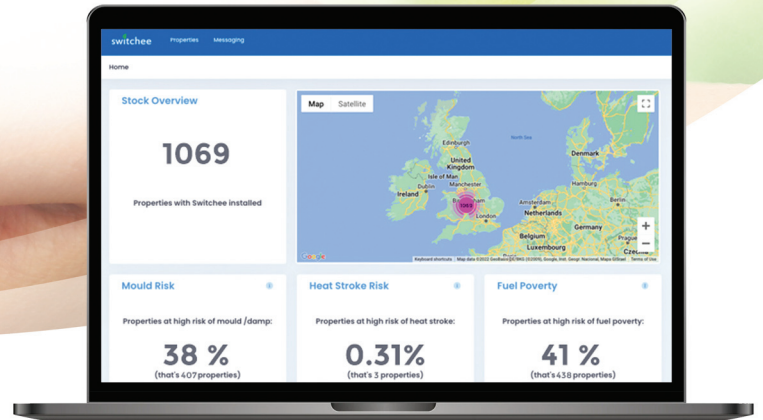
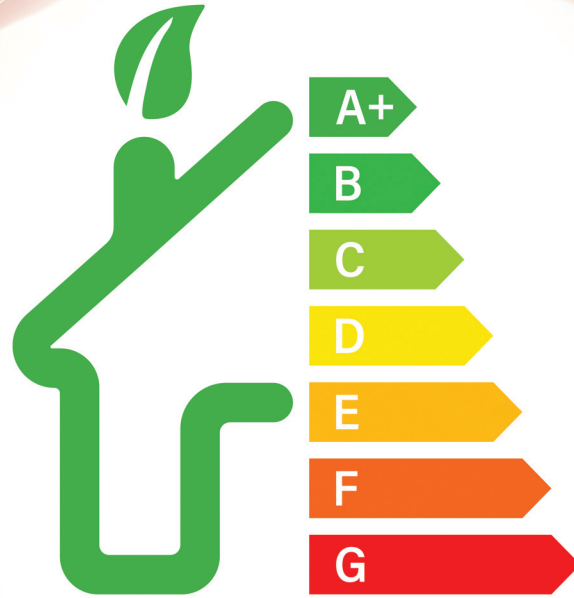


switchee



HOW TO BUILD A NET ZERO STRATEGY **WHITE PAPER**

The UK government's commitment to the [Paris Climate Agreement](#) has led to an increased focus on sustainability across sectors, with a specific focus on drastically reducing carbon emissions. In doing so, the government has declared that by 2050 all businesses should be entirely carbon neutral. Research shows that by cutting our emissions, with a move toward total decarbonisation, we can [slow the spread of climate change](#) and work towards repairing the hurt caused to our environment.

With the housing sector responsible for [40% of UK carbon emissions](#), change within the industry is vital to achieving Net Zero. Without rapid change, the UK is unlikely to meet decarbonisation targets in the outlined timeframe, which is a great cause of panic amongst housing providers as they formulate a realistic strategy.

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1. BUT WHY THE SUDDEN EMPHASIS ON NET ZERO?

Research shows that a drastic reduction in carbon emissions, with a move toward climate neutrality will have many long-term benefits. Decarbonisation will help [improve the overall air quality, lowering pollution levels, and increase public health](#). With rates of climate change still [dramatically accelerating](#) and the notable rise in weather extremes such as [droughts, wildfires, and floods](#), urgent action is necessary. From a housing perspective, the development of energy efficient homes will lower overall costs in the long-term. A recent survey of 79 housing associations in England found that [66% of respondents are in the process of drawing up a plan to hit the stretching target](#).

But with the majority of housing providers still reliant on fossil fuels, these new Net Zero targets are a cause for concern. The housing industry has a CO2 problem, both in construction and in ongoing usage. The [2019 'Fit for the Future'](#) report compiled by the Committee on Climate Change and its Adaptation Committee, concluded with the following findings:

- The UK's legally binding climate change targets will not be met without the near-complete elimination of greenhouse gas emissions from UK buildings.
- Emission reductions from the UK's 29 million homes have stalled, while energy use in homes increased between 2016 and 2017.
- Efforts to adapt the UK's housing stock to the impacts of the changing climate (higher average temperatures, increased flooding, and water scarcity) are lagging far behind what is needed to keep us safe and comfortable, even as these climate change risks grow.

A move towards decarbonisation will help reduce the risk of climate change and help to stabilise our environment. Implementing sustainable and energy-efficient retrofit programmes in the UK will have a significant impact on CO2 production. Moreover, it will raise awareness of climate change and sustainability efforts in the UK, urging landlords and residents to keep in mind the environment in their daily lives. However, while the benefits of Net Zero are plentiful, it also presents many difficult questions for landlords and housing providers. The central question being: How can Housing Providers develop an effective plan?

2. HOW TO SET REALISTIC TARGETS

An effective Net Zero strategy is dependent on workable targets. There are a myriad of factors that need to be taken into consideration when it comes to decarbonisation, which challenges housing providers with their limited resources already stretched thin. With the 2050 deadline already looming, or 2045 for Scotland, there is little time to plan, and definitive action needs to be taken as soon as possible. This is why it is vital to set realistic goals, rather than stretched unrealistic ones.

What constitutes a constructive Net Zero strategy?

The Joseph Rowntree foundation outlines how [‘resources and effort have been wasted because policies have lacked clarity and stability. Social landlords need greater certainty to plan investments in sustainable housing energy modernisation \(retrofit\) programmes.’](#) The important thing is to communicate a clear vision with an actionable, delegated plan, that eliminates any form of confusion amongst departments. This will help prevent financial waste and allow for decisive changes to be made. The next step is communication and collaboration. Housing providers need to come together, sharing data and resources, to tackle current decarbonisation targets. According to Craig Stirrat, Chief Operating Officer at Grampian Housing, ‘collaborative leadership’ is vital to the achievement of Net Zero as ‘no one person has all the answers.’ This is especially important when we consider how different parts of the United Kingdom have their own targets in place.

In Scotland, all new homes are [required by law to be carbon neutral by the year 2025](#). This puts Scottish housing providers under increased pressure as they scramble to meet the outlined timeframes. With England, Wales, Scotland, and Northern Ireland having their own decarbonisation targets in place, the need for cooperation has never been clearer. By sharing information and findings, housing providers can learn from the commonly encountered mistakes. In this case, England, Wales, and Northern Ireland can look to Scotland to lead the way for Net Zero and use their experiences to implement informed action. Inside Housing estimates that [64% of Welsh councils are working toward a 2030 target and 20.8% of UK Housing Providers aiming to achieve Net Zero at an earlier date than set by their government](#).

The next step is to identify and install much-needed retrofits, ensuring the energy efficiency of properties. However, the question at the forefront of Net Zero discussions remains: How will Housing Providers fund these strategies?

3. ASSESSING YOUR STOCK

It is important for housing providers to develop their own cost evaluations against their housing stock, in order to properly prepare for the mandated Net Zero targets. Providers like [Optivo](#) have estimated that it will cost them approximately [£2,842 per property](#) to install the necessary retrofits whereas North West Leicestershire Council estimates that it will cost them 'up to [£50,000 per unit](#)'. These cost estimates vary greatly in detail.

In keeping with expectations, those with the largest stock portfolio face the highest decarbonisation costs. These estimates were achieved by taking the average cost per property and dividing this by the complete housing stock. By assessing stock, housing providers can create an accurate assessment of the financial cost associated with Net Zero. This gives housing providers a realistic overview of decarbonisation, leading to more informed budgeting decisions. Overall the figures are optimistic, with research carried out by [Lucie Heath](#) showing that Social Landlords are in a much better position than Private Landlords when it comes to meeting decarbonisation targets.

4. HOW TO BUDGET FOR NET ZERO

Funding and grants

With budgets already tight for housing providers, the nationwide move toward Net Zero has caused an increased financial strain for the housing sector. Publications like [Inside Housing](#) have estimated that it will cost [£104 billion to decarbonise social housing](#). This is equivalent to paying the rent for all social housing tenants in England for five years, or enough to cover councils' temporary accommodation bills, for an estimated 84 years, if costs were to remain the same.

The government has allocated £3.8 billion worth of funding over a 10 year period as part of the [Social Housing Decarbonisation fund](#), available for social housing providers to improve the energy efficiency of social homes that are currently below Energy Performance Certificate (EPC) C. A £62m fund was announced in 2020 followed by £160m for the first wave of the SHDF in financial year 2021/22 delivering to January 2023.

There are also other grants available such as the [Green Homes Grant](#), which offers a total of £3 billion towards decarbonising the social housing sector, but estimates show that it will cost an expected [£3.5 billion per year in order to reach current targets](#). Evidence shows that new [build EPC efficient properties will lead to lower costs in the long run](#) for both housing providers and residents, making it a worthwhile investment.

Rob Wall, Assistant Director at British Property Federation, said: 'Housing associations are passionate about cutting their carbon footprint and making their homes greener and warmer for residents'. But the main barriers to achieving total decarbonisation are [funding and financing](#). On a more positive note, current estimates show that retrofitting programmes in the North could also bring a [£2.86bn boost to the region each year, as well as an annual £5.61m boost to supply chains](#) across the UK. This money can be funnelled back into the community, bringing benefits to the surrounding area and across the UK as a whole.

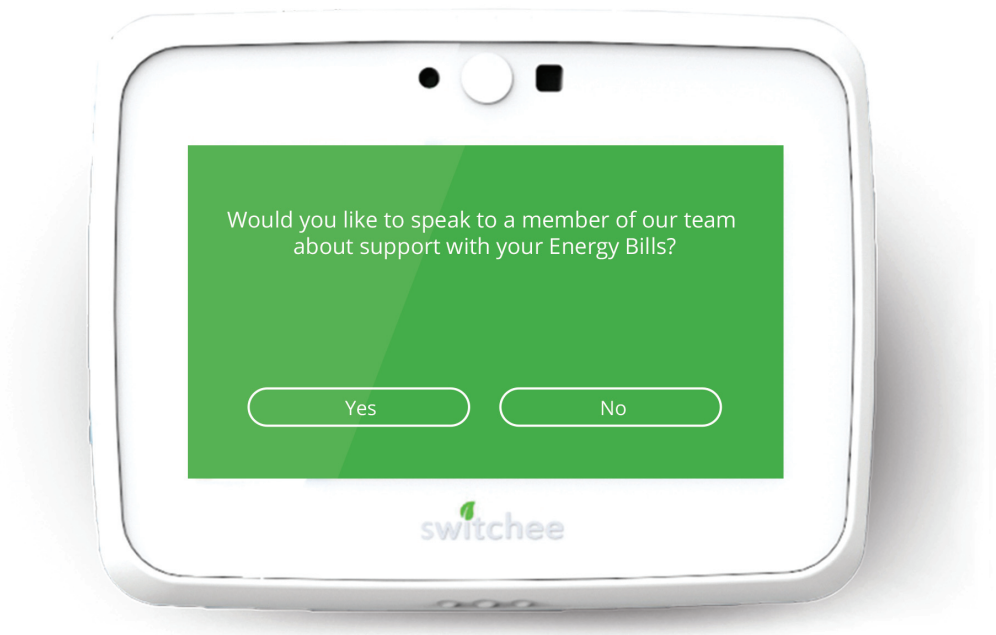
Data and insights

Another way to reduce overall costs is to utilise data and insights through smart home technologies. Advancements in IoT, such as the smart thermostat, allow housing providers to remotely monitor housing stock and individual property performance, and gain key insights into their homes, enabling them to make informed, targeted decisions on budget and resource allocation. Furthermore, these insights can drive a more targeted approach to issues like condensation, damp, and mould and repairs. A proactive management of these areas can reduce future costs such as larger, more costly future repairs and repair claims payouts. Digitisation also allows landlords and housing providers to improve the energy efficiency of their properties in line with Net Zero initiatives, while cutting costs for their residents thereby curbing the risk of fuel poverty.

Resident communication is key

As was previously stated, residents are at the very core of this solution and without their buy-in, many improvements and upgrades will become a challenge. Communicating directly with residents, explaining the numerous benefits of retrofits and upgrades is critical, and Switchee devices enable housing providers to do this quickly and at scale. Furthermore, the Switchee enables for housing providers to capture data on responses and track engagement, building clearer, more accurate pictures of their residents.

By informing residents of the benefits Net Zero can provide, this is likely to lead to resident pressure and improved access to government funds if they see a demand for it. In solutions such as utilising data and insights, residents may be required to interact with certain technologies so it is important to educate them on usage and best practice to ensure their success. In implementing much-needed retrofit projects, housing providers are lowering the risk of disrepair claims whilst also contributing to the wellbeing of their residents. IoT devices like Switchee, will also enable housing providers to measure the impact of those projects.



5. HOW TO ENSURE RESIDENT WELLBEING

Housing providers are understandably concerned that the biggest challenge for social housing is to achieve Net Zero without causing fuel poverty, something which with the current cost of living crisis is ever increasing, particularly for those on the lowest incomes. There are worries that the implementation of new heating systems could cause fuel bills to further increase, pushing low-income tenants further into poverty. This is something that needs to be accounted for when putting together an effective Net Zero strategy. With approximately [44% of social homes failing to fall in line with current EPC standards](#), housing providers are left facing a difficult choice between their budgets or their residents. This is where the introduction of IoT technology can be of assistance. Modern connected technology can help identify the residents and their properties most at-risk, allowing housing providers to prioritise these homes in their financial calculations.

The benefit of this smart technology is readily apparent. Research carried out by the NEA states that [‘tackling fuel poverty’](#) is essential to achieving total carbon neutrality but with electric heating systems costing up to [‘four times more’](#) than their gas counterparts, there is the risk that tenants living on the poverty line will be negatively impacted by the new Net Zero initiatives. With an [estimated 85% of social housing reliant on gas heating systems](#), shifting to an electric system could cause disorientation and higher costs for the tenants. This is where technology can help to bridge the gap. Smart technologies work by collecting household data, such as the average temperature and humidity, allowing them to more effectively utilise a property’s resources (e.g. heating). This information can also then be accessed by maintenance and support teams, providing them with updates in real-time. Data collected by smart technology, like Switchee, can be used to identify problem areas across a range of properties, giving housing providers the chance to roll out a solution.

In the past, housing providers have taken the blanket approach to their stocks by installing repairs across their properties which does have some positives, but it is not a cost-effective solution. The use of technology can help spread the cost and encourage targeted repairs rather than reactive ones, which can often cost more. This helps to raise resident engagement too, as smart technology, like Switchee’s thermostats, can improve lines of communication between landlords and tenants, helping overcome the initial adjustment period, reducing the risk of energy waste, thereby improving the overall efficiency of a property.

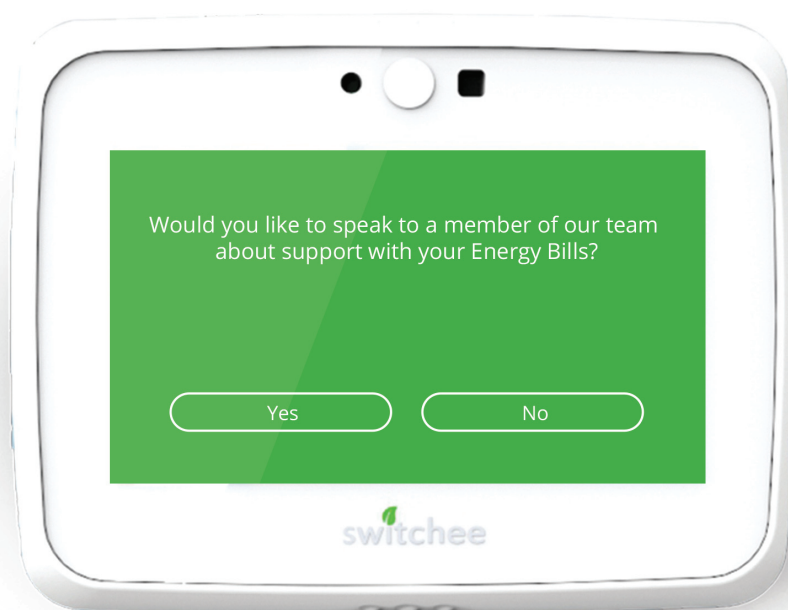
This move towards increased digitisation will have long-lasting benefits for the housing providers and their tenants. Through strengthened lines of communication, landlords can effectively explain the benefits of Net Zero and outline any changes that are being made. This also provides tenants with a forum to share their thoughts on the process. In this way, housing providers can quickly identify problem areas within their approach and set about solving them. For example, Grampian Housing focussed their effort on updating the wall insulation on non-traditional houses which, while not improving the aesthetics of the home, did greatly improve the efficiency of the properties. This saved the residents money and also helped provide more effective heat to their homes, which was communicated through data collected by smart tech installations.

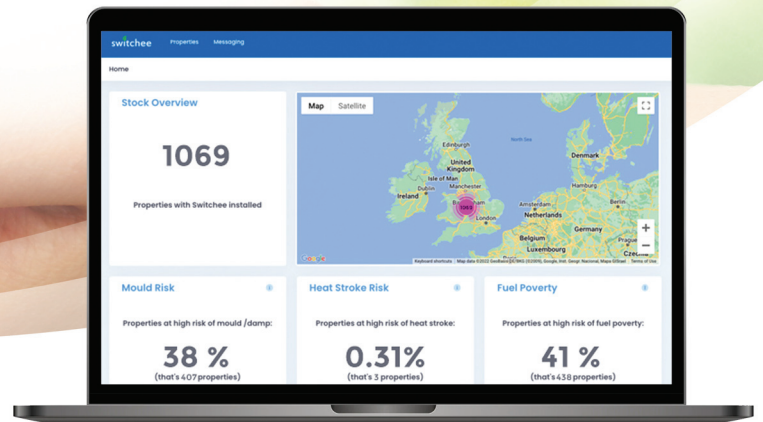
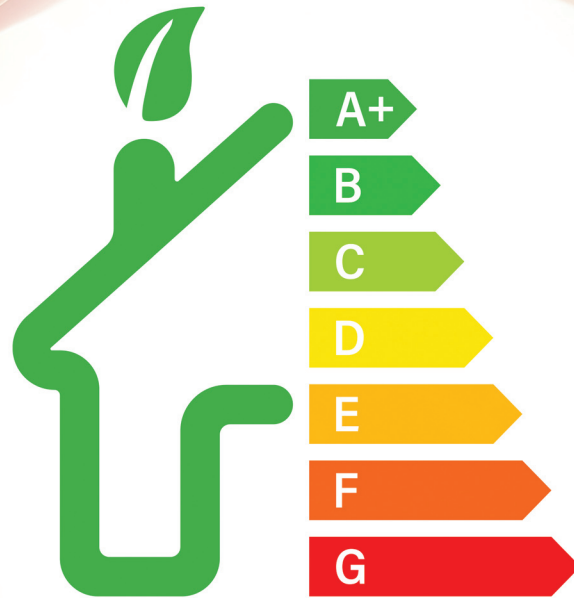
6. THE LONG-TERM BENEFITS OF DECARBONISATION

It is easy to look at the statistics and feel overwhelmed. In the short-term, Net Zero is a big investment that will require high upfront costs but in the long-term, these measures will yield numerous benefits for the entirety of the UK. Decarbonisation and climate neutrality have far-reaching benefits across the country, forging a better future for generations to come. Lower air pollution levels will help reduce the strain on our NHS and reduce the risk of [respiratory illnesses, cardiovascular disease, and lung cancer](#). This will lead to an increase in public health that is well worth the initial costs and uncertainty caused by the 2050 Net Zero initiatives.

Through retrofits and maintenance property upgrades, decarbonisation measures are [creating a boom in jobs for construction workers and maintenance crews](#), and this profit can be filtered back into the housing sector in the future. In the North West of England, there are plans to create the first Net Zero industrial cluster which could lead to the creation of [33,000 jobs](#).

Clusters like these will create tangible change, offering up infrastructure, technology, and investment to drive forward decarbonisation targets across the country. In short, the feat of climate neutrality can only be achieved by teamwork and cooperation. Housing providers need to set aside their business mentality and begin to work as a community, sharing information with neighbouring companies to create a realistic path towards a healthy environment.





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