BAXI

Decarbonising heat in UK care homes

Challenges and Opportunities

Background/Policy Context

Why care homes?

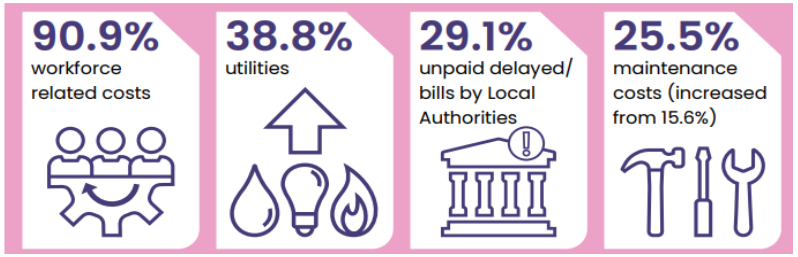
The annual carbon emissions of care homes could be close to 1.5 million tonnes of C02 per year.

Decarbonisation challenges

17,000 properties located throughout the UK

- 40% of care home emissions are generated through the process of heating, cooling and lighting.
- At peak demand, water heating can be the most energy intensive process, accounting for up to 30% of daily energy use.
- Care homes are split between the public and private sectors, creating diverging obligations and access to public funding.

Sector challenges



- A third of providers report that they are considering exiting the market.
- Over two-thirds sought internal efficiencies,
- A third curbed investment
- Three in ten providers closed parts of their organisation or handed back contracts

Regulatory & social decarbonisation drivers

BAXI

Care homes are in scope of a range of general and health and care sector specific regulatory drivers.

Non-sector specific regulation

- *Minimum Energy Efficiency Standards (MEES)* privately rented (non-domestic) buildings must meet have an EPC of E or above.*
- *Energy Savings Opportunity Scheme (ESOS) regulations*. Organisations which employ 250 or more people** must comply with. ESOS compliance requirements are tightening further in Phase 4 due in 2027.

Health and care regulatory drivers

- *Care Quality Commission* now assessing environmental sustainability in their 'Well-Led' category of their assessment framework.
- *NHS Green Plan* guidance requires publicly funded care and health facilities to develop Heat Decarbonisation Plans (HDP). These include phasing out fossil fuel heating by 2032
- *Local authority emissions targets*. Local authority owned and managed care homes many fall in scope of specific local net zero targets.

Social drivers

- *Investor preferences*: Increasing investor scrutiny over ESG means low carbon care homes can attract funding.
- *Staff recruitment and retention:* Low carbon employers attracting a more climate conscious/ Gen Z future workforce.
- *Reputation and brand value:* Demonstrating leadership in sustainability can enhance a care provider's reputation and competitive edge. Families and residents are increasingly aware of climate issues and may prefer care providers that demonstrate environmental responsibility.

*There are proposals to raise this to EPC C by 2028 in Private Care Homes, although this is not law as yet. Similarly in Public Care Homes a new consultation is set to propose setting a minimum EPC rating of C by 2030

**Or have turnover in excess of £44 million and an annual balance sheet total in excess of £38 million

Funding for care home decarbonisation

Policy support for decarbonising care homes

ENERGY COMPANY OBLIGATION

Obliges suppliers to invest in non-domestic energy efficiency upgrades (e.g. insulation, heating system upgrades) in priority properties such as care homes, including installation of decarbonisation measures such as replacements, upgrades or repairs for boilers.

Budget: NA

PUBLIC SECTOR DECARBONISATION SCHEME

Provides grants for public sector bodies to fund heat decarbonisation and energy efficiency measures.

Budget: over £1bn for 2025-2028

LOCAL AUTHORITY DELIVERY

Funding allocated to local authorities, to improve the energy efficiency of homes of low-income households, helping reduce fuel poverty, phasing out high carbon heating and reducing emissions.

Budget: £500m to be delivered from April 2025 to March 2028

Methodology and Survey characteristics

Methodology & Survey Characteristics

BAXI

Survey

- Geography: UK
- Date of survey: 11.06.2025 – 17.06.2025

Respondents

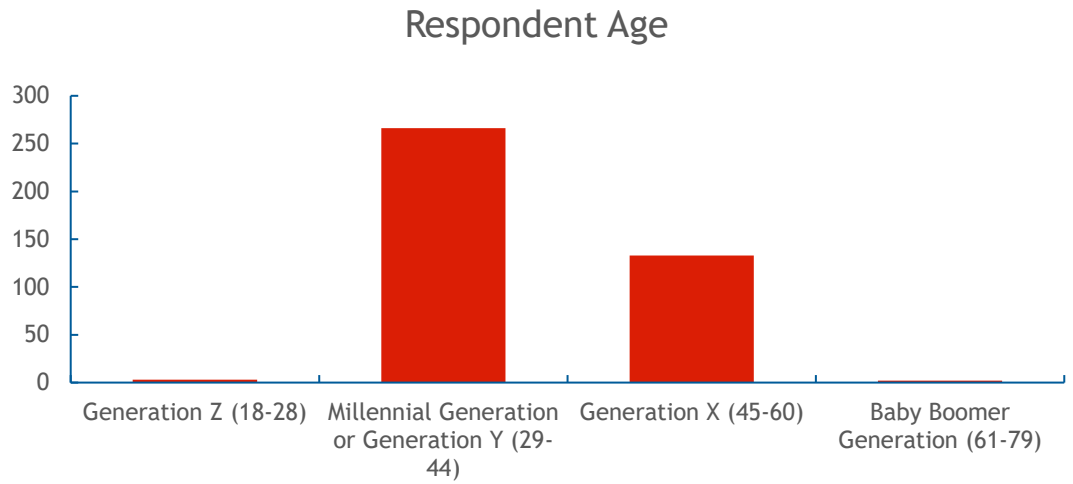
- 404 senior and middle care home managers.
- 204 in the public sector, 200 in the private sector.
- Primarily millennial or generation X (aged between 29-60).

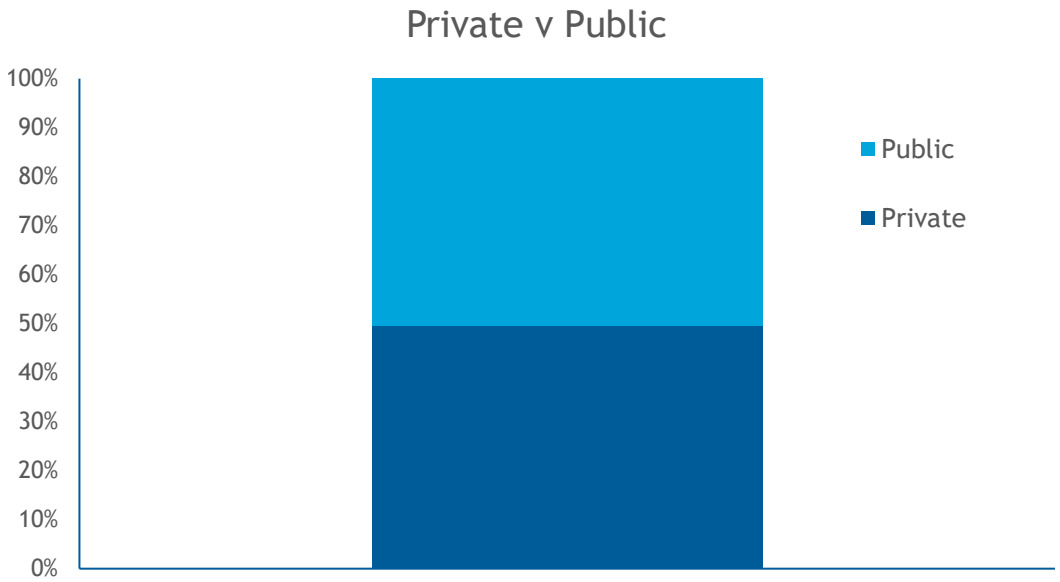
Focus group interview

- Date of focus group: 08.08.2025
- Participants: 2 care home energy managers and a mechanical and electrical contractor.

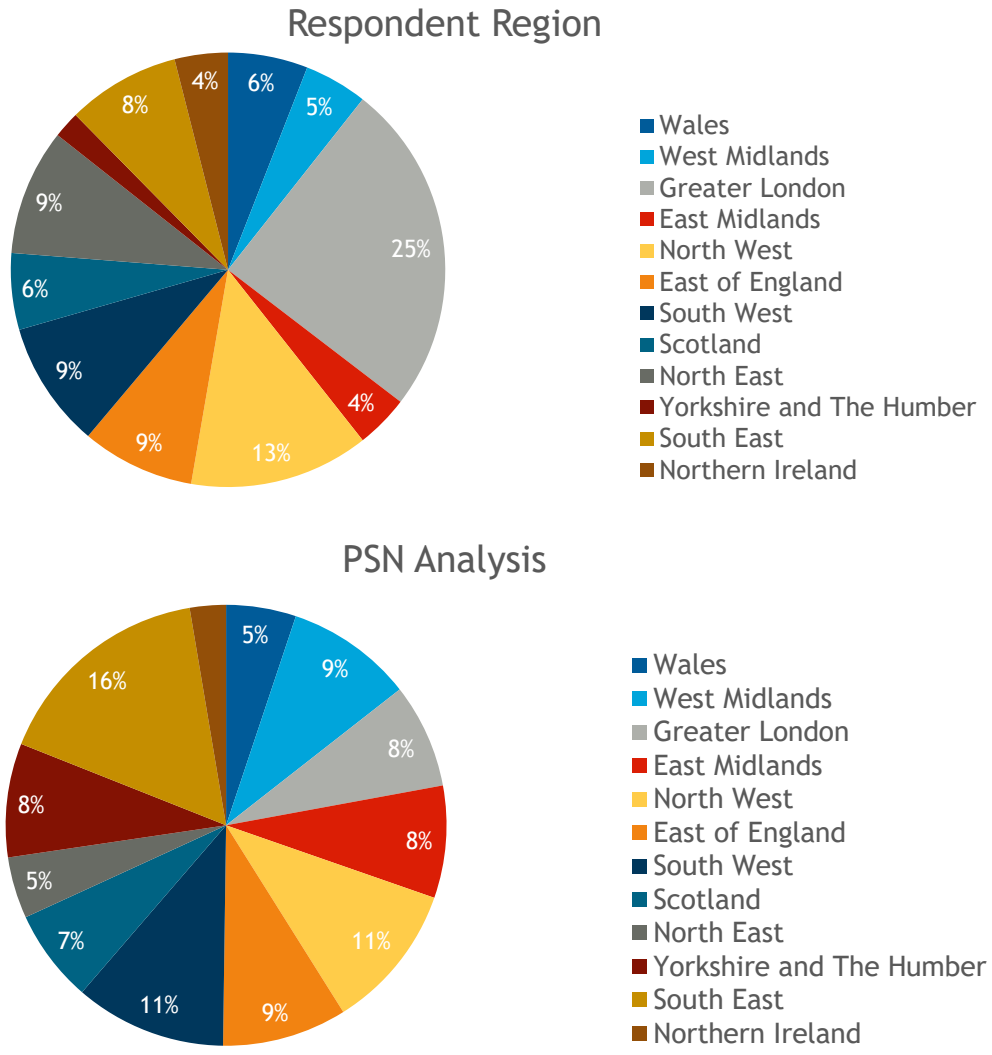
Desk-based research

- Online research conducted to identify relevant policies and schemes to improve energy efficiency and upgrade heating systems of care homes.
- Policies examined to understand heating and cooling obligations for care homes.





Survey Characteristics



Geography

The survey is not dominated by any region, and largely representative of care home distribution.

London and the North East are somewhat overrepresented. The South East, West Midlands, East Midlands, Yorkshire and the Humber are slightly underrepresented in the Survey.

Property Age

It is also worth noting that 88% of care home managers surveyed managed buildings less than 10 years old, 99% managed buildings less that 20 years old.

For comparison, a Knight Frank report estimates that 26% of care homes are less than 10 years old, and 61% are less than 20 years old.

So, if there are differences in attitudes and approaches to decarbonisation between managers of newer and older properties, the present survey may not be representative of the latter group.

Survey findings

- Building characteristics
- Heating systems
- Decarbonisation of heating systems
- Funding and financial considerations

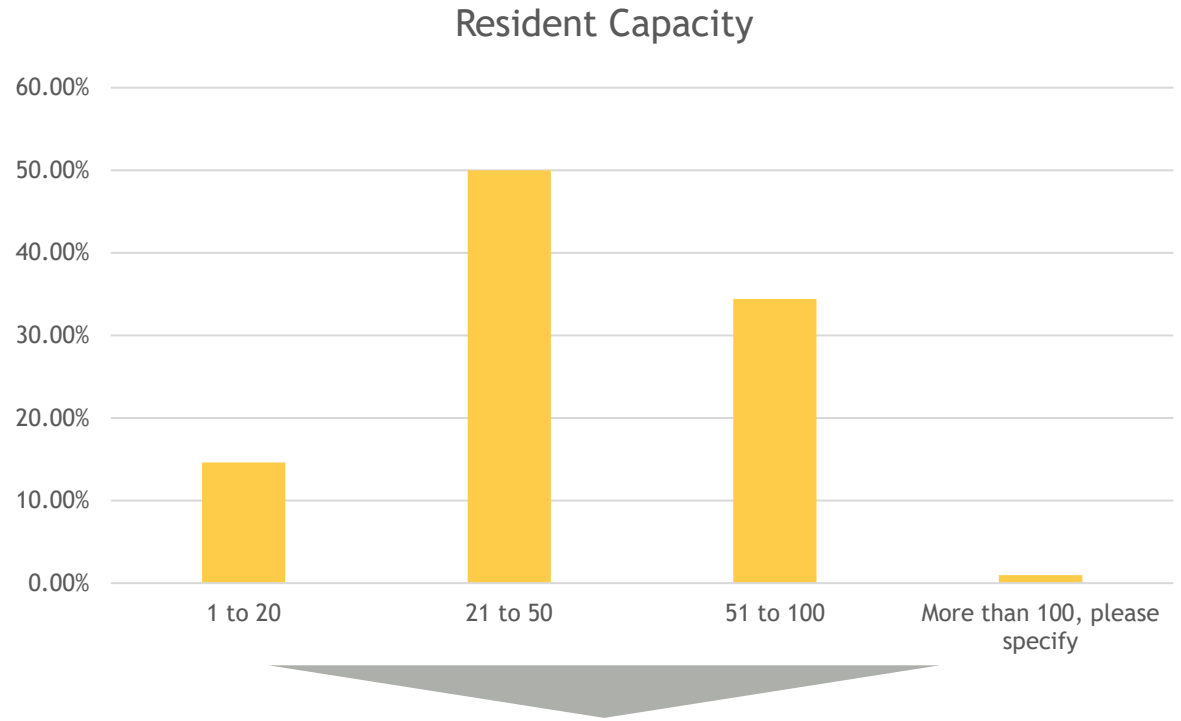
Buildings and Heating systems

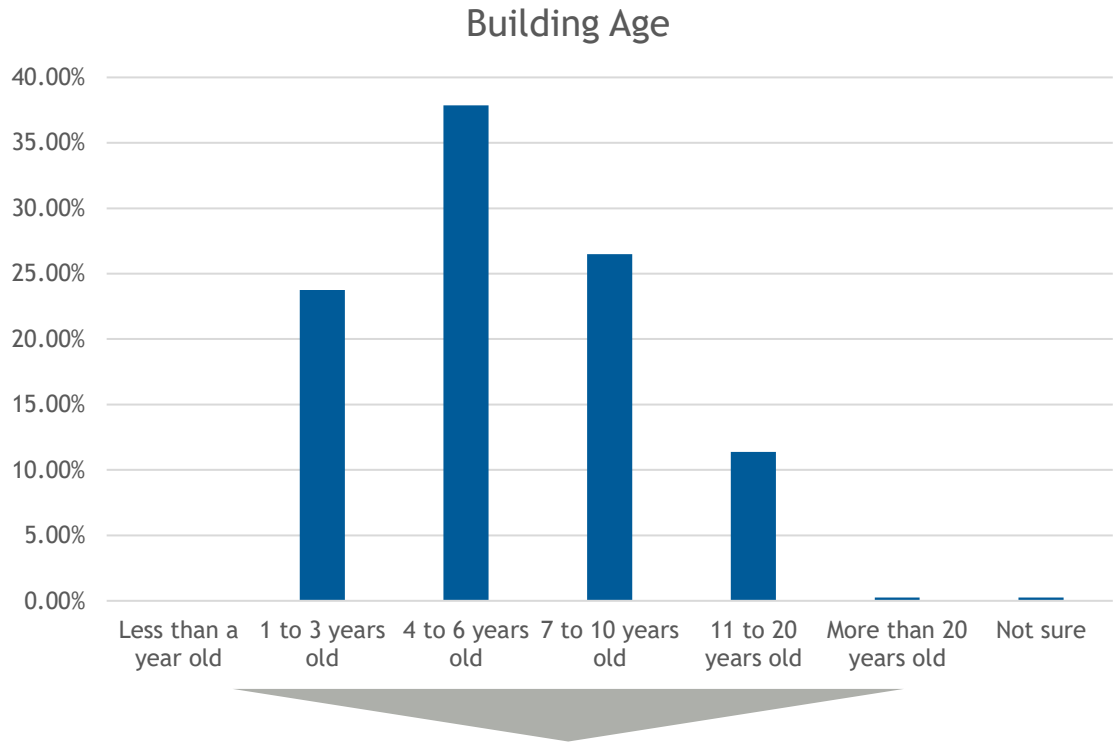
- Resident capacity and building age
- Heating demand
- Current heating systems
- Heating system age
- Attitudes to current heating systems

Care home building characteristics

BAXI

Most care homes are less than 10 years old, with the most common resident capacity of between 20 and 100 residents.





Nearly 85% of care homes have a capacity between 21-100 residents

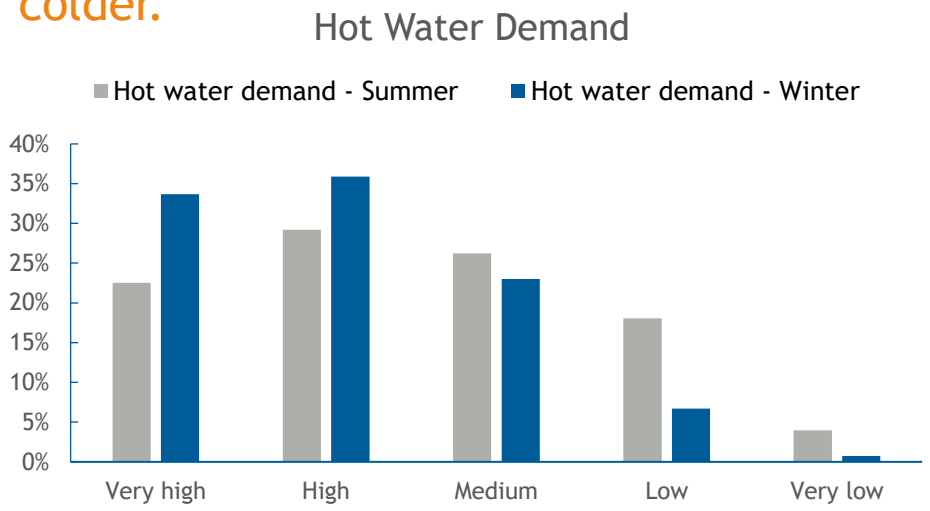
- 50% of care homes have a resident capacity of between 21 to 50
- 34% of care homes have a resident capacity between 51 to 100

88% of care home properties surveyed are between 1 and 10 years old

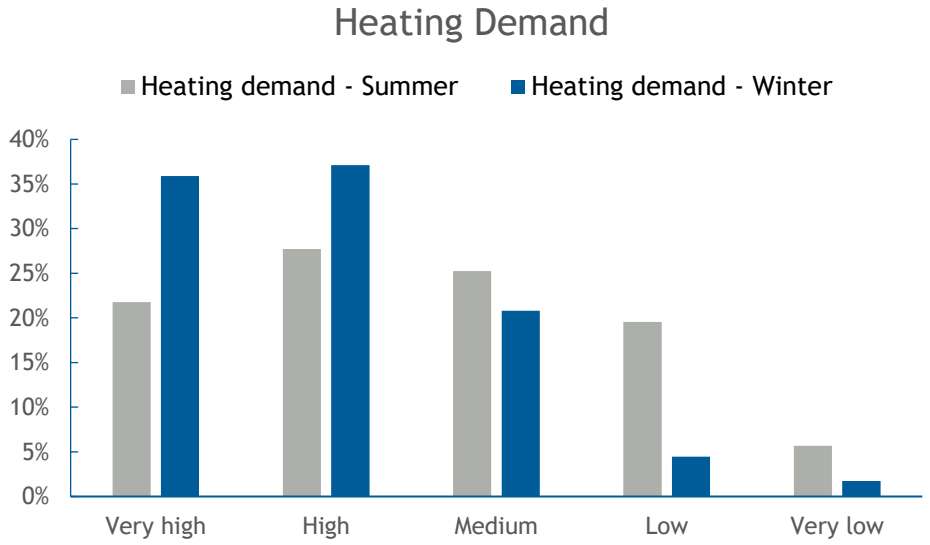
- The most common building age was between 4-6 years old with nearly 38% of the total

Heating demand

Care homes experience significant seasonal variations in demand for heating and hot water. Demand for both heating and hot water is significantly higher in winter than it is for summer, when the weather is colder.



- Hot water demand is higher in winter than in summer. 68% of respondents said that their hot demand was either ‘high’ or ‘very high ‘in winter, compared to only 51% in summer.
- 21% of respondents said their demand for hot water was ‘low’ or ‘very low’ in summer compared to only 7% in winter.



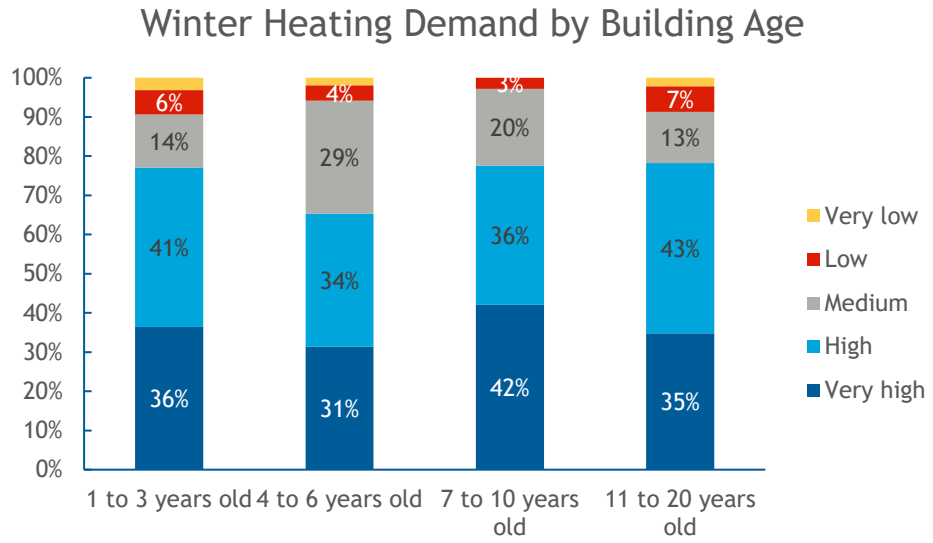
- Heating demand is higher in winter than in summer. 72% of respondents said that their heating demand was either ‘high’ or ‘very high’ in winter, compared to only 48% in summer.
- 24% of respondents said their demand for heating was ‘low’ or ‘very low’ in summer compared to only 6% in winter.

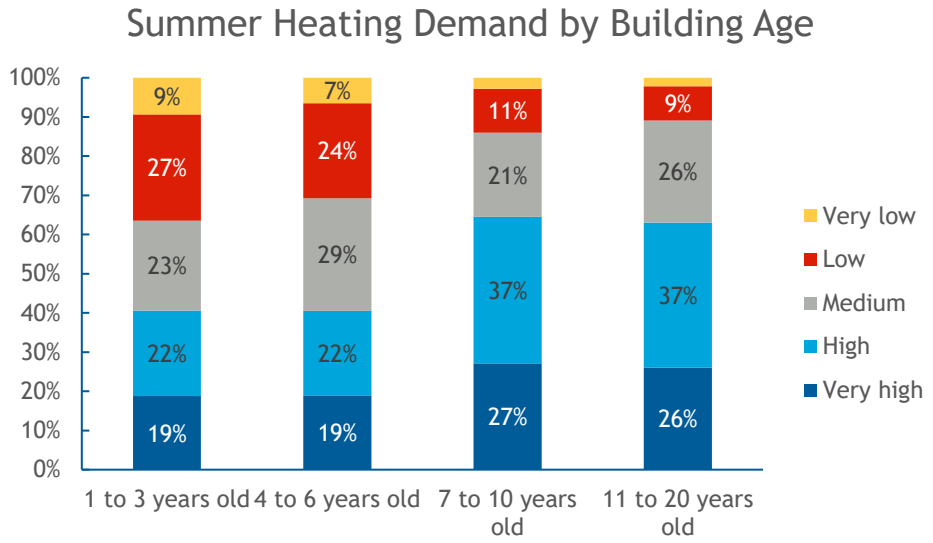
Heating demand

For the sample, the age of a property did not have a large impact on heating demand in winter, but in summer, newer buildings were more likely to report low heating demand.

- Winter heating demand is not significantly different between newer and older properties (noting that the sample consists of relatively new buildings).
- The percentage of properties with ‘high’ or ‘very high’ demand aged between 1-3 and 4-6 years old was 77% and 61% respectively, compared to 78% for properties 7-20 years old.

- Heating demand is higher in winter than in summer. 72% of respondents said that their heating demand was either ‘high’ or ‘very high’ in Winter, compared to only 48% in summer.
- 24% of respondents said their demand for heating was ‘low’ or ‘very low’ in summer compared to only 6% in winter.

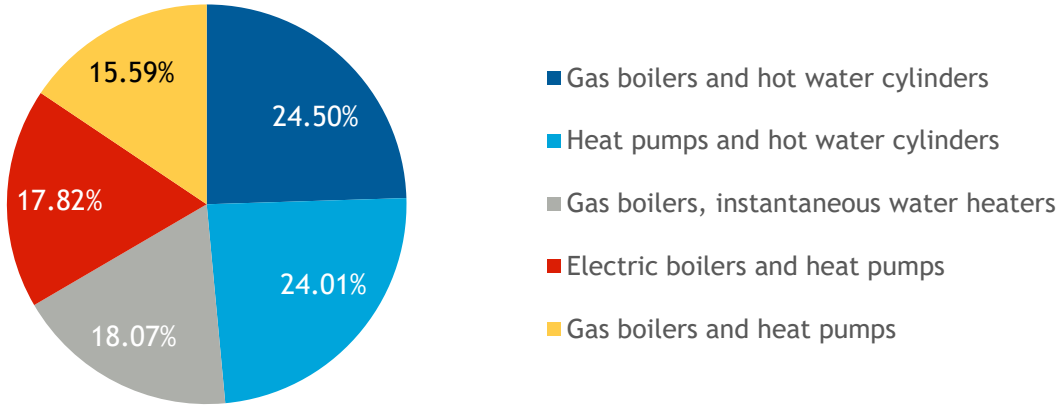




Current heating systems

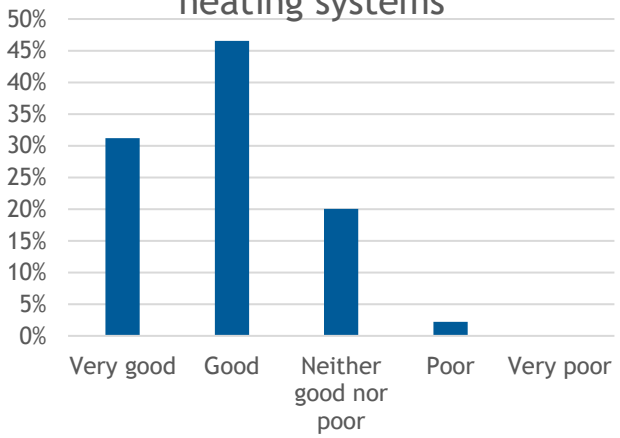
The distribution of heating types systems in the care homes surveyed is relatively even, but gas boilers still make up a significant minority. Care homes generally have newer heating systems and are very happy with their current heating arrangements.

Current heating system technologies

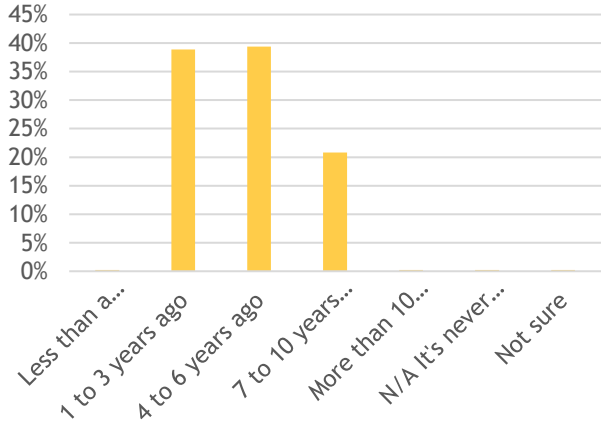


Gas boilers are still present as a main heating system for buildings in 42% of care homes. There is a significant opportunity for further decarbonisation in care homes using low-carbon heating systems.

Experience of current heating systems



When was the heating system last replaced?



77% of care home staff rate their heating systems as either ‘good’ or ‘very good’. Only 2% rated their heating systems as poor.

79% of heating systems were replaced in the last 6 years

Decarbonisation

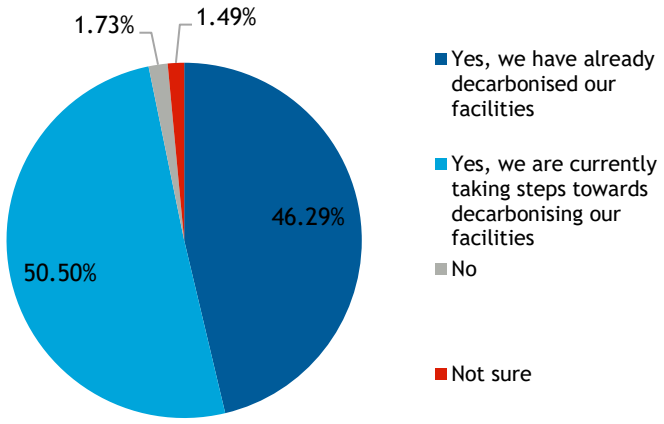
- Decarbonisation considerations
- Have steps been taken to decarbonise?
- Engagement with decarbonisation
- Decarbonisation project type
- Importance of running costs
- Future decarbonisation plans
- Decarbonisation timelines
- Interest in learning more about decarbonisation
- Technologies considered in decarbonisation
- Decarbonisation enablers

Ambitions to decarbonise heating in care homes

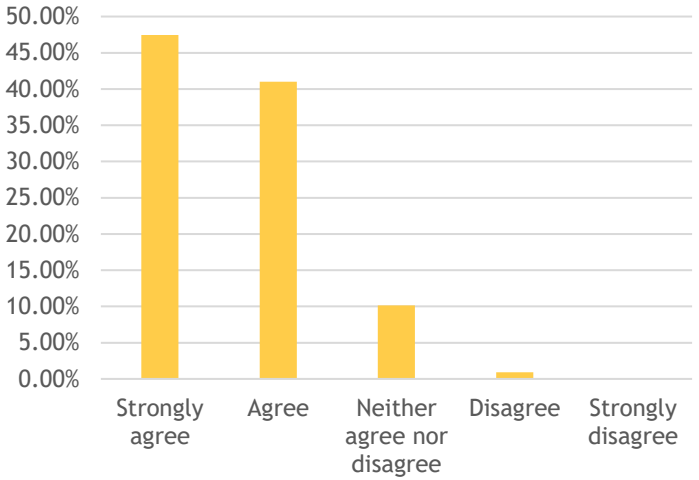
BAXI

Responses show that there is broad support for decarbonisation with almost all respondents either already decarbonising or planning to decarbonise their properties.

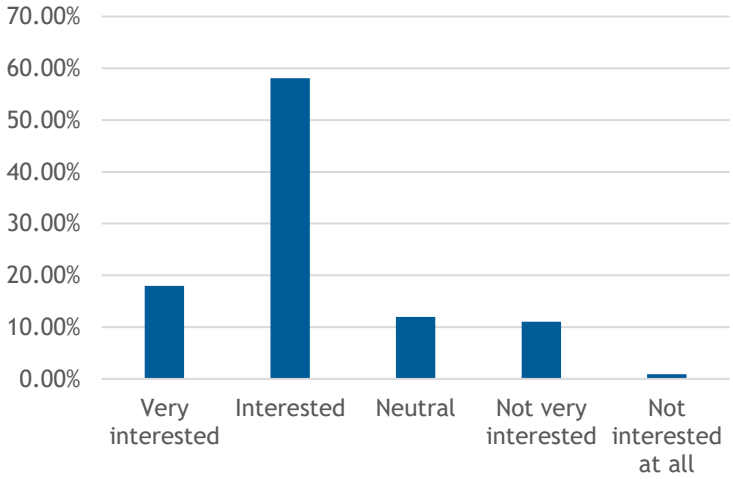
Have steps been taken to decarbonise?



The care home has future decarbonisation plans (those who have not decarbonised)



Interest in knowing options for decarbonising heat & hot water (those who have not decarbonised)



Nearly 97% of care homes that responded to our survey had either already decarbonised (46%) or are taking steps to decarbonise (50.5%) their heating systems.

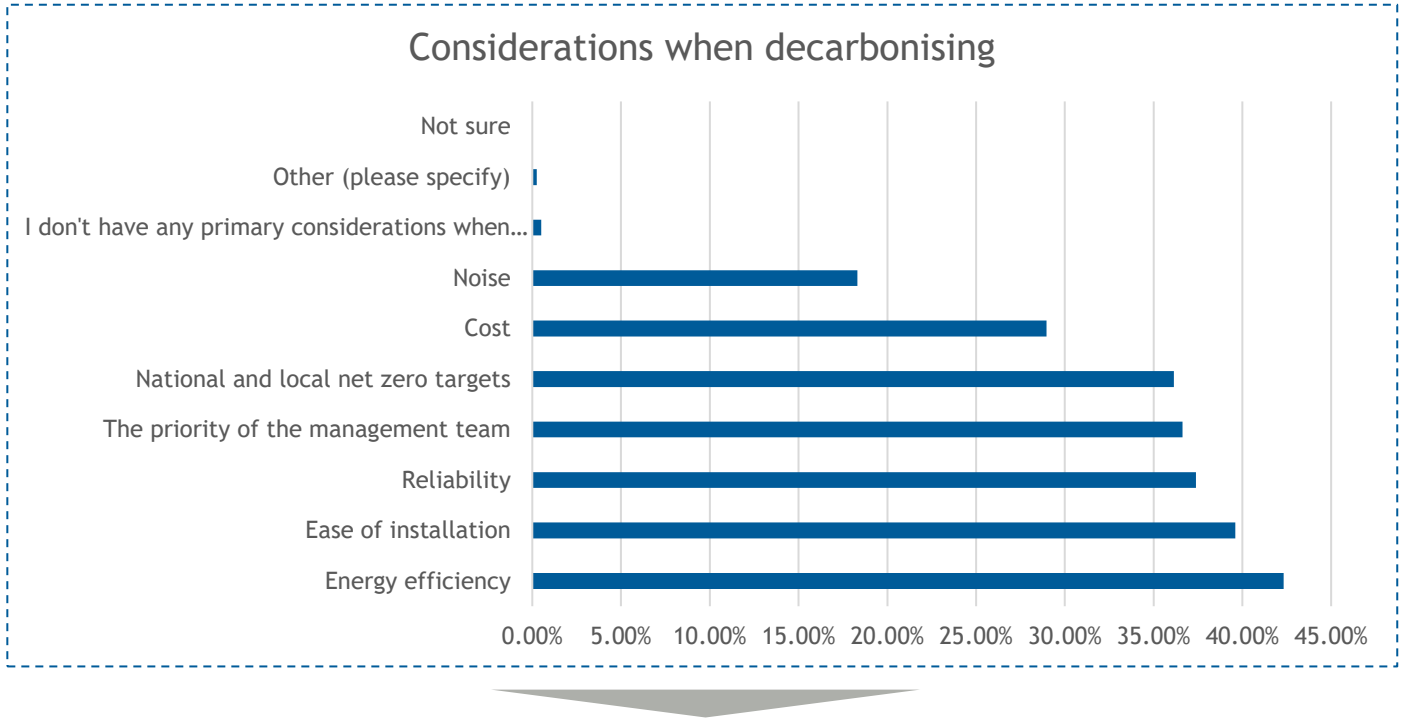
88.5% of care homes that responded to our survey have plans to decarbonise in future if they had not already done so.

76% of respondents were interested or very interested in decarbonising heat and hot water in their properties. Of this, 18% were very interested.

Only 12% of respondents reported not being very interested or at all interested in decarbonising their properties.

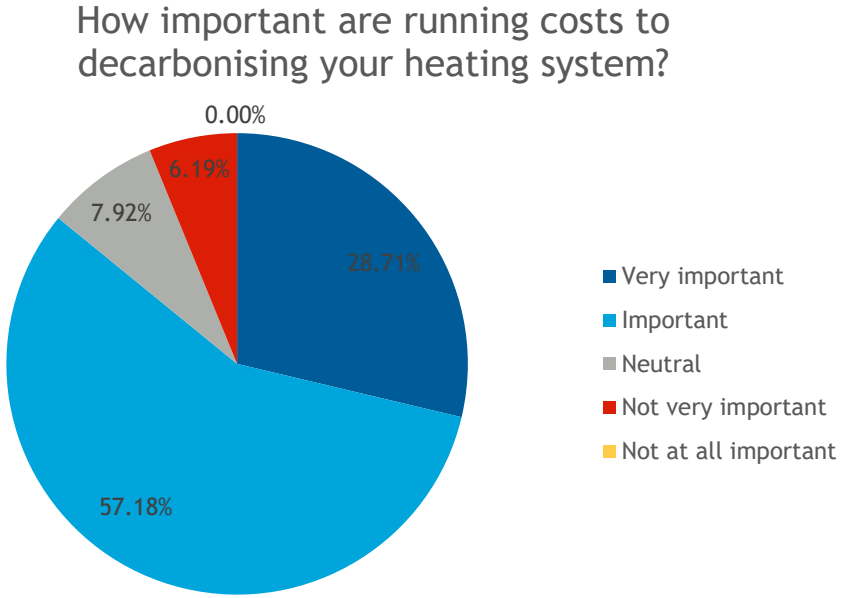
Drivers of decarbonisation

Running costs, energy efficiency and ease of installation are key drivers of decarbonisation



85% of respondents said that running costs are either important or very important to them, suggesting that this could be a significant contributing factor to decisions to replace heating systems.

Focus group participants also outlined cost and reliability as important factors when considering decarbonising their heating systems.



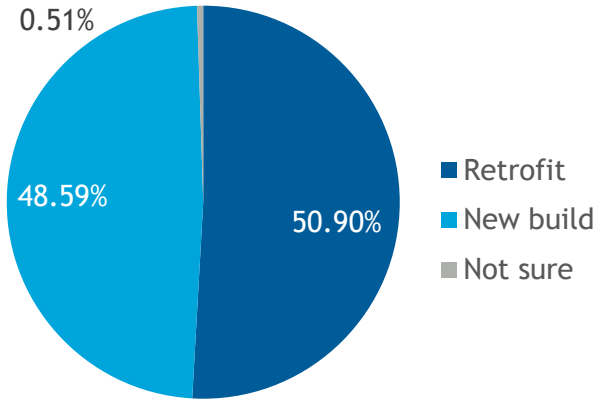
Respondents offered a range of motivations for decarbonising their properties. The most popular were energy efficiency (42%) and ease of installation (39%) as key considerations.

Approach to decarbonisation

BAXI

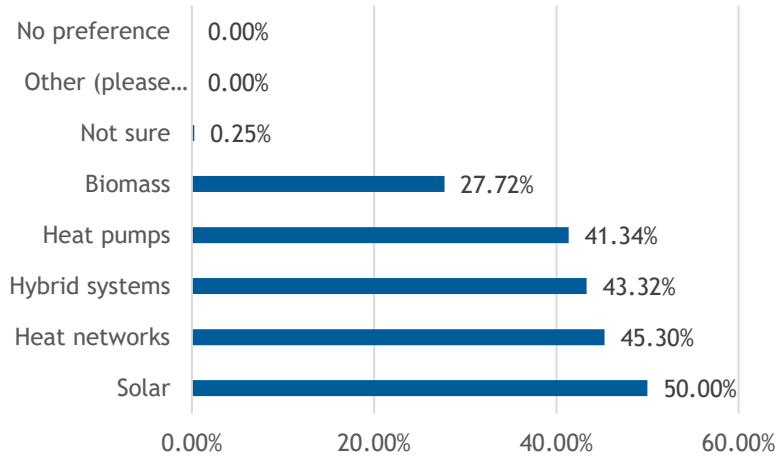
Most respondents showed a high willingness to explore decarbonisation of heat and hot water specifically, with a range of alternatives to gas boilers considered to achieve this.

Did you decarbonise via retrofit or new build?



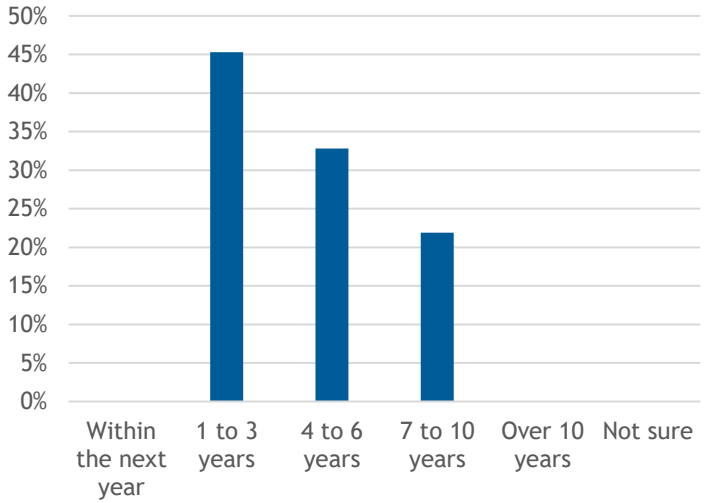
48.5% of respondents opted to undertake new build projects rather than retrofit existing properties. This could indicate cost concerns with retrofitting, given the high overall cost of new build projects.

Which technologies are considered for decarbonising heat/hot water



Solar is the most popular option for care homes upgrading their heating systems, supported by focus group discussions. Heat pumps, hybrid systems and heat networks were all viewed similarly. Respondents expressed a slight preference for hybrid heat pumps (43%) compared to standalone heat pumps (41%). Boiler replacements continue to be a popular choice for system refurbishments, creating an opportunity for low carbon alternatives to gain traction in the replacement market. The group interview revealed a focus on optimising existing systems, with some doing so in preparation for a future heat pump installation.

How soon do you plan to decarbonise?



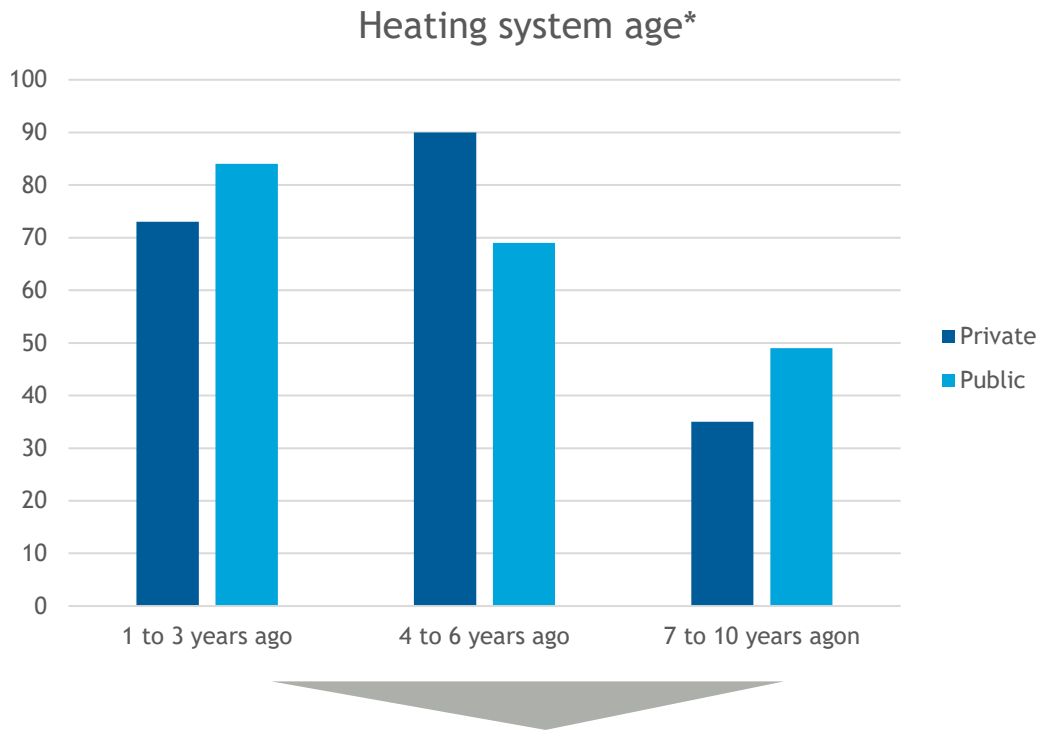
All respondents plan to decarbonise their care homes within the next 10 years, with 45% planning to in the next 1 to 3 years.

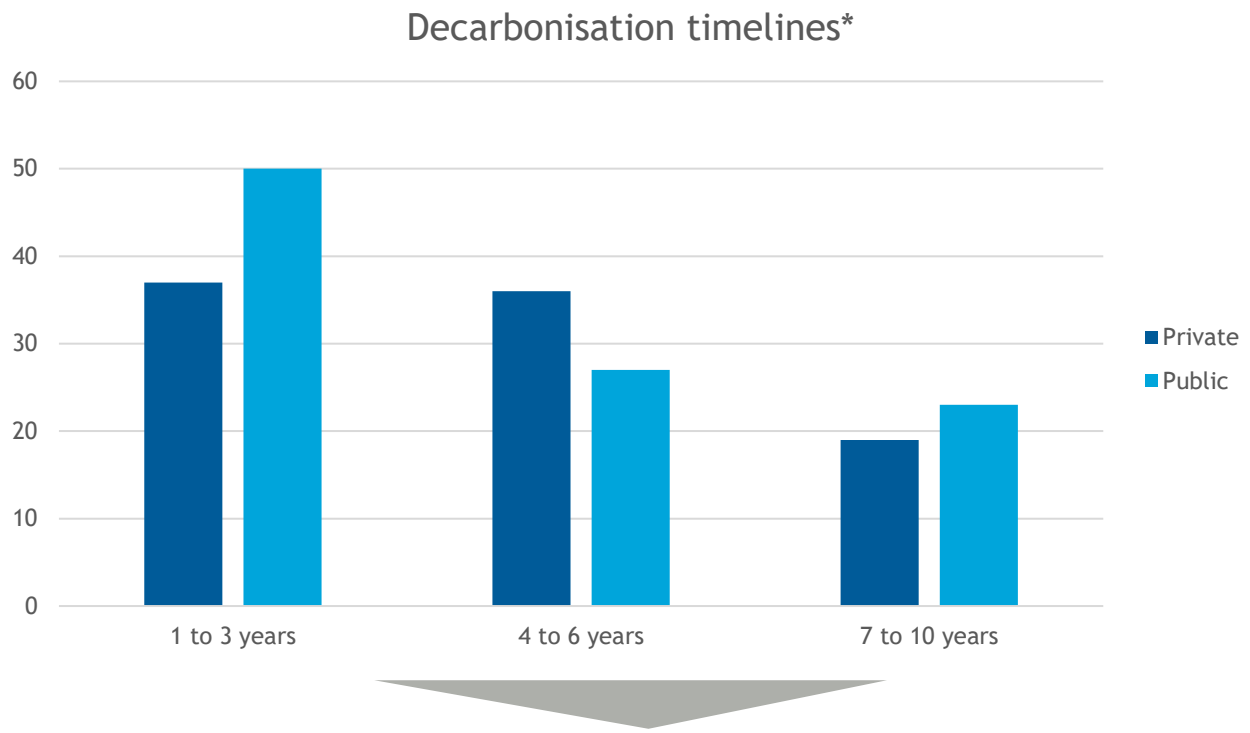
Most focus group participants stated they had a phased approach which had already begun, although plans to fully decarbonise would stretch beyond the next 10 years. Action is being driven by regulatory pressure, rather than a need to replace old heating systems.

Approach to decarbonisation (public vs private sector)

BAXI

There is a similar relationship between heating system age and the timing of decarbonisation plans.





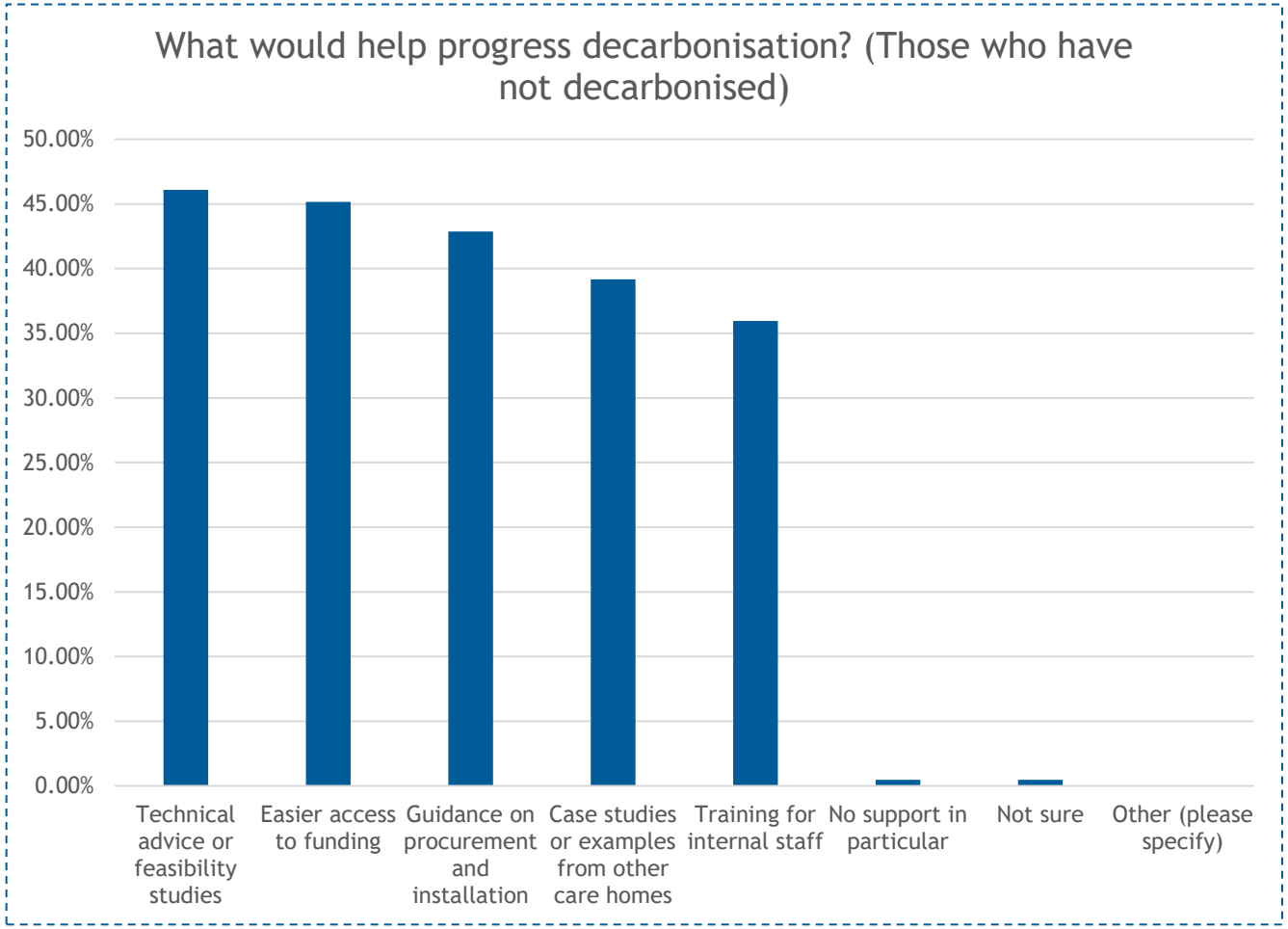
Public sector care homes are more likely to have heating systems between 1-3 years of age (14% difference) and has more older heating systems of 7 – 10 years of age (33% difference). Private sector is more likely to have heating systems between 4-6 years of age (26% difference).

Public sector care homes are more likely to be decarbonising in the next 1-3 years (29% difference) and in 7-10 years (19% difference). More Private sector care homes are likely to be decarbonising in 4-6 year than public sector care homes. However, most private sector care homes are still decarbonising in 1—3 years overall.

*Y axis values are the sum of responses, not percentage of responses.

Enablers of decarbonisation

Respondents cited several enablers of decarbonisation. The main concerns were focussed on technical advice and feasibility, procurement and installation, and easier access to funding.



There was a large degree of consensus on the enablers for decarbonisation with over 40% of respondents requiring technical advice, easier access to funding and case studies from other care homes as helpful to decarbonisation.

Focus group findings highlighted the need for clear advice and guidance on when to replace heating systems, and how to develop an achievable plan for decarbonising their heating.

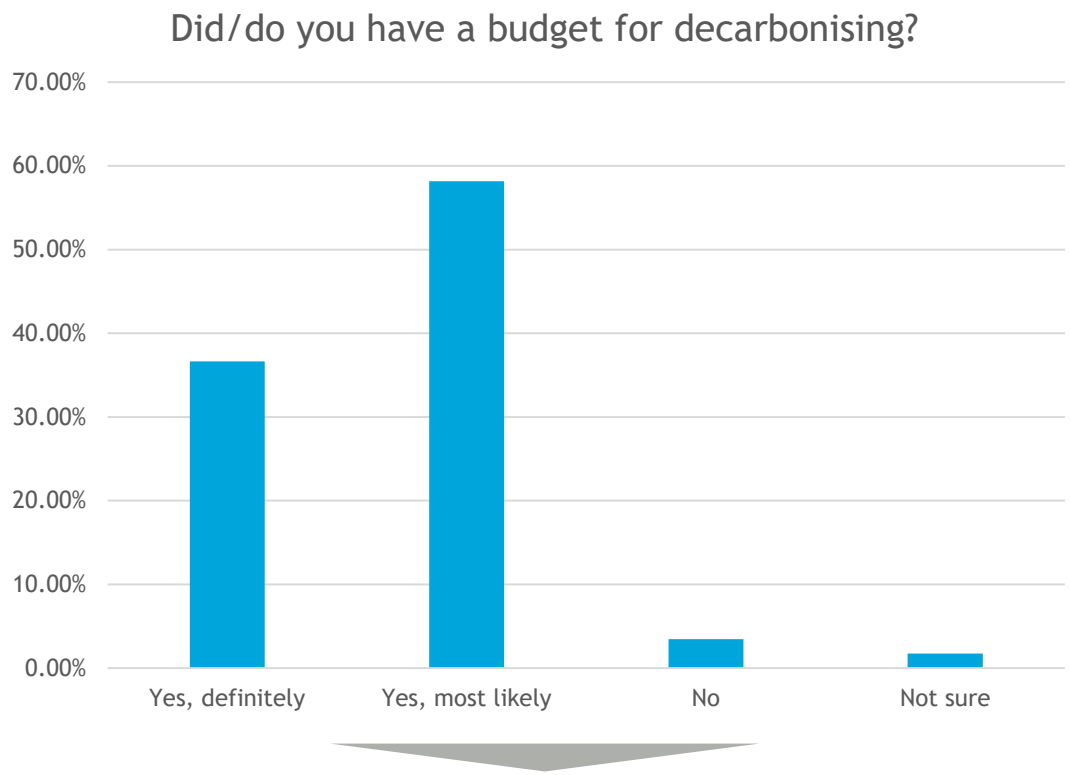
Funding and financial considerations

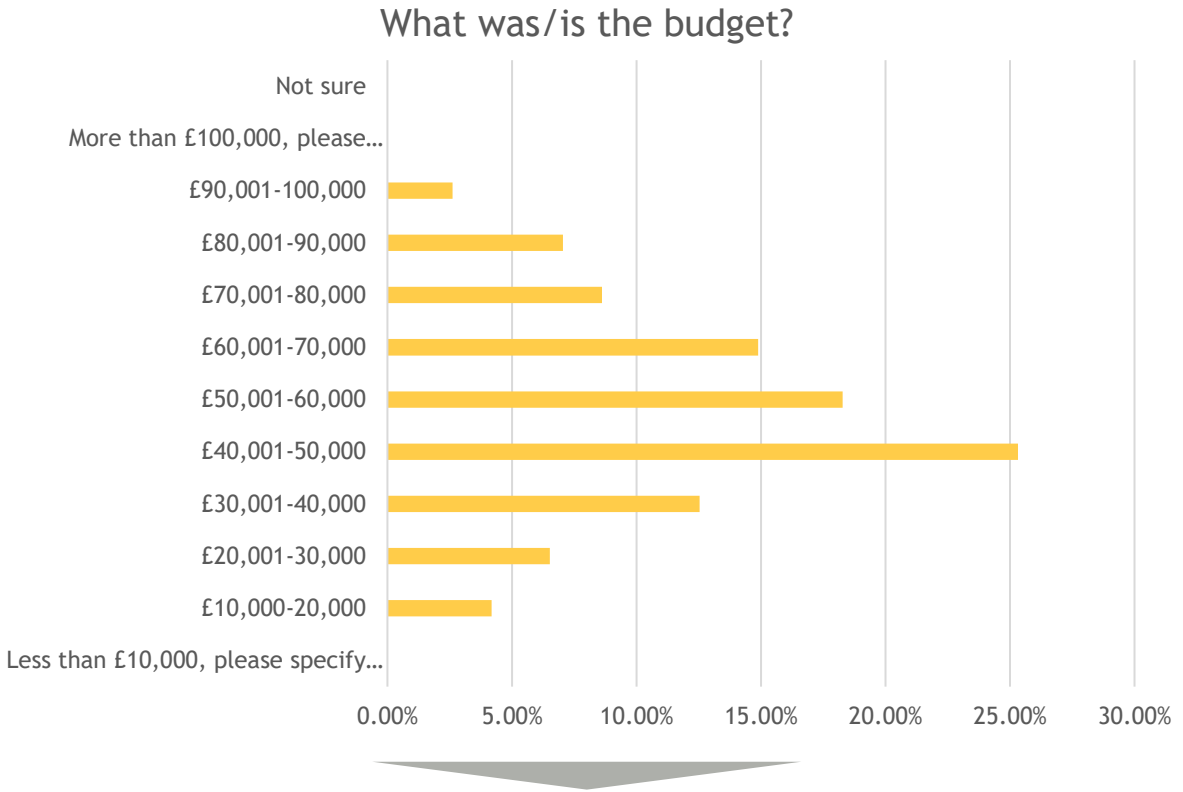
- Were/are plans budgeted?
- Budget size
- Funding schemes considered
- Funding scheme barriers

Budget for decarbonisation

BAXI

Most respondents have or expect to have a budget for decarbonisation. Most have budgets of between £30k and £50k.





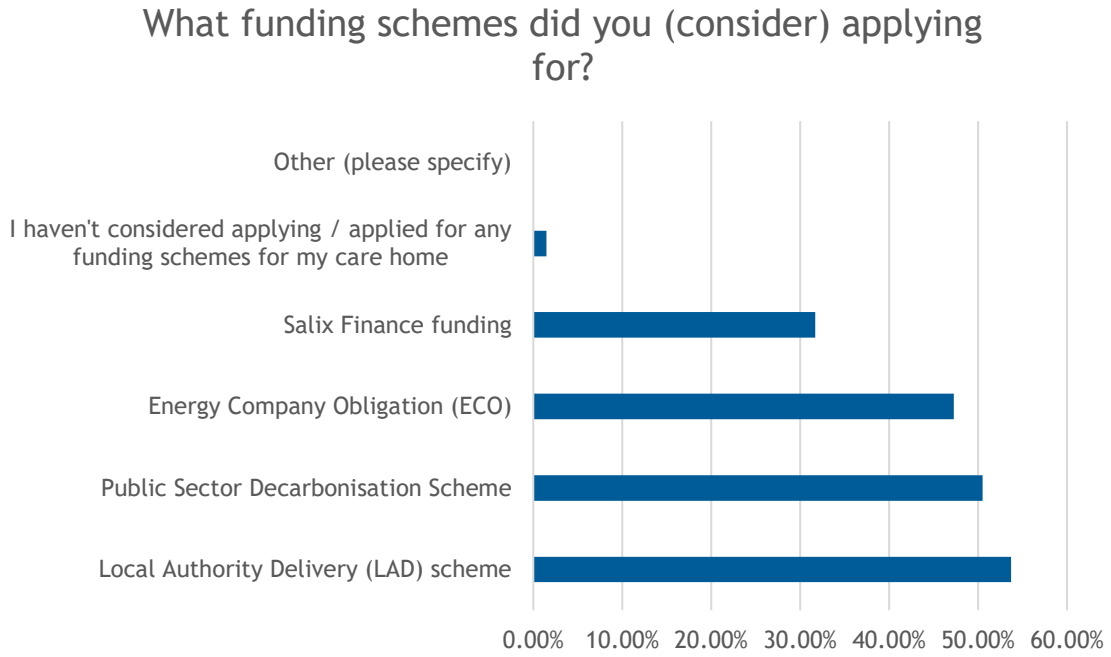
94% of respondents said they had either definitely or likely had budget for decarbonisation. However, 58% said they 'most likely' have a budget. A significant proportion of these respondents therefore may not have budget for this purpose.

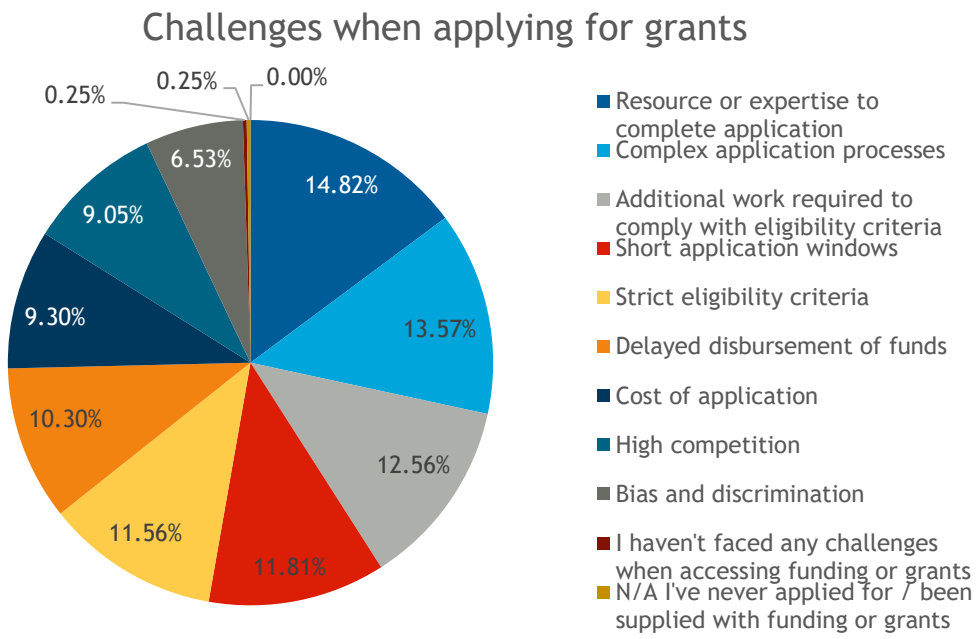
The most common budget size for decarbonisation is between £40k-£50k with 25% of respondents reporting a budget of this size. Overall, 71% of respondents have a budget of between £30k and £70k.

The appropriateness of this funding could vary according to the size of the care home and the complexity of heating system.

Funding schemes considered

Most respondents have either applied for or considered applying for public funding to decarbonise their property. There was significant consensus that resources, expertise and additional work to complete funding applications presented barriers to applying for grants.





The most popular funding streams for care homes was the LAD and the PSDS with just over half (53%) and (50.5%) applying for both respectively. Just 1% of respondents said they hadn't considered applying for funding, suggesting it is required to fund heating system upgrades.

A range of challenges experienced in applying for grants was reported. There is a range of 8% between the least reported challenge (6.5%) and the most reported (14.8%), however, most involve challenges with knowledge understanding and ability to comply with application criteria.

Conclusions

Focus group insights

Ensuring quality care was the main priority for focus group participants. Steps to decarbonise focused on optimising existing systems, given cost and reliability concerns of heat pumps.

Decarbonisation is less of a priority:

Quality of care is the top priority, while residents are less concerned about the environment, meaning continuity and reliability of heating systems is essential.

Budget and financing pressures mean the high upfront and operational costs of heat pumps are significant deterrents to uptake.

Care home providers focus on optimising their existing heating systems first:

Participants' initial steps to decarbonisation involved optimising their heating systems through setting low flow temperatures or improving controls.

While some had made the shift to heat pumps, all would consider solar to decarbonise their heating and hot water system.

Support needed to progress decarbonisation:

Advice from manufacturers on when to change heating system.

Advice from consultants on financially and operationally viable steps to decarbonise.

Conclusions

BAXI

IMPLICATIONS OF THE RESEARCH:

POLICY RECOMMENDATIONS:

While most care homes have budgets for decarbonisation, they are small and eligibility for funding schemes is unclear.	Introduce funding schemes and ringfence specific funding for care home heating system decarbonisation.
The right to access funding schemes and the responsibility to meet certain carbon and energy efficiency standards varies depending on whether care homes are in the public or private sector.	Provide specific guidance to care homes around eligibility and application processes for funding.
Care homes lack skills to decarbonise their properties in terms of technical advice, procurement and grant funding applications for decarbonisation.	Address the skills gap to help deliver heat decarbonisation projects including procurement and access to funding.
Technical difficulty in project delivery is a significant barrier to decarbonising heat in care homes.	Create databases or lists of contractors and developers with experience of the care home sector.
Cost and affordability are key considerations of decarbonising heat in care homes. The UK has the highest electricity prices in Europe.	Address the imbalance in price between gas and electricity and ensure policies/legislation following the upcoming rebalancing levies consultation are not delayed.

BAXI

Thank you

CONSTRUCTION INCLUSION COALITION

INVESTORS IN PEOPLE® We invest in people Gold

INVESTORS IN PEOPLE® We invest in wellbeing Gold