

Oxford City Council's Housing Energy Strategy 2016 - 2020

Tackling fuel poverty and reducing carbon in our housing

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Introduction

Context: Why do we need a Housing Energy Strategy?

The Council's Sustainability Strategy sets out its activities undertaken to achieve a wide range of sustainability targets including carbon reduction and fuel poverty, both of which are key elements covered in this Strategy. Oxford City Council has a strong history of carrying out energy efficiency related work in its housing stock and a commitment to carbon reduction across the organisation.

As a social landlord, the Energy Act 2011 places a number of responsibilities on Oxford City Council, primarily to ensure that all properties in the portfolio reach Energy Performance Certificate level E or above by April 2018.

In a 2014 Oxford Standard consultation, energy came out as the most major concern for Council housing tenants, a sign that the fear of energy bills is a key issue for them. We know that there is a high number of tenants on low incomes in social housing in the homes, and that an inability to afford to heat the home may lead to debt worries and the under heating of homes. Under heated and/or poorly insulated properties are prone to damp and have health implications for their occupants. It is for these reasons that an Energy Strategy, bringing together existing and future energy related work and setting a framework for improved action is required.

Therefore the three main drivers to this strategy are:

1. Meeting our responsibilities under the Energy Act 2011 and future obligations (such as the Housing and Planning Act)
2. Improving the energy efficiency of and reducing carbon emissions from council homes
3. Further reducing fuel poverty in Council housing tenants.

All current and new build Council domestic housing is included in the scope of this strategy. Budgets have been allocated for upgrades of electrically heated homes to

gas, boiler replacement and loft insulation in addition to the large scale refurbishments of the five tower blocks.

Supporting documentation

The Climate Change Act 2008 committed the government to an 80% reduction in Green House gas emissions by 2050 from 1990. Approximately 45% of UK emissions are from buildings as gas and electricity use (ie 'energy'), so buildings are key to meeting this target.

The Council launched its first Carbon Management Plan in 2008/09 and by the end of March 2011 had implemented measures calculated to reduce CO2 levels by over 25% against a 2005/6 baseline, representing energy bill savings of approximately £290,000 a year. The current 5 year carbon management is nearing completion and the Council is on track to meet its average 5% year on year CO2 reduction target through the on-going programme to install energy (and water) efficiency measures and increase on site renewable energy generation across the Council estate. The Council is now generating over 750,000kWh per year of Solar electricity equivalent to ca5% of total annual electricity consumption.

Fuel poverty has been considered within the Council's financial inclusion strategy, setting out a broad range of actions for fuel poverty including those detailed within this Strategy.

The Housing Asset Management Strategy is the precursor document to this strategy, setting out the commitment to energy efficiency and reducing fuel poverty within the context of broader housing stock information and processes for management.

Consultation

This strategy has been consulted broadly with staff and this has informed a range of underlying communication networks and training requirements. However, this Strategy will only note top line actions in order to ensure clarity.

The Oxford Standard consultation in August 2014 showed energy to be the major concern of the 500 tenants who responded to the consultation. Building on this, a small 'understanding energy through our tenants' eyes' session was run with Council housing tenants. This acts as an initial guide to the 'supporting tenants' element of this work. It raised key issues such as the pros and cons of prepaid electricity meters, the importance of personal contact and access to more detail on energy saving, and increased knowledge of the work that the Council was doing.

Fuel Poverty background

The previous government definition for fuel poverty was that if householders were using more than 10% of their income to heat their home to a reasonable standard then they were in fuel poverty. Recently this changed to a different fuel poverty definition, known as the 'Low Income, High Cost' definition, broadly summarised in Figure 1 below. This considers a household to be in fuel poverty if:

- they have required fuel costs that are above average (the national median level)
- were they to spend that amount they would be left with a residual income below the official poverty line

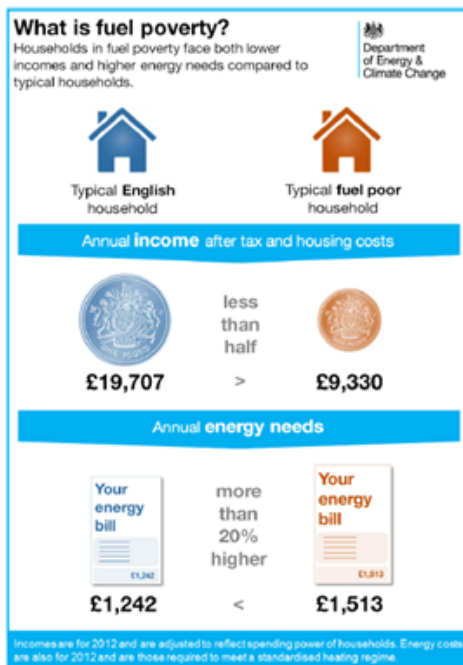


Figure 1: What is Fuel Poverty, DECC 2015

Oxford City Council's approach to fuel poverty

Whilst the Council is also committed to the carbon reduction element of energy efficiency, the primary objective of this strategy is the reduction of fuel poverty.

Whichever definition is used, there are three key components determining the prevalence of fuel poverty in domestic homes:

- the energy efficiency of homes
- household income
- cost of energy

Whilst understanding the need for support on income issues, the Council can tackle fuel poverty primarily by making their dwellings more energy efficient therefore reducing the need for energy use.

To maximise the energy efficiency and therefore minimise fuel poverty in the Council's housing stock by

- Reducing tenants' energy bills and/or reduce under heating of their homes (people often under heat when they can't afford to pay energy bills)
- Supporting those more vulnerable to impacts of fuel poverty (ie those on lower incomes and/or those who have to spend a lot of time in the home)
- Get the best value for money – maximise good quality work carried out under the given budget
- Remaining open to new technologies whilst continuously evaluating them for risks and opportunities including the financial and other impacts for tenants

Using estimated energy performance of buildings¹ matched against tenants on low incomes (housing benefit), it is estimated that 20% of Oxford City Council housing tenants are in fuel poverty at the time of writing.

The approach to energy management agreed in the Council's Asset Management Strategy focuses on the energy efficiency of existing housing stock in order to keep tenants' energy bills as low as possible and reduce fuel poverty focuses on two different areas. Where funding can be accessed for suitable measures/renewables, this will be sourced.

The overall approach requires consideration of the available improvements of the housing stock, available funding and the streamlining of retrofit work to maximize value for money. In order to achieve this, the well-established energy hierarchy will be used (see Figure 2 below)

¹ DECC's targets for fuel poverty assume that properties rated C in their EPC (SAP -69+) cannot be in fuel poverty so this figure assumes anything under this can house people in fuel poverty

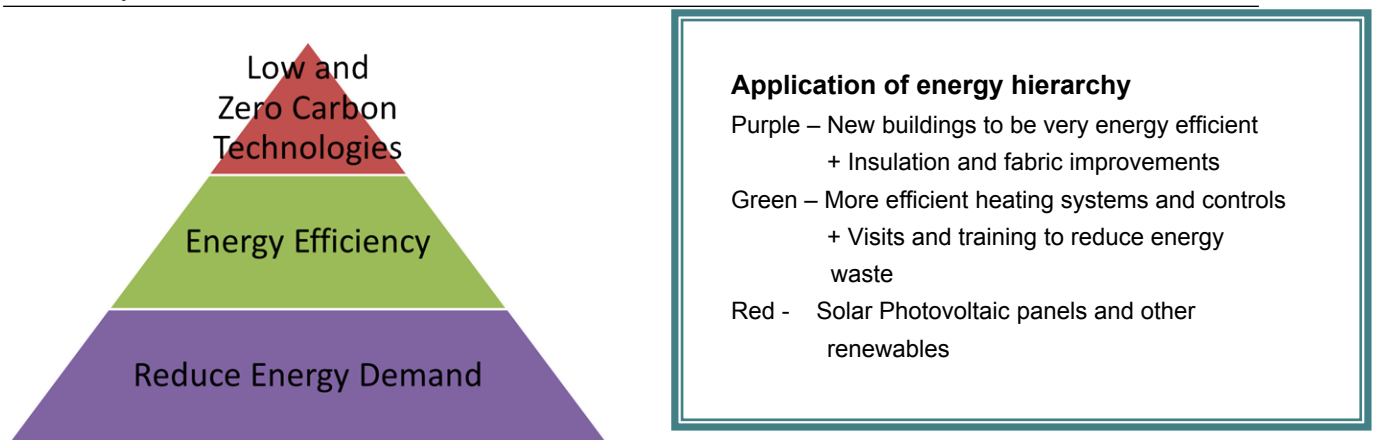


Figure 2: Energy Hierarchy and application to this strategy

Yearly updates and consideration of the financial case and benefits for pre-determined renewables and low carbon technologies can enable a reactive and financially optimal approach to investment (e.g. Feed in tariffs for solar PV and Renewable Heat Incentive for solar thermal, biomass, heat pumps etc).

Key principle: Buildings first

Work to date

Covering an 18 month period from 2014- 2016 prior to budget changes, a number of measures were carried out targeting poorer performing properties where possible. This also attracted funding as detailed below:

Measure	Number	Funding brought in
Cavity wall installs	300	£100,000
Flat block cavity wall insulation removal and refill	12 flats and 1 house	N/A
External wall insulation	80	£125,000
Solar PV installations (over 20 year period)	69	Est. £110,000 income + £62,585 savings to tenants
Moixa battery installs (with Rose Hill Solar PV)	49	£98,000 equivalent
Loft insulation upgrades to 270mm	250 (and now ongoing)	Direct Services work

Insulation

All known cavity wall properties have been insulated, with the majority of this work being free utilising ECO funding.

The majority of houses that are solid wall or traditional build have been either externally insulated or investigated. Key issues for those outstanding include being in conservation areas, other planning issues or infringement on neighbours' properties that are unresolvable. In many cases, internal wall insulation was not a realistic option as kitchens and bathrooms would need removing and reinstalling. Solid walled/ system build flats that can be targeted in the future should funding become available.

Current budget and work

Policy changes announced by Central Government in 2015 have had a significant negative impact on the funding available for investment in energy efficiency works in housing. However, funding continues to be sought to invest in energy efficiency works on council housing projects.

Budget is available for gas heating systems and loft insulation programmes, allowing the setting of a minimum standard for the Council's housing stock on these measures. The current works are detailed below:

- Sample EPC survey then prioritise all properties rated Energy Performance Certificate E, F and G for potential improvement measures
- Determine the basic measures that should be applied to all properties (e.g. loft insulation and boiler replacement for very old and inefficient models)
- Offering an upgrade of traditionally electrically heated properties to gas central heating to all tenants where this is feasible. Many tenants have refused this offer for a variety of reasons.
- Aligning smaller measures such as loft insulation with larger work programmes
- Bring in funding where possible for larger scale works, adjusting priorities as necessary
- Incorporating energy saving measures such as LED lighting, boiler upgrade and loft insulation into the voids process

However, the Council has a legal as well as an ethical responsibility to ensure any properties that are rated F or G in their Energy Performance Certificates are improved to an 'E' or above.

Data

Whilst the Council has been working on energy efficiency measures in its homes for a long time, a recent stock condition survey has enabled a data driven, targeted approach to improving energy performance. Updates of systems and data means that programmes of work can be aligned and checked against each other. Energy modelling showed the measures that should form required work in each home and that would improve the efficiency of the building the most. This is being used to pull out work programmes for large scale projects based on the poorest performing property types. The correct building data is vital for allocation of properties and securing the most external funding possible. Keeping building information up to date is vital.

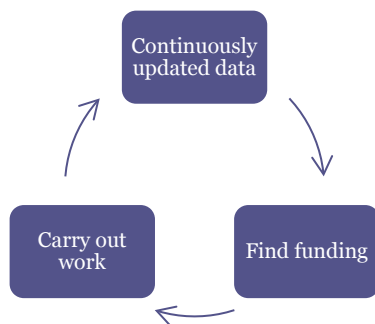


Figure 3: Data cycle

Energy Performance Certificate data is key for evaluating performance and accessing available funding so surveying will be carried out accordingly.

Non traditional system builds account for 1,166 of the existing dwellings and offer a challenge in terms of the approach to insulation and refurbishment. A number of these have been previously insulated and the remainder are being assessed in terms of the best approach.

Bigger projects: The Council's approach.

Boiler replacement and Electric heated properties

The Council will replace the least efficient boilers first with efficient gas condensing boilers. All electric properties will be offered gas where feasible, with an aim of minimising electric heating in Council housing (although many refusals have been received).

Cavity Wall insulation

The Council has insulated all known cavity walled homes by the end of the first year of this strategy. Where unfilled cavity walls are found, funding will be sought to insulate them.

Loft insulation

The Council will roll out loft insulation of 270mm to all properties, initially aligning with boiler replacement programmes (and others in the future) throughout the life of this Strategy.

Tower blocks project

- Building thermal envelope improvements will be 10% improvement above the building regulations.
- Energy efficiency improvements have a target of SAP improvements of 15 point improvement in ground floor, 20 point improvement in mid floor and 30 points in top floor dwellings
- Contractor and energy advice visits offered to all tenants to ensure appropriate electricity tariff changes, and appropriate use of heating and hot water systems.

Solar PV and other renewables

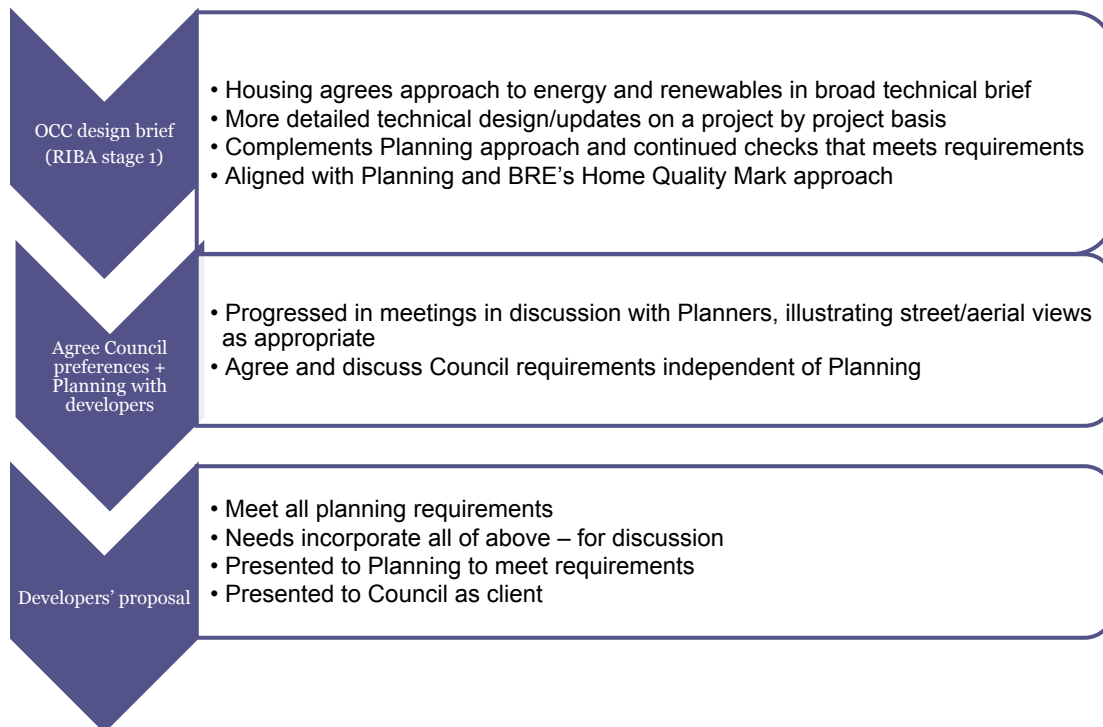
These continue to be explored where external funding makes them financially feasible

Agreed approach and standards in development brief for new Council housing, complementing Planning requirements.

Current Planning policy requires 20% of all regulated and unregulated energy use to come from renewable or low carbon sources.

The Council is currently updating Design Guide and including a sustainability brief for future domestic housing. This includes levels of low carbon/renewable technologies and minimum standards for the insulation of homes, amongst other areas.

The approach in this Design Guide will be incorporated into all initial discussions and tenders on new council housing development, and co-exist with planning requirements. The purpose is to continue an appropriate consideration of sustainability. The process is detailed in the action plan and summarised in Figure 3 below:



Supporting tenants

1. Understanding tenants' needs and providing support and advice on energy saving behaviour, use of heating systems and energy bills/tariffs.

Resident involvement and support is vital and can be used to maximise efficiency of systems. This includes controls evaluation, understanding boilers, and maintenance. Key areas of affordable warmth/energy efficiency support for officers to provide include

- Evaluating and improving building performance
- Energy behaviour and using energy using systems
- supporting those most vulnerable to the impacts of cold homes
- Dealing with financial issues (energy bills and beyond)

Building on this, a small 'understanding energy through our tenants' eyes' session was run with Council housing tenants as an initial guide to the 'supporting tenants' element of this work highlighting three points below:

- **Monitoring & controlling energy use.** Some of the tenants prefer to use prepaid electricity meters, so that they can more easily control their energy use. But these can make electricity more pricey on a unit by unit basis.
- **Making personal contact.** People all have different personal circumstances, and someone with a family may have very different concerns about conserving energy than someone living by themselves and struggling with bills.
- **Spelling it out.** The tenants we spoke to told us that they don't just want information on how to save energy in the home - but more detail and, where possible, financial support.

In employing two Energy Advice Officers to visit the homes of tenants to advise on energy efficiency, heating system and basic energy tariff issues, the Council has responded to these points. This work is carried out in conjunction with a part time Citizens' Advice Office worker who offers detailed support and guidance on debt issues and financial planning.

After 9 months, 752 properties had been visited by energy advice officers with 1179+ unsuccessful access attempts (this is with 3 months at 1 officer only). The impact they have had includes:

- 40 inefficient boiler or heating related referrals with 11 replacements

- 125 loft insulation installations were carried out as a result of referrals to Direct Services
- Total recordable cost benefit to tenants so far is £49,890 and potential savings we are able to estimate are £4,212. We know this is underestimated as it doesn't include what tenants have changed or where they have switched supplier.
- Referrals to the CAB have resulted in 39 clients receiving financial and debt support with a further 5 awaiting contact or booked in.
- 20 Energy related issues have been advised on (inc priority services register, switching, financial help), 101 Debt related (stopping creditor action, repayment negotiation, stop bailiffs action, financial planning) and 4 Benefits related issues.

2. Improving communications on energy and setting programmes of training and knowledge to increase the understanding and capacity of Council staff and partners

As concerns about energy bills increase in tenants, front facing staff's and Councillors' need of support and advice on issues related to energy efficiency also increases. As part of the consultation process, staff were given information then asked for areas that they needed support with and issues that they needed to be dealt with within the strategy.

This has been incorporated into a broader training programme for all front facing staff in housing but also those in the private rented and home owner sectors across the Council. Key areas of training include:

- Fuel poverty and basic energy efficiency
- Gas and electric heating systems – understanding and advising
- Energy bills, meter readings and other energy finance issues such as pre payment meters and switching supplier

Key to this work is the early work of setting up of a communications and referral map and system aligned with the new Energy Advice Officer roles. All front facing officers including Direct Services have been given training on energy advice and the process to be aligned with existing roles. Energy efficiency training to frontline staff is now in the corporate training programme and available to all staff.

Delivering the Strategy

The Action Plan (including completed actions) Aligning small scale measures with existing programmes of work to maximise efficiency

Action	Date	Owner
Include the installation of loft insulation with the boiler replacement programme	Complete/ Ongoing	Gary Bateman
Identify other minor measures to be aligned in planned works programmes	31 March 2016	Jon Gould

Roll out of larger scale projects to improve energy efficiency and energy generation

Action	Date	Owner
Complete the first year's insulation programme for simple cavity and solid walls	Complete	Jon Gould
Identify hard to treat properties (including system builds) and insulate	31 March 2015	Debbie Haynes/ Nigel Archer
Complete the first year's programme for solar PV installation	Complete	Jon Gould
Investigate alternative models of funding for council properties for solar PV	Ongoing	Debbie Haynes
Upgrade electrically heated properties to gas.	31 March 2018 Work in progress	Debbie Haynes/ Barry Smith

Agreed approach and standards in development brief for new Council housing, complementing Planning requirements.

Action	Date	Owner
The Council to ensure the design brief includes a section on renewable energy and insulation levels, setting the standard for this and other areas of sustainability.	December 2016	Alan Wylde
Consolidate the Council's Housing team's approach with that of the Planning team to ensure future housing schemes can meet the planning requirements with sustainable solutions	31 December 2016	Debbie Haynes

Understanding tenants needs and providing support and advice on energy saving behaviour, use of heating systems and energy bills/tariffs/ Improving communications on energy and setting programmes of training and knowledge to increase the understanding and capacity of Council staff and partners

Action	Date	Owner
Appoint Energy Advice officers to provide home energy audits and referral networks to key internal and external officers – two year contracts	Complete	Martin Shaw/ Debbie Haynes
Commission and link in energy bills/debt advice service for referrals to complement existing – two year	Complete	Debbie Haynes

contract		
Set up a training plan for officers to ensure joined up approach to energy issues and appropriate referrals	Complete	Debbie Haynes
Investigate roll out of smart meters/ reduction of pre-payment meters	31 December 2016	Debbie Haynes