



Home Energy Strategy

2006 - 2011

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Executive summary:

The recent Stern Review (source: HM Treasury) states the following:

“Climate change will affect the basic elements of life for people around the world – access to water, food production, health, and the environment. Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms.”

“The evidence gathered by the Review leads to a simple conclusion: the benefits of strong and early action far outweigh the economic costs of not acting.”

Cambridge City Council's new Medium Term Objectives include the commitments to “agree targets for carbon dioxide reduction”, “improve the energy rating of housing in the city” and to “help people understand how they personally can make changes to live more sustainably and contribute to carbon reduction”.

Cambridge City Council recently signed the Nottingham Declaration on Climate Change. This acknowledges that climate change is occurring and that it will continue to have far-reaching effects on the UK's people and places, economy, society and environment. In signing the Declaration Cambridge City Council welcome the opportunity to lead the response to climate change at a local level.

More than a quarter of carbon dioxide emissions in Cambridge City are as a result of the energy we use to heat, light and power our homes. The advent of a full-time Home Energy Officer has allowed time to develop a strategy to tackle home energy issues that will have effect across all tenures within Cambridge City.

The aim of the new Home Energy Strategy is to: “Increase the efficient use of energy in existing homes in Cambridge and reduce the emissions of carbon dioxide (and other greenhouse gases) associated with this use of energy in order to mitigate climate change.”

There is also a need to inform and to facilitate improvements in the households that need it most – for example, housing conditions of vulnerable private sector households tend to be worse than those of other households in the private sector [source: English House Condition Survey 2004].

1. The policy background

1.1. Background

Previous Cambridge City Council Home Energy Strategies focused predominantly on local authority housing and are now out of date in this rapidly changing area. The advent of a full-time Home Energy Officer has allowed sufficient time to develop a new strategy to tackle home energy issues across all housing tenures in the city of Cambridge.

1.2. Key legislation

Key pieces of legislation and central government commitments that will be used to drive the Home Energy Strategy:

- **Home Energy Conservation Act (HECA) 1995** - Requires all local authorities in the United Kingdom to assess the energy performance of their housing stock (in terms of energy consumption and carbon dioxide (CO₂) emissions) and to develop strategies to achieve a 30% improvement over a 10 - 15 year period as well as tackling fuel poverty.

The first Cambridge City Council HECA report was produced in 1997 in response to the 1995 Act. The HECA makes all Unitary Authorities, Metropolitan Boroughs, and District Councils 'Energy Conservation Authorities'; it instructs the provision of a report on an annual basis to the Secretary of State; it ensures that Local Authorities measure the actions carried out in their area; and it ensures that Local Authorities promote the ethos of energy efficiency to their populace.

We are currently producing the 10th edition of our HECA report – this will report on progress made towards our target of improving energy efficiency across all tenures by 48% by 2011 from a 1996 baseline. This is amongst the highest targets in the United Kingdom and will be difficult to achieve. There are also serious doubts regarding previous reported improvements (to date we have reported a 35% improvement) as well as the initial baseline figure. This is one of the main reasons for wishing to draw a line under previous strategies and set new objectives and targets that can be closely monitored from an April 2006 baseline.

- **Housing Act 2004** – Requires a 20% improvement in energy efficiency by 2010 (from a 2000 baseline). Under the Housing Health & Safety Rating Scheme (HHSRS) we also need to improve all homes with a Standard Assessment Procedure (SAP) energy rating of less than 35.
- **The Decent Homes Standard** - In 2000, the Government made a commitment to bring all public sector homes up to a decent standard and, through its Public Service Agreement (PSA 7) 2002, extended its focus to vulnerable households in the private sector, with the aim of no

more than 30% of vulnerable people living in non-decent homes by 2010.

- **Local Government Act 2000** - Every local authority are to have power to do anything which they consider is likely to achieve any one (or more) of the following objects: (a) the promotion or improvement of the economic well-being of their area; (b) the promotion or improvement of the social well-being of their area, and (c) the promotion or improvement of the environmental well-being of their area. This includes power for a local authority to: (a) incur expenditure; (b) give financial assistance to any person; (c) enter into arrangements or agreements with any person; (d) co-operate with, or facilitate or co-ordinate the activities of, any person; (e) exercise on behalf of any person any functions of that person, and (f) provide staff, goods, services or accommodation to any person.
- **Kyoto Protocol** – This commits the United Kingdom to reduce our emissions of greenhouse gases (GHG) by 12.5% from a 1990 level by 2008-12. In the longer term the Government has accepted that far more significant cuts in GHG emissions will be required, and the need to cut emissions by at least 60% by the middle of this century is now agreed.
- **Energy White Paper 2003** - There are four goals for the government's energy policy: (i) cutting carbon dioxide emissions; (ii) maintaining the reliability of energy supplies; (iii) promoting "competitive markets in the UK and beyond" and (iv) ensuring that every home is adequately and affordably heated.
- **Sustainable Energy Act 2003** - Under this act local authorities may be issued with a direction requiring them to take action to improve energy efficiency in residential accommodation by a certain date.
- **Climate Change and Sustainable Energy Act 2006** – This act will have statutory implications for local authorities in reducing the emissions of greenhouse gases, promoting micro-generation, alleviating fuel poverty and enabling electricity produced by domestic micro-generation to be sold.
- **Part L, the Building Regulations, 2006** - Under the new legislation a more holistic approach to the energy efficiency of buildings will be taken. Buildings will be required to have an Energy Performance Certificate which will need to be updated when buildings are sold or let. New buildings will be required to meet minimum energy efficiency requirements, and CO₂ emissions will be reduced by at least 20% from the previous standards.
- **Energy Efficiency Commitment (EEC) 2005 – 2008** This is part of the Government's Climate Change Programme and sets targets for energy suppliers to achieve improvements in energy efficiency by providing

energy efficiency measures to households across the UK. The main types of measures available are insulation, lighting, heating and appliances. In addition to helping consumers to use less energy, reduce their fuel costs and enjoy greater comfort, the energy efficiency measures stimulated through the EEC contribute to lower carbon dioxide emissions and to the achievement of the United Kingdom's Climate Change Programme.

1.3. Corporate context:

- **Nottingham Declaration** – In September 2006 Cambridge City Council signed the Nottingham Declaration on Climate Change. This acknowledges that climate change is occurring and that it will continue to have far-reaching effects on the UK's people and places, economy, society and environment. In signing the Declaration Cambridge City Council welcome the opportunity to lead the response to climate change at a local level. It also commits us to contribute towards delivery of the various central government commitments and to progressively address the impacts of climate change (according to our local priorities, securing maximum benefit for our communities).
- **Medium Term Objective** – The new Medium Term Objectives include the commitment to: “Promote Cambridge as a sustainable city, in particular by reducing carbon dioxide emissions and the amount of waste going into landfill in the City and sub-region”. This will partially be done by “Working with national, regional and local partners to promote sustainability and agree targets for carbon dioxide reduction; taking practical steps towards promoting sustainability and reducing carbon dioxide emissions and waste in the way the council operates; improving the energy rating of housing, offices and other buildings in the city; working with local communities, organisations and businesses to help people understand how they personally can make changes to live more sustainably and contribute to carbon reduction.”
- **Housing Strategy 2004 – 2007** – This strategy states that “Promoting energy efficiency is important in helping people to afford to heat their homes; this contributes to good health. It also addresses a corporate objective of protecting the environment”. “Improve energy efficiency in all tenures” is listed as a key priority.
- **Private Sector Housing Strategy** - Outlines the requirement for a permanent, full-time Home Energy Officer as well as more accurate energy efficiency data to ensure that national and local targets and objectives can be met.

2. Why energy efficiency is important

2.1. Climate change

Fundamental change is needed in the way the United Kingdom obtains and uses its energy. Climate change is now accepted as occurring as a result of reasons above and beyond natural causes. Increasing concentrations of greenhouse gases (such as carbon dioxide) in the atmosphere are increasing the 'greenhouse' effect and changing the Earth's climate. The United Kingdom is responsible for approximately 2% of the world's greenhouse gas emissions despite being home to less than 1% of the world's population.

The Intergovernmental Panel on Climate Change (IPCC) reported in 2001 that the Earth's climate warmed up during the 20th century and that there is new and stronger evidence that this was attributable to human activities. The main IPCC findings were:

- The global average surface temperature increased during the 20th century by about 0.6 deg C.
- From the late 1960s snow cover decreased by 10%.
- There was a widespread retreat of mountain glaciers in non-polar regions during the 20th century.
- The global average sea level rose between 0.1 and 0.2 metres during the 20th century.
- Fossil fuel burning is responsible for 75% of man-made carbon emissions in the atmosphere.
- The atmospheric concentration of carbon dioxide has increased by 31% since 1750.

To avert catastrophic effects on both humans and the wider ecosystems we need to prevent global temperatures from rising by more than two degrees Celsius above pre-industrial levels. The United Kingdom government has committed to reducing carbon dioxide emissions by 20% by 2010 (from a 1997 baseline) and by 60% by 2050. However, recent studies have shown that a 90% reduction by 2030 will be required to only potentially avert these catastrophic disasters (source: George Monbiot, *The Heat Is On*, 2006).

2.2. Fuel costs and supply security

Recent years have seen a sharp rise in fuel costs predominantly as a result of increasing demand and declining supplies of fossil fuels. Political instability and concern surrounding our reliance upon the Middle East and Russia for gas and oil supplies has also played a large part in driving the cost of oil up from \$40 per barrel to \$60 during 2005 (see Fig. 1 below).

Gas currently provides around 40% of the UK's energy requirements but the import level has recently overtaken the export. This dependence on other

European markets and the aforementioned high oil prices have directly increased the price of gas.



Fig. 1: Price of oil during 2005 (source: BBC online)

Coal currently provides around 30% of the UK's electricity requirements and has historically been our main source of energy. Although resources are still fairly abundant there are obvious concerns regarding the fact that it produces more greenhouse gas emissions (for the energy it gives) than any other fuel.

This reliance on fossil fuels for our energy requirements resulted in carbon emissions of 400 million tonnes in 2004. This figure does not include transport energy use of any kind. With fossil fuels slowly becoming a technology of the past we will have to look elsewhere to meet our increasing energy demands. Nuclear energy has again been proposed as a solution but, despite reassurances over improved safety and increased stability of supply, there remains much public concern. The problem of nuclear waste (radioactive for tens of thousands of years) remains, and the current United Kingdom energy demand met by electricity from nuclear power stations in 2004 was only 3.6%. Combined with the current estimate of £70 billion for cleaning up existing nuclear power stations (this could rise to £100 billion when waste storage is considered) the argument against nuclear power remains convincing.

Some of the alternative options for meeting our energy demands include increased energy efficiency, renewable technologies and decentralised energy generation. Approximately 4% of our electricity demand currently comes from renewable energy and, with improving technology and increased uptake, this figure is expected to rise. Whilst fossil fuels will no doubt continue to supply the majority of our energy needs for the next few years the time to act is now in order to avoid potentially calamitous climate change problems.

2.3. Home energy use background

The energy we use to heat, light and power our homes is responsible for 27% of the United Kingdom's carbon dioxide emissions. Fig. 2 shows how this energy is used in a typical UK home.

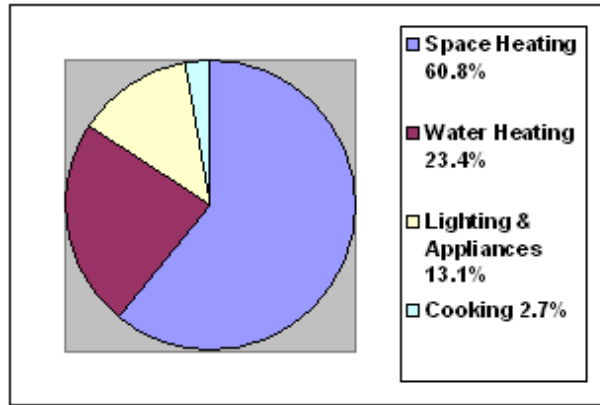


Fig. 2: Domestic energy use breakdown (source: DTI 2002)

Despite substantial work to reduce domestic energy use there was a 19% increase in consumption between 1990 and 2001 in UK homes. This is predominantly as a result of increased provision of central heating. In 1970 only 31% of homes had central heating, but by 2001 this figure had risen to 90% (source: Leo Hickman, *A Good Life*, 2005). Fig. 3 shows the average internal temperature of a UK home over the same time period.

Year	Temperature (°C)
1970	12.6
1990	16.9
2001	18.9

Fig. 3: Average internal temperature of a UK home (source: Leo Hickman, *A Good Life*, 2005)

This domestic energy consumption rise is also attributable to our increased usage of electrical appliances: £1.2 billion per year is spent running our fridges and freezers; £800 million is spent operating our washing machines and tumble dryers.

From a financial angle, rising fuel prices and increasing fuel poverty (along with a potentially unstable fuel supply) mean that using our energy efficiently and effectively can only help to enhance our lives.

Domestic fuel bills have been rising over the past few years and, even though annual costs are only now approaching mid 1980's levels, the rate of increase has caused major problems. Many people have entered fuel poverty for the first time and even the most affluent of households are taking notice as their bills increase. Fig. 4 & 5 below show how the average electricity and gas bills have changed in the past twenty years and Fig. 6 & 7 show the past 4 years increase in more detail.

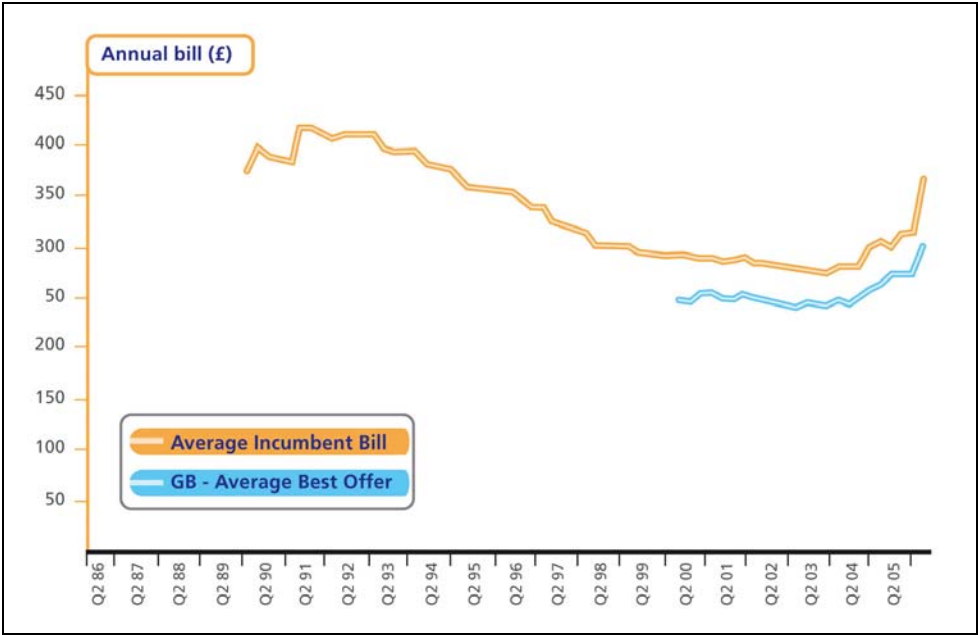


Fig. 4: Average annual electricity bill (source: OFGEM)

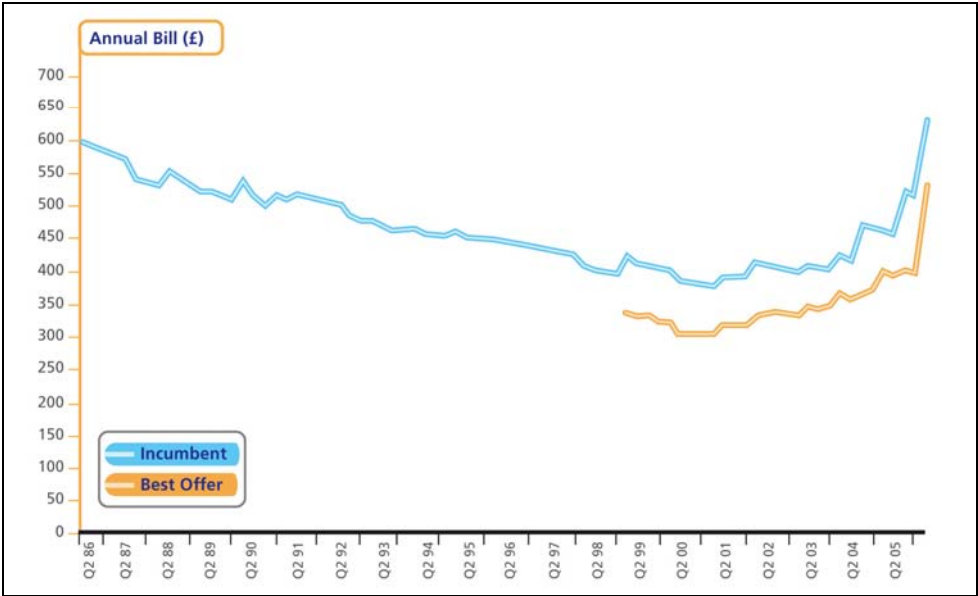


Fig. 5: Average annual gas bill (source: OFGEM)

With not only environmental but also economical drivers in place to encourage change, the next few years will be vital in securing a comparable quality of life for our future generations. By being efficient with the energy we have; by making the change to renewable, de-centralised sources of energy; by taking responsibility for our everyday actions, we can take a huge step towards climate change reduction and hence the prospects of life on this planet.

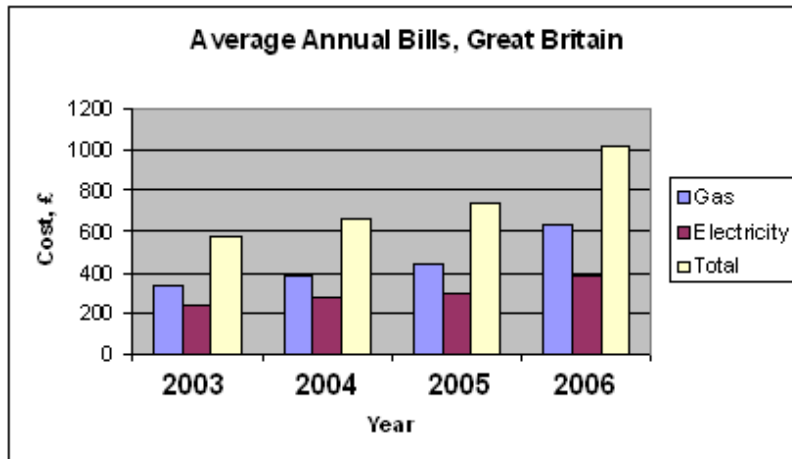


Fig. 6: Average annual utility bills, past 4 years (source: Energywatch)

Year	Gas	Electricity	Total
2003	£330	£242	£572
2004	£384	£274	£658
2005	£440	£296	£736
2006	£630	£383	£1013

Fig. 7: Average annual utility bills, past 4 years - details (source: Energywatch)

3. Current situation

3.1. Cambridge context

Cambridge is a beautiful and historic city in the east of England home to approximately 118,500 people divided into 14 wards. This population is housed in approximately 46,000 dwellings. The tenure breakdown of these dwellings is as follows:

Tenure	Cambridge	East of England	England
Owner-occupied	55%	74%	70%
Private rented	21%	9%	10%
Local Authority	18%	12%	14%
Other RSLs	6%	5%	6%

Fig. 8: Housing tenure breakdown in Cambridge City (source: Census 2001)

Taking into account the decreasing number of local authority homes these figures equate to approximately 25,800 owner occupied tenure properties, 9,700 private rented, 7700 local authority and 2800 RSL.

The city is characterised by a high student population and a relatively high proportion of younger people and single occupant households. Although Cambridge appears from the outside to be a thriving, wealthy and vibrant city it is important to note that average incomes tend to be low and deprivation levels are on a par with the rest of the country (as measured by the 2004 Index of Deprivation).

3.2. Current situation

Fig. 9 shows the average Standard Assessment Procedure (SAP) energy ratings per tenure (as at April 2006). It is envisaged that the actual figures will prove to be higher than those shown – this is as a result of resource constraints with working on the energy database. The strategy will help to ensure that the energy database is reliable and up to date across all tenures.

Tenure	Cambridge average SAP			National average SAP
	April 2004	April 2005	April 2006	
Owner occupied	41	41	41	51
Private rented	45	45	45	49
Local authority	58	59	65	56
Other RSLs	49	50	49	61

Fig. 9: Average SAP energy ratings per tenure (National average SAP source – English House Condition Survey 2004).

Fig. 10 shows the average carbon dioxide emissions per tenure (as at April 2006). It is envisaged that the actual figures will prove to be lower than shown – these emission levels are partly based on the SAP ratings above and so suffer from the same constraints.

Tenure	Average CO2 emissions (tonnes/year)
Owner occupied	10.5
Private rented	8.0
Local authority	5.1
Other RSLs	7.4

Fig. 10: Average carbon dioxide emissions per tenure as at April 2006.

It is estimated that the time of the Home Energy Officer is currently divided approximately 80-20 in favour of local authority housing versus other tenures. Considering that the housing tenure breakdown is roughly the reverse of this ratio there is much outstanding work in the private sector. It should also be noted that carbon dioxide emissions are much higher in the under-resourced private sector and this amplifies the problem.

There are also issues regarding the age of the housing in Cambridge as shown in fig. 11 and 12. The older the property, the lower the average SAP rating and the higher the average CO₂ emissions. The high proportion of pre-1944 homes further exacerbates the problem.

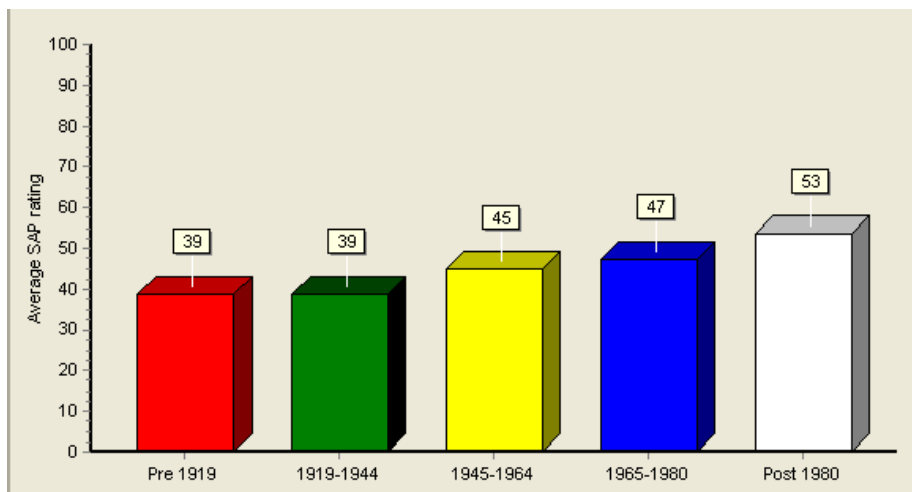


Fig. 11: Average SAP energy rating per property age range.

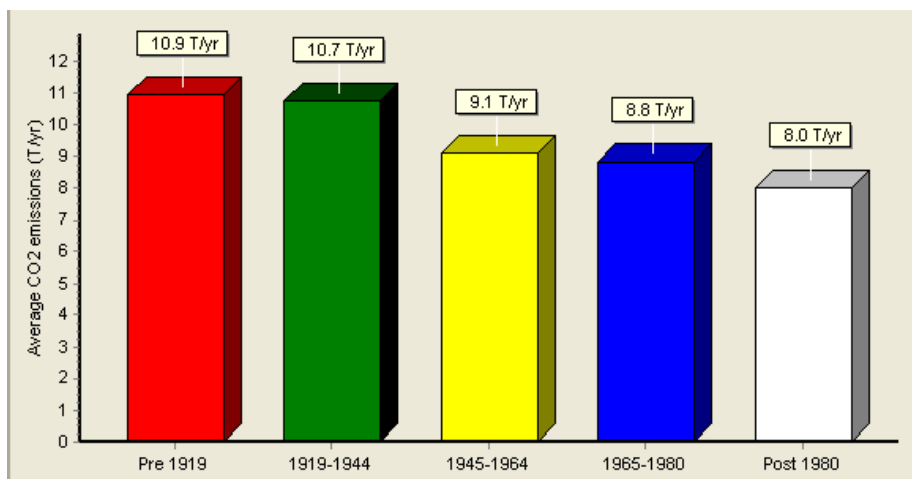


Fig. 12: Average CO₂ emissions per housing age range.

3.3. Local Authority housing

Energy efficiency improvements to local authority housing is currently managed under the Decent Homes programme. Approximately £50,000 per year is spent on insulation measures and another £1.1 million is spent on repairing and replacing heating systems with energy efficient gas condensing boilers. These budgets are both programmed to continue until 2010. A revenue budget of approximately £13,000 is available for the purchase of licenses, promotional material, consultant costs and ongoing monitoring to help facilitate energy efficiency improvements (also in the local authority sector).

Local authority housing SAP energy rating data is collected on a regular basis via Decent Homes surveys and the Home Energy Officer. A database of housing across all tenures is updated regularly to ensure that reliable stock assessment can be carried out. Recent software purchases will enable greater accuracy in the forthcoming years.

3.4. Owner Occupied housing

Private sector work is currently limited to some energy efficiency awareness raising work and the facilitating of standard home insulation schemes. We work with the Energy Saving Trust Advice Centre Anglia to provide a free and impartial energy efficiency advice service for all local residents. Private sector housing stock information is primarily collected in partnership with the Energy Saving Trust. Cambridge City Council's Housing Standards team also collect this information during home visits.

Current sources of funding for energy efficiency work in the private sector include:

Warm Front:

WarmFront is the government-funded scheme that provides means-tested grants to improve the home energy efficiency of homeowners and private rented residents.

Enact Energy:

This organisation directly markets grant funded loft and cavity wall insulation to all households within the city through the HEAT project.

Local installers:

At least 10 independent insulation installers currently operate in Cambridge City, many of these offer grant-funded work.

Utility companies:

The main utility companies (Powergen, British Gas, Scottish Power, etc.) have a commitment to provide subsidised energy efficiency products under the Energy Efficiency Commitment (EEC). This usually takes the form of grant assisted loft and cavity wall insulation work, low energy light bulbs and occasionally energy efficient white goods.

Low Carbon Buildings Programme:

The DTI's Low Carbon Buildings Programme provides grants for microgeneration technologies for householders. It is managed by the Energy Saving Trust.

Energy for Good:

Additional Cambridge City Council grants are available for solar thermal installations.

Cambridge City Council Home Aid:

The Home Aid department in Cambridge City Council administers the Council's Grants and Loans Schemes to help owner-occupiers maintain their homes. In particular Home Aid can help older people or people with disabilities carry out repairs and maintenance on their homes. Some of this work can be classified as energy efficiency improvements (e.g. loft insulation, new gas condensing boilers, etc.).

3.5. Private Rented and Other RSLs housing

Work with the private rented sector and the other RSLs is currently extremely limited as a result of a lack of resources. There is some scope for slow improvement in the private rented sector via close working with the newly appointed Landlord Accreditation Officer. Other RSLs are already constantly improving their housing – but we do not currently monitor this work.

For a full outline of new and ongoing work carried out in all housing tenures please view the current Cambridge City Council HECA report by contacting Sam Griggs on 01223 457960, or sam.griggs@cambridge.gov.uk. Alternatively visit: www.defra.gov.uk/Environment/energy/heca95/index.htm for further information.

4. Aims, objectives, targets and strategy details

4.1. Aim

Increase the efficient use of energy in existing homes in Cambridge and reduce the emissions of carbon dioxide (and other greenhouse gases) associated with this use of energy in order to mitigate climate change.

4.2. Dwelling-focused objectives

- Improve the average Standard Assessment Procedure (SAP) rating for the local authority housing stock by at least 2 points per annum (from an April 2006 baseline).
- Improve the average SAP rating for the owner-occupier housing stock by at least 2 points per annum (from an April 2006 baseline).
- Improve the average SAP rating for the private rented housing stock by at least 2 points per annum (from an April 2006 baseline).
- Improve the average SAP rating for the housing association housing stock by at least 2 points per annum (from an April 2006 baseline).
- Ensure that there are no domestic properties with a SAP rating of less than 35.
- Increase the use of micro-renewables on Cambridge homes along with other renewable energy sources.
- Establishment of a Cambridge City Council Home Energy Forum / Network that will form partnerships with stakeholders who will be able to help us deliver home energy savings.

4.3. Targets

Initial targets are identified in the Home Energy Strategy Action Plan along with intended completion dates. These will be updated and added to as the Home Energy Strategy matures and new work is identified.

4.4. Achieving these objectives

The dwelling-based objectives will be difficult to achieve, even with the provision of sufficient resources. Whilst the Home Energy Strategy aims to facilitate higher levels of activity in the city, there is already a lot of energy efficiency improvement work taking place. The initial SAP energy rating increases and CO₂ decreases across all housing tenures will result predominantly from an improved energy database profiling all known property details. This will provide an increasingly reliable source of information on the local housing stock over the next five years.

4.5. Local Authority housing

4.5.1. Main targets

- Improve the SAP energy rating by at least 2 points per annum from a baseline of 65;
- Ensure that no homes have a SAP of less than 35;
- Increase the use of renewable energy technology.

4.5.2. Key action points (please see the Action Plan for further information)

- Continuation of the Decent Homes work which will ensure that energy efficient heating systems (with suitable controls) are provided, all glazing is double-glazing, all cavity walls are insulated and all lofts are insulated to a minimum of 200mm.
- Introduction of Anglia Energy Services Company to assist with void properties. All void properties will be automatically switched to a single utility company meaning that new tenants will benefit by having information on their supplier when they move in and also no outstanding debt issues. Cambridge City Council will benefit by the creation of a fund of referral fee money that will be spent on further energy efficiency measures within the housing stock. For further details of this Energy Services Company scheme please see Appendix 3.
- Ensure that all tenants have access to a wide range of energy efficiency information free of charge.
- Increased promotional and awareness raising work.
- Energy efficiency training for all frontline Cambridge City Council staff.
- Implement A-G energy rating for all homes.
- Limited number of free home energy audits to assist tenants directly with their utility bills, consumption monitoring and general energy saving.
- Production of a series of case studies outlining before/after living conditions as a result of any major refurbishment work.

4.5.3. Barriers

- Providing the Home Energy Officer post is continued for the duration of the strategy these targets should be achievable.
- If resources are not forthcoming then the post will continue to be at the mercy of external year-by-year funding which will potentially prevent these targets from being achieved.
- Other barriers that may prevent these targets being met include the high proportion of 'hard to treat' homes that have solid walls and require further insulation and the forthcoming changes to the SAP rating scheme (a 1-100 scale will replace the existing 1-120 scale).

4.6. Owner Occupied housing

4.6.1. Main targets

- Improve the SAP energy rating by at least 2 points per annum from a baseline of 41;
- Ensure that no homes have a SAP of less than 35;
- Increase the use of renewable energy technology.

4.6.2. Key action points (please see the Action Plan for further information)

- British Gas Council Tax reduction insulation scheme. Any resident who applies for wall and/or loft insulation work via British Gas will automatically qualify for £50 reduction from their Council Tax account (more depending on any Cambridge City Council contribution).
- Targeted energy efficiency work (via Warm Front and Home Aid) for vulnerable households. There is potential to utilise part of the existing Home Aid private sector grants scheme to help meet the energy efficiency targets.
- Ensure that all tenants have access to a wide range of energy efficiency information free of charge.
- Increased promotional and awareness raising work, particularly with other departments within Cambridge City Council and local stakeholders.
- Energy efficiency training for all frontline Cambridge City Council staff.
- Implement A-G energy rating for all homes.
- Facilitate and/or produce Energy Performance Certificates as required. Ensure that this valuable information can be utilised.
- Limited number of free home energy audits to assist tenants directly with their utility bills, consumption monitoring and general energy saving.
- Production of a series of case studies outlining before/after living conditions as a result of any major refurbishment work.

4.6.3. Barriers

- Without additional resources work in the owner-occupied sector will be limited to predominantly promotional and facilitation services.
- Most household energy data will be from resident conducted surveys. This is potentially not as reliable as a trained surveyor's data.
- Lack of funding (EEC scheme, Low Carbon Building Programme, Energy Saving Trust, etc.) from central government.
- Public apathy towards climate change.
- Identification problems of properties with SAP scores under 35.
- Other barriers that may prevent these targets being met include the high proportion of 'hard to treat' homes that have solid walls and

require further insulation and the forthcoming changes to the SAP rating scheme (a 1-100 scale will replace the existing 1-120 scale).

4.7. Private Rented housing

4.7.1. Main targets

- Improve the SAP energy rating by at least 2 points per annum from a baseline of 45;
- Ensure that no homes have a SAP of less than 35;
- Increase the use of renewable energy.

4.7.2. Key action points (please see the Action Plan for further information)

- Assist with implementation of the new Landlord Accreditation scheme. Monitor progress against the energy efficiency standards and facilitate further work leading to increasing baseline standards.
- Increase Warm Front referrals for vulnerable households. Achieve this by increasing the level of targeted work using the energy database and data analysis toolkit.
- Ensure that all residents have access to a wide range of energy efficiency information free of charge.
- Increased promotional and awareness raising work.
- Implement A-G energy rating for all homes.
- Limited number of free home energy audits to assist tenants directly with their utility bills, consumption monitoring and general energy saving.
- Production of a series of case studies outlining before/after living conditions as a result of any major refurbishment work (to highlight the benefits to the landlord in particular).

4.7.3. Barriers

- Without additional resources work in the private rented sector will be limited to predominantly promotional and facilitation services and any working within the Landlord Accreditation scheme.
- Gaining access to more than one landlord at a time is difficult making this a very time-intensive sector.
- Landlord apathy towards climate change (increased because they often do not live in the rented properties and will therefore not benefit directly from energy efficiency improvements).
- Short-term nature of some rentals.
- Lack of survey material to provide the necessary energy database.
- Identification problems of properties with SAP scores under 35.
- Other barriers that may prevent these targets being met include the high proportion of 'hard to treat' homes that have solid walls and

require further insulation and the forthcoming changes to the SAP rating scheme (a 1-100 scale will replace the existing 1-120 scale).

4.8. Other Registered Social Landlord (RSL) housing

4.8.1. Main targets

- Improve the SAP energy rating by at least 2 points per annum from a baseline of 49;
- Ensure that no homes have a SAP of less than 35;
- Increase the use of renewable energy.

4.8.2. Key action points (please see the Action Plan for further information)

- Improve partnership working with all local Housing Associations.
- Highlight benefits of energy efficiency/renewable energy technologies to landlords via case studies of local work.
- Ensure that all tenants have access to a wide range of energy efficiency information free of charge.
- Increased promotional and awareness raising work.
- Implement A-G energy rating for all homes, where applicable.
- Limited number of free home energy audits to assist tenants directly with their utility bills, consumption monitoring and general energy saving, where applicable.
- Production of a series of case studies outlining before/after living conditions as a result of any major refurbishment work.

4.8.3. Barriers

- Without additional resources work in the private rented sector will be limited to predominantly promotional and facilitation services and the collection of energy database data.
- Time-intensive sector gaining access to all of the local RSLs.
- Landlord apathy towards climate change (increased because they often do not live in the rented properties and will therefore not benefit directly from energy efficiency improvements).
- Identification problems of properties with SAP scores under 35.
- Other barriers that may prevent these targets being met include the high proportion of 'hard to treat' homes that have solid walls and require further insulation and the forthcoming changes to the SAP rating scheme (a 1-100 scale will replace the existing 1-120 scale).

4.9. Housing Energy Management Matrix

The housing energy management matrix is a powerful and practical tool for assessing the scope and quality of the Home Energy Strategy and for monitoring and reviewing its progress. It shows performance against 7 key action areas.

A baseline profile has been established by assessing progress under each of the key action areas; this is shown as Year 1. This is assessed by answering a series of questions and awarding one point for each positive answer - the more points, the higher the achieved progress level. If the Home Energy Strategy is fully implemented it will oversee an improvement up to the profile denoted by Year 5.

The progress levels can be summarised as follows:

Progress Level 0 (0 points)

There is no corporate commitment to energy efficiency and no policy framework exists to promote it. Significant numbers of tenants are likely to be in fuel poverty, but the extent of fuel poverty is unknown. The carbon dioxide emissions associated with the use of energy in the stock are unknown. The extent of the investment needed to deliver affordable warmth and reduce carbon dioxide emissions is also unknown.

Progress Level 1 (1-3 points)

The importance of energy efficiency is recognised in some parts of the organisation, and progress is being made to understand and promote it, but it has not yet become part of the corporate culture. Progress depends mainly on the commitment of individual members of the technical staff.

Progress Level 2 (4-6 points)

A housing energy efficiency strategy is being developed, but there is a lack of reliable, up-to-date information about the energy efficiency of the housing stock and the availability of affordable warmth. Not all departments are equally committed to energy efficiency, and many staff have little knowledge of the strategy. Resources are being invested to address these problems.

Progress Level 3 (7-9 points)

The promotion of energy efficiency and the delivery of affordable warmth are taken seriously and reflected in the corporate culture. A housing energy efficiency strategy is in place, the extent of fuel poverty is known, staff training and tenant advice programmes have been developed and energy improvements are included in maintenance and refurbishment programmes.

Progress Level 4 (10-12 points)

A comprehensive, best practice housing energy strategy embracing all the key action areas has been developed and implemented. The strategy is reviewed regularly and adjusted in the light of progress and available resources. The organisation has secured external funding to support the strategy and is investing in systematic improvement of the energy efficiency of

the housing stock. There is a steady improvement in the availability of affordable warmth. New developments and improvements make use of renewable energy systems. Carbon dioxide emissions associated with the use of energy in the stock are being reduced.

For further information on how Cambridge City Council performance is profiled on the matrix please refer to Appendix 1: Housing Energy Management Matrix – details.

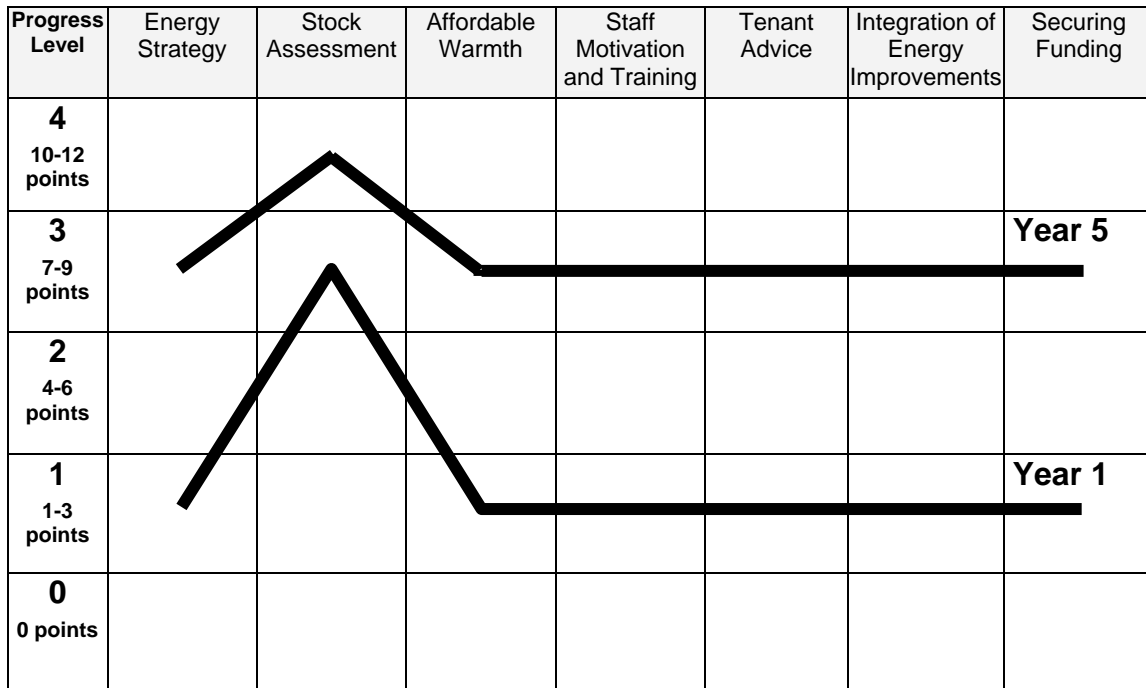


Fig. 13: Housing Energy Management Matrix (source: EST)

4.10. Strategy drivers

Partnership Working – the strength of this Strategy will lie in the strength of our partnerships, which are key to improving energy efficiency in the local area. We will need to get utility companies, installers, health authorities, charities and advice agencies (amongst others) to sign up to the Strategy so that a joint approach is developed and maintained to ensure our targets are met.

Effective communication with the public and professionals – this is crucial to ensure a consistent message is conveyed to the customers on how to save energy.

Community Participation – we will aim to reach and involve the community in developing solutions to improving energy efficiency in all homes by focusing on the harder to reach groups, e.g. BME community, vulnerable people, in this process.

Performance Management – the strategy contains an Action Plan and measurable performance targets that will be regularly monitored and reviewed to ensure we are focusing on the right priorities. This will help us in our efforts to continuously improve our service.

Accountability – progress on the Home Energy Strategy Action Plan will be reported to our key stakeholders, partners and Members of the Council on an annual basis. The system for administering financial assistance and providing advice and information will be fair and transparent.

4.11. Service Users, Partners and other Stakeholders

Effective partnership working is vital if the new Home Energy Strategy is to be delivered effectively. The setting of objectives and priorities will be done in conjunction with the main partners and can be constantly reviewed to remain relevant.

The following list outlines the major stakeholders involved in the delivery of the Home Energy Strategy. All of these stakeholders will be extensively consulted with during the implementation of the strategy.

4.11.1. Cambridge Residents

Owner occupiers

Owner-occupiers make up the largest proportion of residents in the city. Whilst it would be reasonable to expect that a significant proportion of them will not want or require direct input from the Council, or will already have the resources to deal with their own housing conditions, the Council still has a responsibility in terms of improving the overall condition of the stock and protecting the surrounding environment. There is also a responsibility to some of the more vulnerable owner-occupiers under the Decent Homes standard and the Housing Act 2004, and potentially to those on low incomes who cannot afford to maintain their properties.

Private rented sector tenants

These are tenants of private rented housing, including Houses in Multiple Occupation (HMOs). Some actively seek the input of the Council through the housing advice service, or through the Private Sector Housing Team in connection with issues around the condition of the property or the activities of their landlord. However, there are also a large number of tenants who have no contact with the Council with regard to their housing.

Private Rented Sector Landlords and Landlords Association

Landlords have responsibilities in terms of ensuring that individual dwellings and any communal areas are safe and habitable. The Council provides advice and assistance to landlords in doing this, and also has an enforcement role where landlords do not comply with their obligations.

There was a Landlords' Association made up of local landlords that lapsed due to poor attendance. It is planned that this will restart with the Council to discuss areas of concern. Effectively engaging landlords has been problematic – however the recently formed Landlord Accreditation Scheme will help to restart this process.

Council tenants

Of all the different housing tenures, Cambridge City Council has the greatest direct influence over the energy efficiency performance of council owned homes, via the Decent Homes programme. Cambridge City Council Sheltered Housing scheme residents will also be included under this section.

RSL tenants

Some of the private sector's most vulnerable people – particularly in relation to health – live in the RSL sector, although they tend to be living in better conditions overall than other private rented sector tenants.

RSLs

There are approximately 10 RSLs providing housing within the city. Whilst RSLs have a responsibility to address conditions within their own stock, the Council has a role in enabling them to achieve their aims and in enforcement if they do not fulfil their responsibilities as landlords.

4.11.2. Cambridge City Council stakeholders

Stakeholders within Cambridge City Council include the following departments:

- Asset Management
- Building Control
- Cambridge Home Aid
- City Homes
- City Services
- Environment Centre (and Sustainable City)
- Environment and Planning
- Property and Building Services
- Revenue Services
- Strategy department
- Technical Services
- Temporary Housing

4.11.3. External stakeholders

Home Energy Officer's Network (HEON)

The UK Home Energy Conservation Association (UK HECA) is a network of support groups made up of local government HECA officers, who have responsibility for reporting progress on the Home Energy Conservation Act. HEON is the eastern region department of this group.

GO East

The Government Office join up the work of 10 Central Government Departments across the East of England, and feed back the region's views and unique needs to Whitehall. The annual HECA report is submitted directly to them.

Energy Saving Trust (EST)

The Energy Saving Trust are a non-profit organisation funded by government and the private sector. Their two main goals are to achieve sustainable use of energy and to cut carbon dioxide emissions. They work with households, business and the public sector to encourage a more efficient use of energy, to stimulate the demand and supply of cleaner fuelled vehicles and to promote the use of small-scale renewable energy sources. Cambridge City Council work with the EST Advice Centre Anglia to provide free and impartial energy efficiency advice to all local residents.

Cambridge and South Cambridgeshire Primary Care Trust (PCT)

The conditions in which people live have a huge impact on their health and wellbeing. Health problems may be exacerbated by living in unsuitable housing conditions – e.g. in properties that are draughty, experiencing condensation or damp problems, lacking sufficient insulation, lacking effective or affordable heating, etc. We work closely with the PCT to try to ensure that resources are used in the most effective way. The PCT is also concerned with reducing winter deaths by (amongst other methods) improved energy efficiency and reducing fuel poverty via the Fuel Poverty Group.

Age Concern

Age Concern's mission is to promote the well being of all older people and to help make later life a fulfilling and enjoyable experience. Cambridge City Council have done some promotional and educational work with the local branch, but this should be developed to ensure that the most vulnerable local residents can take advantage of available services.

Cambridge Older People's Enterprise (COPE)

COPE promote and activate the interests and well-being of people aged 50 or over in Cambridge. Cambridge City Council is an associate member of COPE and regularly attends their promotional events.

ENACT Energy (HEAT Project)

This organisation directly markets grant funded loft and cavity wall insulation to all households within the city through the HEAT project.

Aran Services

Currently our preferred contractor for installing loft and cavity wall insulation in council housing. Also works (independently) in the private housing sector in Cambridge.

Other local heating and insulation contractors

There are a number of other local contractors who are interested in working with Cambridge City Council to improve the energy efficiency of the private sector stock in Cambridge.

WarmFront

WarmFront is the government-funded scheme that provides means-tested grants to improve the home energy efficiency of homeowners and private-rented residents.

Utility companies

The main utility companies have a commitment to provide subsidised energy efficiency products under the Energy Efficiency Commitment (EEC). This usually takes the form of grant assisted loft and cavity wall insulation work, low energy light bulbs and occasionally energy efficient white goods.

Cambridge City Council can use this EEC funding to help fund insulation and heating improvements within council housing and can also utilise it in other schemes for the private sector.

4.12. Resources

Energy efficiency improvements to local authority housing is currently managed under the Decent Homes programme. Approximately £50,000 per year is spent on insulation measures and another £1.1 million is spent on repairing and replacing heating systems with energy efficient gas condensing boilers. These budgets are both programmed to continue until 2010. A revenue budget of £13,000 is also available to enable the purchase of licenses, promotional material, consultancy services and ongoing monitoring to help facilitate energy efficiency to benefit local authority housing residents.

A limited increase in private sector activity will be possible through the establishment of the Cambridge City Council Home Energy Network. Funding will be required for further activity; current resources will result in energy saving and carbon emission reduction targets not being met.

Any income generated from energy schemes or via EEC funding must be ring-fenced for spending on future energy efficiency improvements. It should be noted that, since all energy efficiency home improvements will reduce householders utility bill outgoings, an increase in local spending will go hand in hand with increased energy efficiency work.

4.13. Home Energy Officer

The post of Home Energy Officer was originally agreed for a period of two years in 2005. Funding for this post came from £70,000 EEC funding already attracted prior to this time. The new Home Energy Strategy will start in the

second year of this two-year period, so Year 1 of the strategy already has adequate funding.

During Year 2 of the Home Energy Strategy the position of Home Energy Officer will also be self-funding. This is via approximately £35,000 EEC funding attracted as a result of Decent Homes work during 2005-07 (in particular the installation of high energy efficiency condensing boilers and loft insulation upgrades). Whilst it is hoped that this income will continue it will obviously depend on how central government decide to proceed with the next phase of the EEC. There is also a direct correlation between the money spent on energy efficiency improvement work carried out by Cambridge City Council and the amount of additional funding we can attract.

4.14. Additional resources

Due to the lack of secure funding and since the carbon emission reduction and energy efficiency subjects are rising rapidly up the political scale we will be seeking additional funding to continue and develop our home energy work. Fig. 14 below should give an impression of the type of work and positive consequences that could be carried out during the five-year scope of the strategy and beyond. This table only covers promotional, educational, publicity and increased facilitation (with our stakeholders) work – any major energy efficiency improvement projects would have to be budgeted for separately and would cost significantly more.

No.	Scenario	Cambridge City Council resources	Outcome at end of Year 5
0	No further CCC funding over 5 years.	Year 1 = £0 Year 2 = £0 Year 3 = £-35000 Year 4 = £-35000 Year 5 = £-35000 5 year total investment = £0	<ul style="list-style-type: none"> - Likelihood of post termination after 07/08, at end of Year 2. - Minimum 2% reduction in carbon dioxide emissions. - Owner-occupier housing average SAP increased to minimum 45. - Local authority average SAP increased to minimum 67. - Private rented average SAP increased to minimum 49. - Other registered social landlords average SAP increased to minimum 53. - Minimal increase in renewable technology uptake.
1	Limited funding for HEO post.	Year 1 = £0 Year 2 = £0 Year 3 = £35000 Year 4 = £35000 Year 5 = £35000 5 year total investment = £105,000	<ul style="list-style-type: none"> - Minimum 5% reduction in CO2 emissions. - Owner-occupier average SAP increased to minimum 51. - Local authority average SAP increased to minimum 72. - Private rented average SAP increased to minimum 55. - Other registered social landlords average SAP increased to minimum 59.

			<ul style="list-style-type: none"> - Continuation of limited promotional and educational work to change lifestyles as well as households. - Limited increase in renewable technology uptake.
2	Funding for HEO post and an additional Home Energy staff member (engaged primarily on promotion and engagement)	Year 1 = £0 Year 2 = £35000 Year 3 = £70000 Year 4 = £70000 Year 5 = £70000 5 year total investment = £245,000	<ul style="list-style-type: none"> - Minimum 10% reduction in CO2 emissions. - Owner-occupier average SAP increased to minimum 60. - Local authority average SAP increased to minimum 75. - Private rented average SAP increased to minimum 55. - Other registered social landlords average SAP increased to minimum 60. - More than twice the previous promotional and educational work to change lifestyles as well as households. - Substantial increase in renewable technology uptake in local authority housing.
3	Extended funding for home energy work (includes additional promotional budget of £15000 per year for improving the situation in the private sector).	Year 1 = £0 Year 2 = £50000 Year 3 = £85000 Year 4 = £85000 Year 5 = £85000 5 year total investment = £305,000	<ul style="list-style-type: none"> - Minimum 15% reduction in CO2 emissions. - Further SAP increases across all tenures. - Particular attention paid to improving the situation in the private sector via additional incentives and information delivery. - Targeted work aimed at the lowest SAP scoring properties across all tenures. - Massive improvement in levels of Affordable Warmth across all tenures. - Substantial increase in renewable technology uptake across all tenures.
<ul style="list-style-type: none"> • Year 1 = 2006-07, Year 2 = 2007-08, Year 3 = 2008-09, Year 4 = 2009-10, Year 5 = 2010-2011. • All figures shown are from an April 2006 baseline. 			

Fig. 14: Cambridge City Council funding scenarios and outcomes after Year 5.

5. Energy efficiency standards

5.1. Existing housing

The main focus of this strategy is on existing housing. This is predominantly because approximately 70% of the housing stock that will exist in 2050 has already been built (source: Department for Communities and Local Government) but also because the newly appointed Sustainable Construction Coordinator covers new build housing. The Home Energy Officer will work closely with this post to help ensure that improved energy efficiency standards in new build are met. It is also envisaged that any new strategies/standards for Cambridge City new build housing will be included in the Home Energy Strategy in future years.

5.2. Local Authority standards

Local Authority housing is already performing well in terms of energy efficiency compared to other tenures. In order to further improve this sector the energy efficiency standards shown in Fig. 15 will be applied.

Details	Target standard
Loft insulation	All lofts with less than 150mm insulation will be upgraded to 250mm insulation by 2011.
Wall insulation	All cavity wall construction filled by 2011. Solid wall properties to be internally/externally insulated as required by 2011.
Windows and doors	All double-glazed and fully draught-proofed by 2011.
Heating	All replacement boilers to be A rated. Inefficient heating systems to be gradually replaced.
New build / Refurbishment	Aim for EcoHomes - very good rating.

Fig. 15: Energy efficiency standards for Local Authority housing.

Apart from Decent Homes, the Housing Health and Safety Rating Scheme, Building Regulations and the Renewables Obligation (a minimum of 10% of energy from renewable sources for any new site over 10 units or 1000 m²) there are no other statutory standards set for new build in the private sector. This is an area of work that requires careful consideration to decide on the best route forward. However, since it is possible to construct new housing that does not require any form of mechanical heating or cooling (at little additional cost to standard design), this could at least be a potential target of all new build housing.

6. Review procedures

6.1. Annual review

The new Home Energy Strategy will be reviewed annually in autumn. This review process will consider progress against the performance indicators and clarify the availability of resources. Strategic objectives will be adjusted and work re-prioritised as appropriate. New targets will be set for the following year.

This review procedure will produce an Annual Report that will be disseminated to the management committee and members of Cambridge City Council as well as to all stakeholders (including Cambridge City residents). The Housing Energy Management Matrix will be used to assess and review the quality and progress of the Home Energy Strategy.

6.2. Performance indicators

The full list of performance indicators is shown below in Fig. 16.

No.	Performance indicator	Baseline value	Strategy-based target value (by 2011)
1	The average SAP energy rating for the whole housing stock	44	54
2(a)	The average SAP energy rating for the Local Authority housing stock	65	75
2(b)	The average SAP energy rating for the Owner Occupier housing stock	41	51
2(c)	The average SAP energy rating for the Private Rented housing stock	45	55
2(d)	The average SAP energy rating for the other Registered Social Landlord housing stock	49	59
3(a)	Number of Local Authority homes with a SAP energy rating less than 35	-	0
3(b)	Number of Owner Occupier homes with a SAP energy rating less than 35	-	0
3(c)	Number of Private Rented homes with a SAP energy rating less than 35	-	0
3(d)	Number of other Registered Social Landlord homes with a SAP energy rating less than 35	-	0
4	The average CO ₂ emissions for the whole housing stock (tonnes / year)	10.0	-
5(a)	The average CO ₂ emissions per Local Authority home (tonnes / year)	5.1	-
5(b)	The average CO ₂ emissions per Owner Occupier home (tonnes / year)	10.5	-
5(c)	The average CO ₂ emissions per Private Rented home	8.0	-

	(tonnes / year)		
5(d)	The average CO ₂ emissions per other Registered Social Landlord home (tonnes / year)	7.4	-
6(a)	The number of renewable energy installations on Local Authority housing stock	8	15
6(b)	The number of renewable energy installations on Owner Occupier housing stock	-	-
6(c)	The number of renewable energy installations on Private Rented housing stock	-	-
6(d)	The number of renewable energy installations on other Registered Social Landlord housing stock	-	-
7(a)	The number of energy efficiency measures installed in Local Authority housing stock during the year	700	-
7(b)	The number of energy efficiency measures installed in Owner Occupier housing stock during the year	-	-
7(c)	The number of energy efficiency measures installed in Private Rented housing stock during the year	-	-
7(d)	The number of energy efficiency measures installed in other Registered Social Landlord housing stock during the year	-	-
8	The number of households receiving energy efficiency grants	-	-
9	The number of households that have received energy advice in the form of a home energy check	580	1000
10	The number of staff members who have received energy training	-	-
11	Total external funding attracted	-	-

Fig. 16: Performance indicators for the Home Energy Strategy

7. Glossary of terms

Affordable Warmth

The ability to heat your home without incurring excessive fuel bills or developing a debt as a result.

Arms-Length Management Organisation (ALMO)

An ALMO is a company set up by a local authority to manage and improve all or part of its housing stock. The company is owned by the local authority and operates under the terms of a management agreement between the authority and the ALMO. High performing ALMOs are eligible for additional funding from the Government.

Building Regulations – Part L1

The approved document of the Government's Building Regulations that applies to energy efficiency. Its full title is Part L1, Conservation of Fuel and Power.

Carbon dioxide (CO₂)

A gas produced when fossil fuels are burned and is one of the 'greenhouse gases'. UK energy policy aims to cut carbon dioxide emissions.

Central heating

A heating system that provides heat to the whole home from a central source (such as a boiler).

Climate change

A change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural variations in climate.

Climate changing gases

Gases in the Earth's atmosphere such as carbon dioxide, methane and CFCs which warm the atmosphere because they absorb some of the thermal radiation emitted from the earth's surface.

Combi

A combi is a combination boiler which provides heating and hot water without the need for a hot water storage cylinder.

Combined heat and power (CHP)

A type of power station which uses the waste heat from the generation of electricity (normally dumped into the atmosphere, rivers or the sea) to provide heating and hot water.

Community heating

Delivery of steam or hot water through a network of pipes to heat a number of buildings in a district from a central boiler.

Condensation

A change of state from gaseous to liquid (e.g. from water vapour to water).

Decent Homes standard

In 2000, the government made a commitment to bring all public sector homes up to a decent standard, establishing a ten-year target and an interim target to: "ensure that all social housing meets set standards of decency by 2010, by reducing the number of households living in social housing that does not meet these standards by a third between 2001 and 2004, with most of the improvement taking place in the most deprived local authority areas".

Dry lining

Insulation of a wall (usually a solid wall) from the inside by lining the room with plasterboard and insulation.

Energy efficiency advice centre (EEAC)

The network of 52 EEACs provide energy advice to the public and promote energy efficiency all around the UK.

Energy Efficiency Commitment (EEC)

An obligation placed on gas and electricity supply companies as a condition of their licence. EEC places targets for energy savings to be achieved (by energy supply companies) in domestic residences. This means the supply companies deliver schemes to encourage take up of insulation and efficient electrical items. Schemes are delivered by the company itself or in partnership with other organisations or local authorities. 60 per cent of the energy savings achieved under EEC must be in vulnerable households.

Energy ratings

An energy rating is a measure of the energy efficiency of a dwelling under standard occupancy conditions. It is designed to help compare the energy efficiency of different homes on a common basis, much like the mileage per gallon figures used to compare the energy efficiency of cars.

Energy White Paper 2003

The Government's strategy for energy policy combining environmental, security of supply, social and competitiveness goals.

Fossil fuels

Any hydrocarbon deposit that can be burned for heat or power such as coal, oil or natural gas. Fossil fuels are formed from the decomposition of ancient animal and plant remains (e.g. coal, natural gas and fuels derived from petroleum).

Fuel poverty

A fuel poor household is one that needs to spend more than 10 per cent of their income on all fuel in order to heat their home to an adequate standard.

Global warming

The effect which occurs when the radiant heat from the sun passes through the atmosphere and is trapped by greenhouse gases. This increases the temperature of the earth's surface.

Housing Corporation

The Housing Corporation is a public body sponsored by the Office of the Deputy Prime Minister (ODPM) that funds and regulates housing associations in England.

Housing stock profile

A graphical representation of the numbers of properties in a housing stock with different levels of energy efficiency. Stock profiles provide an immediate visual indication of overall performance.

Insulation

Material which is a very poor conductor of heat, used to minimise the rate at which heat is lost from inside a warm building to a cold environment outside.

Joule (J)

A very small unit of energy. It takes 4200J to raise the temperature of one kilogram of water by one degree Centigrade. Because these units are so small it is more usual to use a unit of millions of joules. This is known as a megajoule (MJ) and is equal to 1,000,000 joules.

Kilowatt (kW)

A rate of flow of energy equal to one thousand watts. This power rating is applied to heating appliances to define the rate at which they are able to give out heat or power.

Kilowatt hour (kWh)

A unit for measuring energy. An appliance with a power rating of one kilowatt, running for exactly one hour will use one kilowatt hour of energy. The electricity and gas suppliers use this unit to measure the amounts of fuel they supply. 1 kilowatt hour equals 1000 watt hours.

Mould

A type of fungus propagated by spores which grow on some surfaces where dampness is present.

National Home Energy Rating (NHER)

The NHER operates on a scale of 1-10 (with 10 being the highest) and enables you to compare the energy efficiency of homes. The NHER is based on total fuel costs per square metre (i.e. the costs of cooking, lights and appliances are included, as well as heating and hot water). The NHER, unlike the SAP, also takes locality into account.

Programmer

A device which controls the time at which heating and hot water systems are turned on and off. Some can operate heating and hot water programmes independently of each other.

Renewable Energy

Energy production using natural resources in an inexhaustible manner.

Room thermostat

A device which controls the overall space temperature of a dwelling by responding to air temperature where it is sited and regulating the source of heat.

Solar energy

The energy from the sun is used in different ways in domestic buildings. These are passive solar heating, solar water heating and solar photovoltaics.

Solid wall

An external wall without a cavity, usually brick or stone (plus internal plaster and sometimes external render).

SAP

The SAP energy rating compares the energy efficiency of different homes regardless of their location in the country. It is based on the estimated annual cost of heating and hot water per square metre and is expressed on a scale of 1 to 120 (with 120 being the highest). The version of SAP will be changing during 2006; it will revert to a 1-100 scale.

Thermostat

A device which maintains a system at a constant temperature.

Timer / timeclock

A device which controls the times at which the heating and/or hot water are turned on or off.

Unit (electricity)

A measure of electricity. One unit is equal to one kilowatt hour of electricity, or one kilowatt used for one hour.

U-value

A measure of the rate at which heat passes through building fabric, measured in watts per square metre per degree Kelvin. The higher the u-value the greater the rate of heat loss.

Watt

A watt is the SI unit of power. This is the rate of flow of energy, equivalent to one joule per second.

Wet central heating

A central heating system which uses hot water to distribute heat through the home in pipes and radiators (or sometimes under the floor).

Appendix 1

Home Energy Strategy – Action plan

Objective	No.	Actions	Timescale	Resources likely to be required	Lead Officer and other staff
<p>Relevant Medium Term Objective: Promote Cambridge as a sustainable city, in particular by reducing carbon dioxide emissions and the amount of waste going into landfill in the City and sub-region.</p>					
<p>Improve the average SAP rating for the local authority housing stock by at least 2 points per annum (from an April 2006 baseline).</p>	A.1	Decent Homes central heating programme.	2 nd quarter – Year 5	Already designated	CB
	A.2	Decent Homes insulation programme.	2 nd quarter – Year 5	Already designated	SG

	A.3	Anglia Energy Services scheme for all void council properties.	3 rd quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG
	A.4	Home energy audit service for all council tenants.	2 nd quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG
	A.5	Provision of new tenant energy information packs.	2 nd quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG / New tenant advisors
	A.6	Energy efficiency training for all frontline City Homes / and other staff.	3 rd quarter – Year 3	Full-time Home Energy Officer for duration of strategy	SG
	A.7	Raising energy efficiency awareness for all tenants.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy	SG

	A.8	Targeted energy efficiency work with all sheltered schemes.	2 nd quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG
	A.9	Target worst recorded properties for energy efficiency improvement work (particularly hard to treat homes).	1 st quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG / RM
	A.10	Continue to make full use of EEC funding.	4 th quarter – Year 2	Full-time Home Energy Officer for duration of strategy	SG
	A.11	Produce case studies of successful energy efficiency improvement projects.	Work continuing throughout 5 years	Additional resources will be required (see Resources section).	SG
	A.12	Continue to improve the reliability and utilise the energy database to target work.	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG

	A.13	Facilitate and/or produce Energy Performance Certificates as required.	Due to start before 3 rd quarter – Year 3	Additional resources will be required (see Resources section)	SG
	A.14	Implement A-G energy rating scheme for housing.	3 rd quarter – Year 2	Full-time Home Energy Officer for duration of strategy.	SG
Improve the average SAP rating for the owner-occupier housing stock by at least 2 points per annum (from an April 2006 baseline).	B.1	Home Aid repairs grant work (means-tested).	Work continuing throughout 5 years	Funding is applied for annually – potential to utilise part of the existing private sector grants scheme to help meet targets?	DW
	B.2	British Gas Council Tax reduction insulation scheme.	1 st quarter – Year 2	Full-time Home Energy Officer for duration of strategy.	SG / JF
	B.3	Increased promotional work via the Sustainable City team, including drop-in sessions at the Environment Centre.	Work continuing throughout 5 years	Continuation of Sustainable City team and Environment Centre resource for duration of strategy.	SC / HW / EF

B.4	Raising energy efficiency and grant availability awareness.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
B.5	Continuation and formalisation of the energy efficiency processes used by Housing Standards including HHSRS.	Work continuing throughout 5 years	Continuation of Housing Standards resource for duration of strategy.	YOD
B.6	Continuation of HEAT project promotion.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
B.7	Increase Warm Front referrals for vulnerable households.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
B.8	Case study project of energy efficiency improvement works to some of the worst energy rated streets showing what can be achieved.	3 rd quarter – Year 3	Additional resources will be required (see Resources section).	SG

B.9	Increased promotional work with Age Concern and other older people groups.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
B.10	Joined up working with the local PCT to ensure vulnerable groups are targeted.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
B.11	Enable more, approved local installers of energy efficiency products to work and report on measures in Cambridge.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
B.12	Utilise the data analysis toolkit to target those areas likely to require additional energy efficiency work.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
B.13	Produce case studies of successful energy efficiency improvement projects.	Work continuing throughout 5 years	Additional resources will be required (see Resources section).	SG

	B.14	Continue to improve the reliability of and utilise the energy database to target work.	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG
	B.15	Facilitate and/or produce Energy Performance Certificates as required – ensure that information can be utilised.	Currently starts 2 nd quarter – Year 2	Additional resources will be required (see Resources section).	SG
	B.16	Implement A-G energy rating scheme for housing.	2 nd quarter – Year 4	Additional resources will be required (see Resources section).	SG
Improve the average SAP rating for the private rented housing stock by at least 2 points per annum (from an April 2006 baseline).	C.1	Raising energy efficiency and grant availability awareness.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
	C.2	Continuation and formalisation of the energy efficiency processes used by Housing Standards including HHSRS.	Work continuing throughout 5 years	Continuation of Housing Standards resource for duration of strategy.	YOD

	C.3	Increase in Warm Front referrals for vulnerable households.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
	C.4	Landlord accreditation scheme – monitor and increase the energy efficiency standards and assist with implementation.	Incremental improvements every quarter	Continuation of Housing Standards Landlord Accreditation resource for duration of strategy.	EB
	C.5	Produce case studies of successful energy efficiency improvement projects, particularly aimed at landlord benefits.	Work continuing throughout 5 years	Additional resources will be required (see Resources section).	EB / SG
	C.6	Case study project of energy efficiency improvement works to some of the worst energy rated streets showing what can be achieved.	3 rd quarter – Year 3	Additional resources will be required (see Resources section).	SG
	C.7	Continue to improve the reliability of and utilise the energy database to target work	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG

	C.8	Facilitate and/or produce Energy Performance Certificates as required – ensure that information can be utilised.	Currently starts 2 nd quarter – Year 2	Additional resources will be required (see Resources section).	
	C.9	Implement A-G energy rating scheme for housing.	2 nd quarter – Year 4	Additional resources will be required (see Resources section).	SG
Improve the average SAP rating for the housing association housing stock by at least 2 points per annum (from an April 2006 baseline).	D.1	Raising energy efficiency and grant availability awareness	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
	D.2	Continuation and formalisation of the energy efficiency processes used by Housing Standards including HHSRS.	Year 1		YOD
	D.3	Improve partnership working with all Housing Associations.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG

	D.4	Produce case studies of successful energy efficiency improvement projects.	Work continuing throughout 5 years	Additional resources will be required (see Resources section).	SG
	D.5	Continue to improve the reliability of and utilise the energy database to target work.	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG
	D.6	Facilitate and/or produce Energy Performance Certificates as required – ensure that information can be utilised.	Due to start before 3 rd quarter – Year 3	Additional resources will be required (see Resources section).	SG
	D.7	Implement A-G energy rating scheme for housing.	2 nd quarter – Year 4	Additional resources will be required (see Resources section).	SG
Ensure that there are no domestic properties with a SAP rating of less than 35.	E.1	Targeted energy efficiency awareness raising in homes with SAP energy rating less than 35.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	SG

	E.2	Highlight grant availability.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	SG
	E.3	Free home energy audits to improve lifestyle and living conditions.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	SG
	E.4	Deal with 'hard to treat' homes.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	SG
	E.5	Increase access to benefits for residents.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	SG
	E.6	Continue to improve the reliability of and utilise the energy database to target work.	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG

Increase the use of micro-renewables on Cambridge homes along with other renewable energy sources.	F.1	Domestic wind turbine trial on local authority housing stock.	3 rd quarter – Year 2	Full-time Home Energy Officer for duration of strategy.	SG
	F.2	Energy for Good micro-renewable energy scheme for local residents; includes additional solar thermal grant scheme.	Incremental improvements every quarter	Continuation of Sustainable City team and Environment Centre resource for duration of strategy.	SC / HW
	F.3	Case study and monitoring of Rawlyn Court energy use, including solar thermal installations.	4 th quarter – Year 1	Already designated.	SG
	F.4	Raise awareness of grant schemes, Low Carbon Building Programme.	Incremental improvements every quarter	Full-time Home Energy Officer for duration of strategy.	SG
	F.5	Raise awareness of green energy supply companies.	2 nd quarter – Year 3	Additional resources will be required (see Resources section).	SG

	F.6	Organise site visits of renewable energy installations for local residents and City Council staff.	4 th quarter – Year 2	Additional resources will be required (see Resources section).	HW / SG
Other strategic / promotional work etc.	G.1	Ensure home energy use is considered in all relevant future strategies.	4 th quarter – Year 5	Full-time Home Energy Officer for duration of strategy.	SG
	G.2	Ensure housing energy needs for BME groups are met by providing access to suitable information and carrying out ethnic profiling of service users.	4 th quarter – Year 5	Full-time Home Energy Officer for duration of strategy.	SG
	G.3	Annual mailout of Home Energy Checks survey forms.	2 nd quarter – Years 1, 2, 3, 4, 5	Full-time Home Energy Officer for duration of strategy.	SG
	G.4	Annual report showing energy efficiency improvements across all housing stock.	3 rd quarter – Years 1, 2, 3, 4, 5	Full-time Home Energy Officer for duration of strategy.	SG

	G.5	Annual Home Energy Efficiency Guide free for all local residents.	2 nd quarter – Years 1, 2, 3, 4, 5	Additional resources will be required (see Resources section).	SG
	G.6	Continuation of promotional work with the Energy Saving Trust Advice Centre Anglia.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
	G.7	Organise regular promotional events to highlight all aspects of home energy use.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
	G.8	Commit to regular talks / presentations to groups from all housing tenures.	Incremental improvements every quarter	Additional resources will be required (see Resources section).	SG
	G.9	Improve and formalise arrangements between Cambridge City Council staff and departments with regards to home energy.	4 th quarter – Year 2	Full-time Home Energy Officer for duration of strategy.	SG

	G.10	Host the annual Energy Saving week promotional event.	3 rd quarter – Years 1, 2, 3, 4, 5	Full-time Home Energy Officer for duration of strategy.	SG
	G.11	Ensure regular press releases in local media highlighting grant and service availability.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
	G.12	Home energy information dissemination to all local outlets.	Work continuing throughout 5 years	Full-time Home Energy Officer for duration of strategy.	SG
	G.13	Update and regularly work on Cambridge City Council website.	2 nd quarter – Year 2	Full-time Home Energy Officer for duration of strategy.	SG
	G.14	Continue to improve the reliability of and utilise the energy database to target work.	Incremental improvements every quarter	Full-time Asset Management System Co-ordinator and Home Energy Officer for duration of strategy.	RM / SG

	G.15	Establish a Home Energy Network. This will monitor and update the Home Energy Strategy and will help to enable full and ongoing implementation.	4 th quarter – Year 1	Full-time Home Energy Officer for duration of strategy.	SG
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This action plan will be regularly updated (and progress monitored) as part of the Cambridge City Council Home Energy Network.

Year 1 = 2006-07, Year 2 = 2007-08, Year 3 = 2008-09, Year 4 = 2009-10, Year 5 = 2010-2011

CB = Chris Brown, Heating Engineer

DW = Dee Watson, Home Aid Manager

EB = Emma Barker, Landlord Accreditation Officer

EF = Eithne Flanagan, Sustainable Construction Coordinator

JF = John Frost, Head of Revenue Services

HW = Helen Witherington, Environment Publicity & Projects Officer

RM = Rania Marjeh, Asset Management System Co-ordinator

SC = Simon Chubb, Environment Co-ordinator

SG = Sam Griggs, Home Energy Officer

YOD = Yvonne O'Donnell, Housing Standards Manager

Appendix 2

Housing Energy Management Matrix details (Source: Energy Saving Trust)

The housing energy management matrix is a powerful and practical tool for assessing the scope and quality of a housing energy efficiency strategy and for monitoring and reviewing its progress.

The matrix helps with:

- Identifying key action areas.
- Comparing the strategy with best practice in each area.
- Identifying a route towards achieving best practice.
- Displaying progress in developing and implementing a strategy.
- Regularly reviewing the housing energy strategy.
- Identifying areas in which progress is being made or areas of weakness where action is required.
- Illustrating the quality and progress of the strategy to senior managers, partner organisations, funding bodies and tenants.

The seven key action areas identified in the matrix are:

- Energy strategy.
- Stock assessment.
- Affordable warmth.
- Staff motivation and training.
- Tenant advice.
- Integration of energy improvements.
- Securing funding.

The matrix can be used to identify areas where progress is good and those where more effort is required. The distinctions between the levels of progress are defined in more detail by means of points scored against the questions set out in the boxes below. There is one set of questions for each key action area (i.e. for each column of the matrix). For every question to which a housing organisation can answer 'yes', one point is scored; no points are scored for questions to which the answer is 'no'. The total number of points scored against the twelve questions for each key action area defines the level of progress in that area, as follows:

0 points	Progress level 0
1-3 points	Progress level 1
4-6 points	Progress level 2
7-9 points	Progress level 3
10-12 points	Progress level 4

Overall progress may then be plotted on the matrix as a line joining the centre of the appropriate cell in each column.

Questions for key action area: **energy strategy**

1. Are there energy efficiency standards for new developments?

2. Are there energy efficiency standards for improvement schemes?
3. Are the energy efficiency standards incorporated in specifications, and enforced?
4. Is there an energy policy that embraces all the key action areas of the matrix?
5. Is the policy based on assessments of the energy efficiency of the housing stock?
6. Does the policy incorporate overall aims, measurable medium-term objectives and annual targets?
7. Has the energy policy been formally approved at committee or board of management level?
8. Is there a formal implementation action plan with defined responsibilities?
9. Have resources been allocated for implementation of the action plan?
10. Are both strategic and operational performance indicators used for tracking progress?
11. Has the energy policy been published (for staff, tenants and partner organisations)?
12. Is the policy formally reviewed at least annually and adjusted in the light of progress and resources?

Questions for key action area: **stock assessment**

1. Has the housing stock been classified into dwelling types for energy efficiency purposes?
2. Have the numbers of dwellings of each type been determined?
3. Has an assessment of the energy efficiency of each dwelling type been carried out?
4. Have housing stock energy profiles been produced?
5. Has a stock energy database been established with energy ratings for each property in the stock?
6. Are procedures in place for continuous updating of the database using surveys and inspections?
7. Are there mechanisms for updating the housing stock energy profiles at least annually?
8. Has an assessment of improvement measures required to bring the energy efficiency of each dwelling type up to a target level been carried out?
9. Has an assessment of the improvement measures required to reduce fuel running costs of each dwelling type down to a target level (or to meet an affordable warmth standard) been carried out?
10. Have the results of energy efficiency assessments been used to prioritise improvement works?
11. Have the results of energy efficiency assessments been used to inform energy advice provided to tenants and/or to target the provision of energy advice to tenants?
12. Is there a comprehensive energy information strategy encompassing the identification, collection, collation, management and continuous updating of energy efficiency data and its analysis?

Note: housing organisations that can answer 'yes' to question five above will usually (but not always) also be able

to answer 'yes' to questions one to four. Question twelve can only be answered 'yes' if the answers to questions one to seven are all also 'yes'.

Questions for key action area: **affordable warmth**

1. Has a performance indicator for reducing fuel poverty been adopted as part of the energy strategy?
2. Does the housing energy efficiency policy incorporate explicit affordable warmth standards?
3. Have areas where there is likely to be a high incidence of fuel poverty been identified?
4. Is fuel poverty data collected during the course of stock condition surveys, inspections and visits?
5. Are formal assessments of fuel poverty made during surveys and advice visits?
6. Do front-line staff actively identify households in fuel poverty and refer them for assistance?
7. Do front-line staff actively identify tenants at risk of hypothermia and refer them for urgent assistance?
8. Are at-risk households advised of ways to maximise their incomes and reduce their fuel costs?
9. Are housing managers and advisers aware of the estimated cost of heating each type of dwelling?
10. Is there a dedicated budget for priority improvements to dwellings where there is fuel poverty?
11. Is external funding used for priority improvements to dwellings where there is fuel poverty?
12. Are assessments of affordable warmth incorporated in assignment and letting procedures?

Questions for key action area: **staff motivation and training**

1. Is there a designated person responsible for energy training within the organisation?
2. Has an energy training programme been developed and approved?
3. Has the energy training programme been scheduled for implementation and funding secured?
4. Is at least one tenant adviser trained to NEA/City and Guilds 6176 Energy Awareness standard?
5. Is at least one person trained as an energy rating assessor (NHER or SAP)?
6. Have at least 50 per cent of front line staff received basic energy awareness training?
7. Have at least 50 per cent of technical staff received energy rating surveyor training?
8. Have all staff been made aware of the organisation's energy policy (preferably via a workshop)?
9. Have at least 75 per cent of front line staff received basic energy awareness training?
10. Have at least 75 per cent of technical staff received basic energy rating surveyor training?

11. Is energy efficiency an integral part of staff training programmes (including induction)?
12. Is the training programme regularly reviewed and updated with refresher courses?

Questions for key action area: **tenant advice**

1. Is there a qualified member of staff who delivers basic energy advice to tenants, when required?
2. Is there a qualified technical officer who delivers technical advice to tenants, when required?
3. Is there a measurable energy policy objective for providing energy advice to tenants?
4. Is the tenant energy advice service publicised?
5. Is there a referral network for the energy advice service?
6. Do front-line staff deliver basic energy advice to tenants over the telephone or in the office?
7. Are tenants offered home energy advice visits when new heating systems have been installed?
8. Are new tenants being offered home energy advice visits?
9. Is heating system specific guidance available to all tenants?
10. Are there procedures for recording the provision of energy advice?
11. Is there a community energy advice programme involving community talks and one-to-one advice?
12. Does the energy advice service conform to the Code of Practice for Domestic Energy Efficiency Advice?

Questions for key action area: **integration of energy improvements**

1. Is the need for energy work identified and prioritised using energy ratings and stock profiles?
2. Has provision been made for 'hard to treat' dwellings as well as those that are easier to improve?
3. Has the stock-wide potential for using new and/or renewable energy technologies been assessed?
4. Is opportunist energy work included in repair and maintenance programmes and void repairs?
5. Do major refurbishment projects include improvement of energy efficiency?
6. Is there a dedicated energy programme for dwellings that would not otherwise be improved?
7. Are integrated packages of improvement measures specified wherever possible?
8. Is the cost effectiveness of improvement options evaluated using BREDEM-based software?
9. Are assessments made of the scope for incorporating new and renewable energy systems?
10. Are improvements in energy efficiency included in proposals subject to tenant consultation?
11. Are new and/or renewable energy systems incorporated in improvement packages?

12. Have arrangements been made for managing new and renewable energy systems (eg ESCOs)?

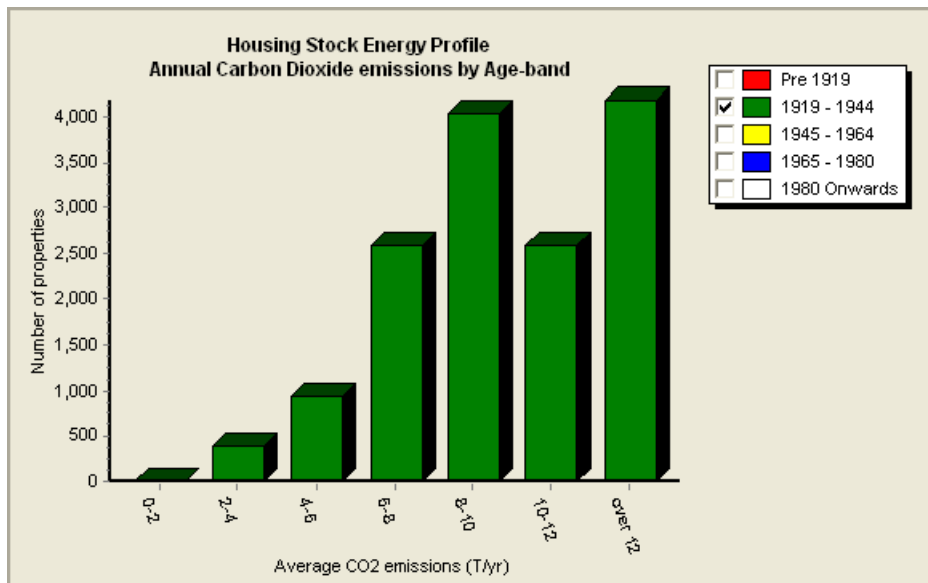
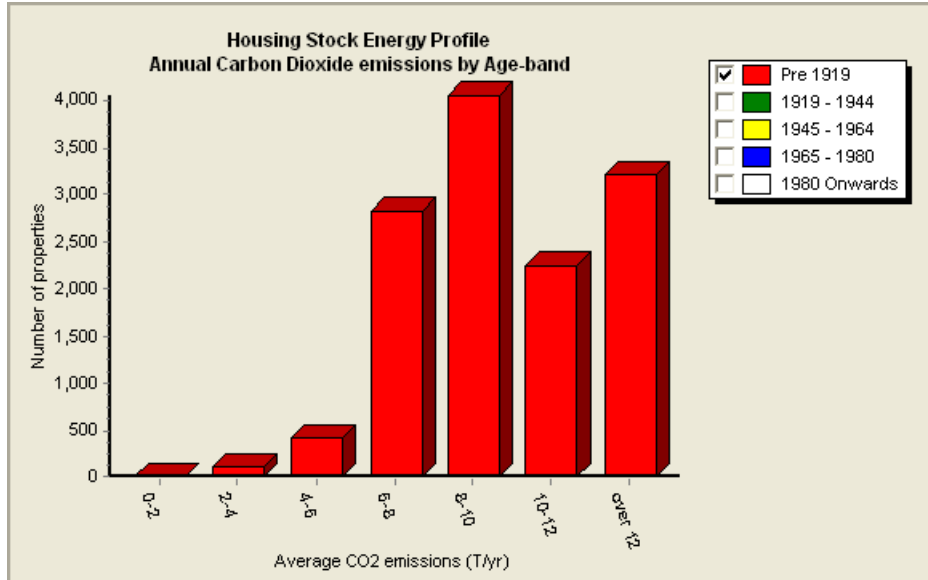
Questions for key action area: **securing funding**

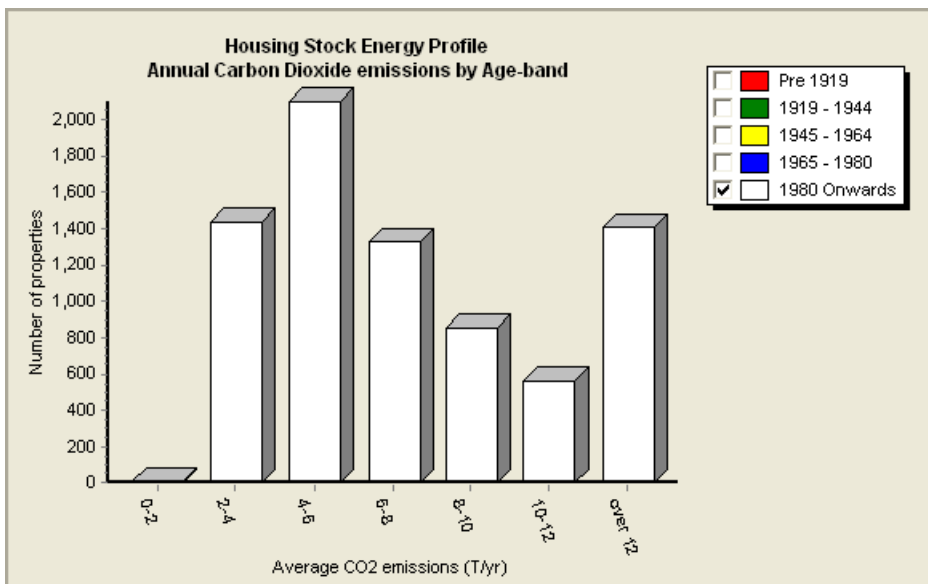
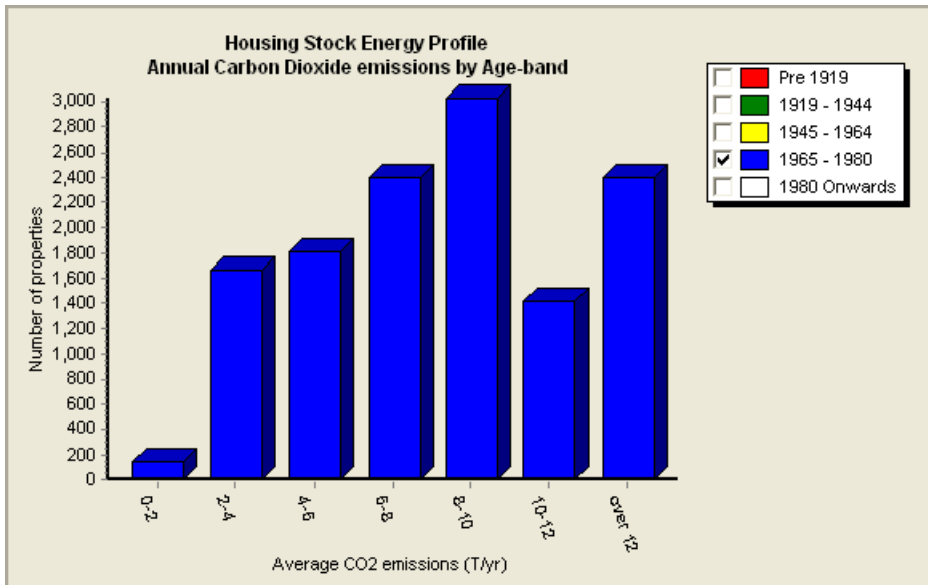
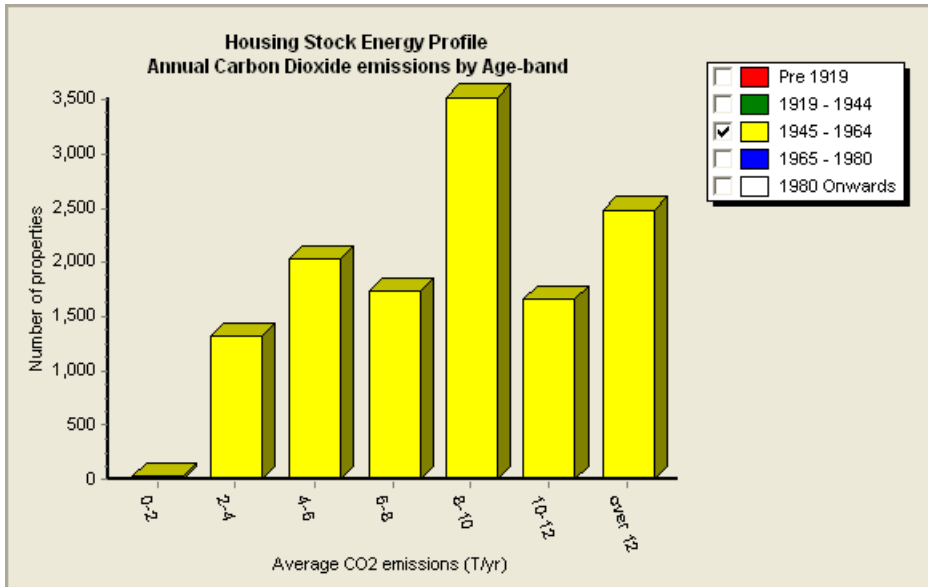
1. Does the organisation invest its own funds in energy efficiency measures?
2. Is there any use of national schemes to improve energy efficiency?
3. Is there any use of national schemes to help fund investment in renewable energy or community heating systems?
4. Is there any use of funding from schemes with broader social/regeneration objectives to improve energy efficiency?
5. Is funding secured for annual rolling energy efficiency improvement programmes?
6. Is funding identified for incorporating energy efficiency improvements above minimum standards in refurbishment and/or new build projects?
7. Is dedicated funding available for ad hoc improvements identified in the course of maintenance programmes or for urgent treatment of properties where tenants are identified as in fuel poverty or at risk of hypothermia or where there is condensation or mould growth?
8. Are underspends used for energy efficiency improvements towards the end of each financial year?
9. Has the potential for the use of third party finance (eg leasing of heating systems) been assessed?
10. Have tenants been consulted about the priority of affordable warmth in the allocation of funding?
11. Are assessments of landlord benefits included in whole-life appraisals of energy efficiency projects?
12. Are there pre-identified, assessed projects that can proceed quickly if funding becomes available?

Appendix 3

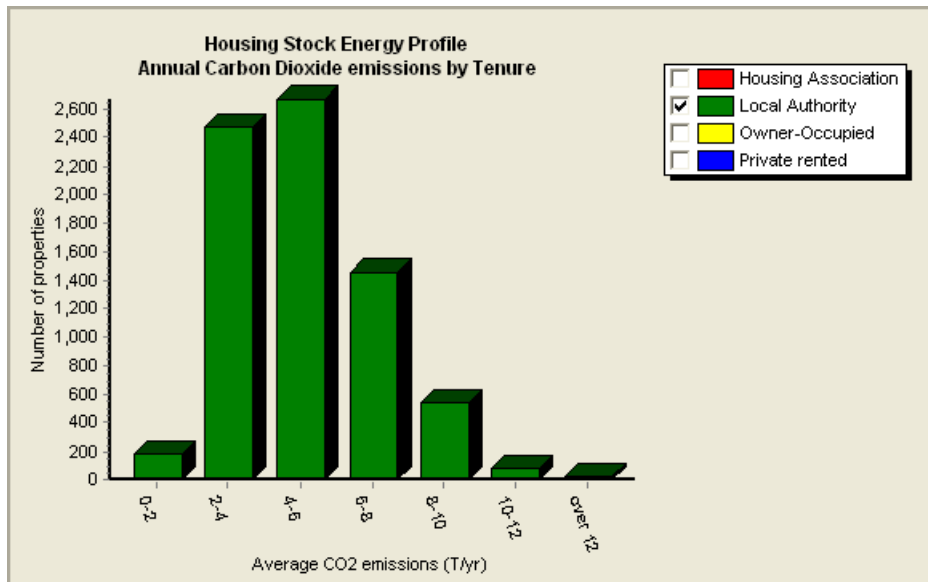
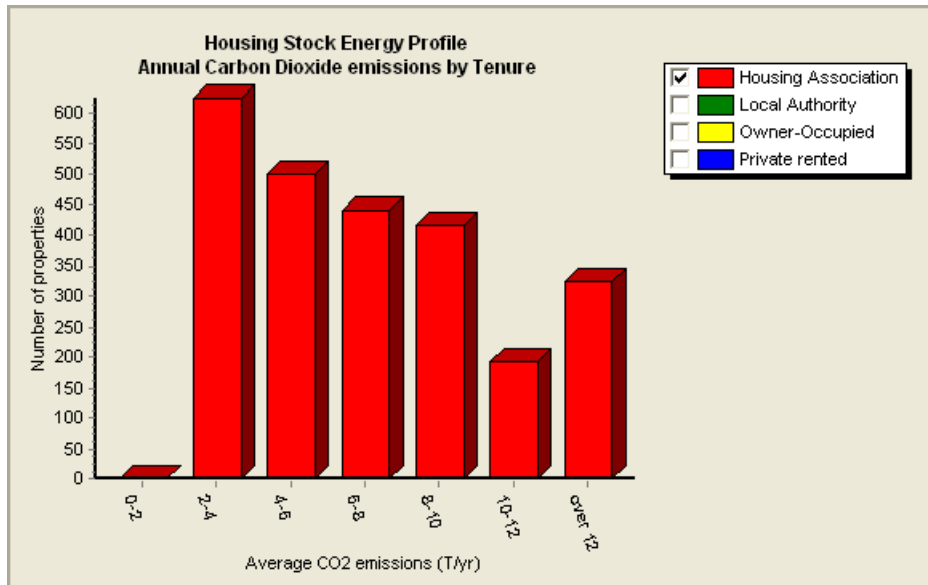
Additional housing stock energy profile graphs

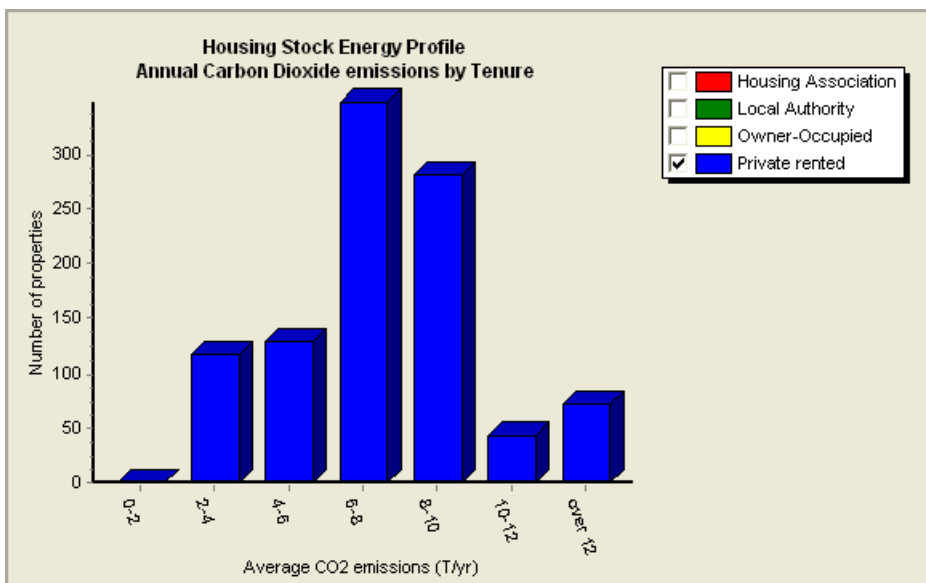
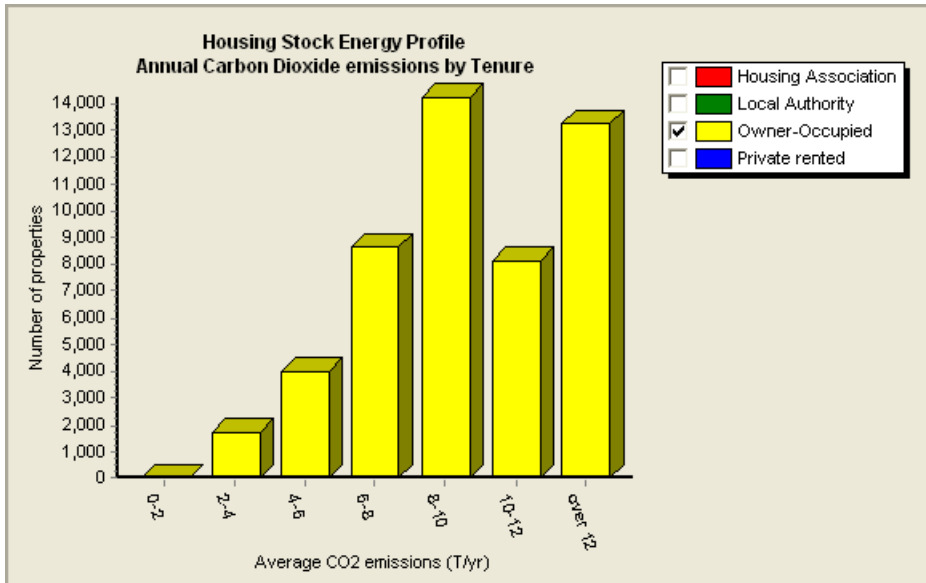
- Annual carbon dioxide emissions by age-band



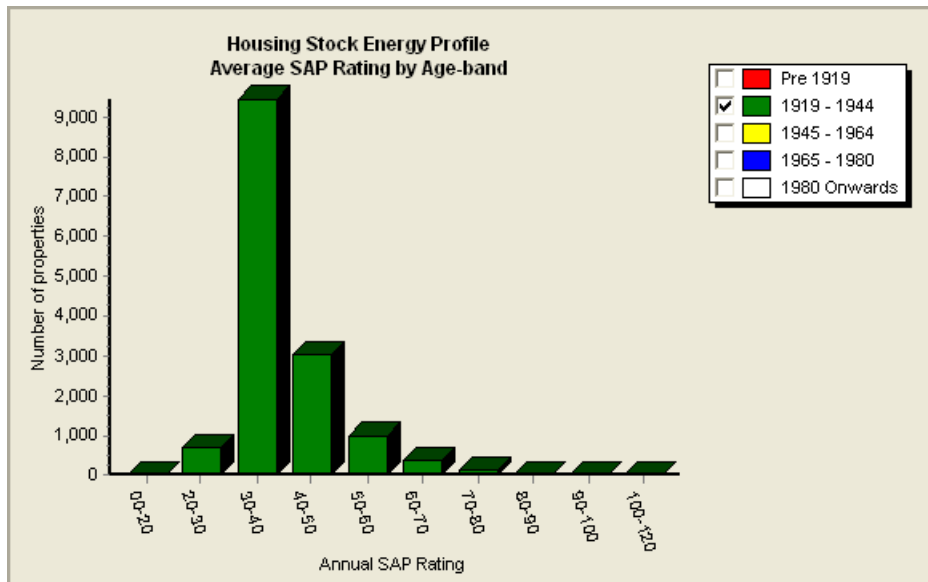
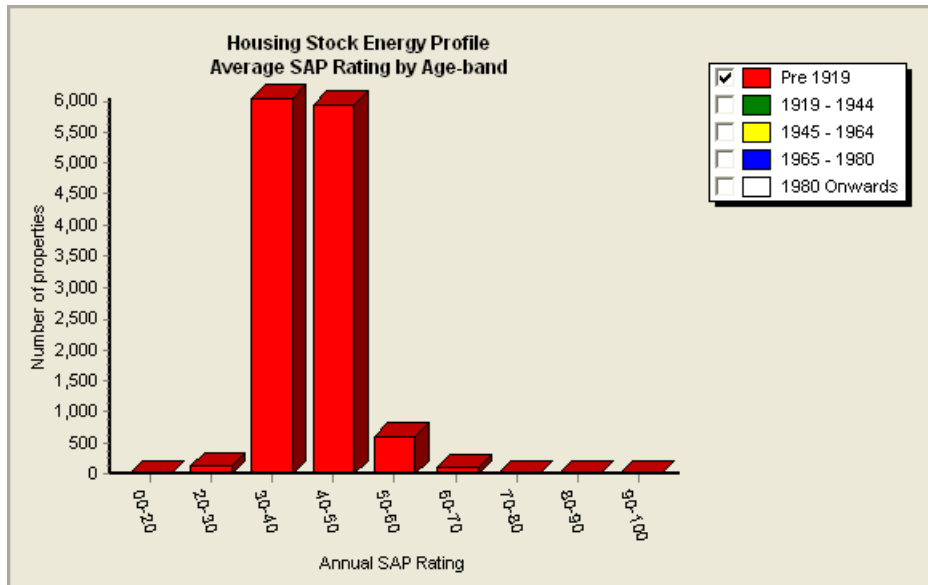


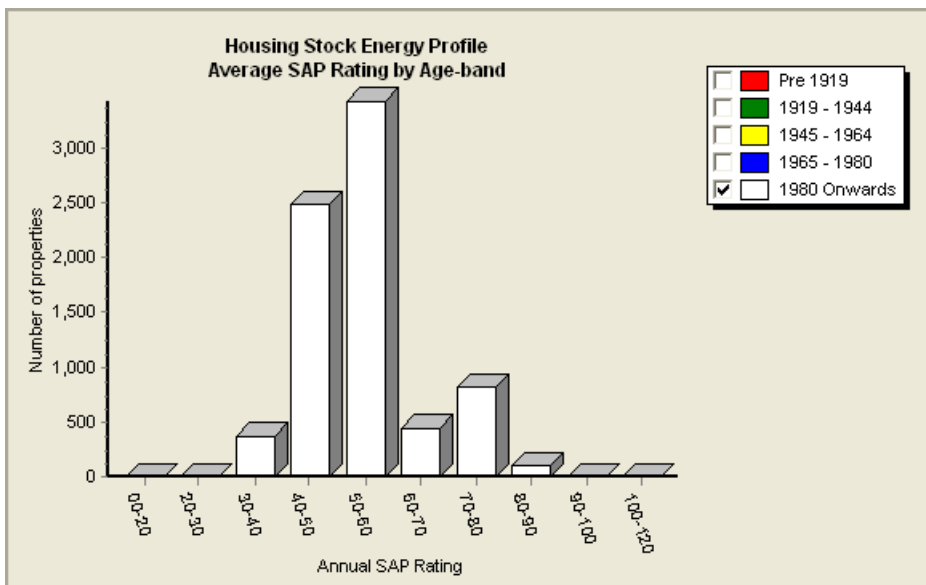
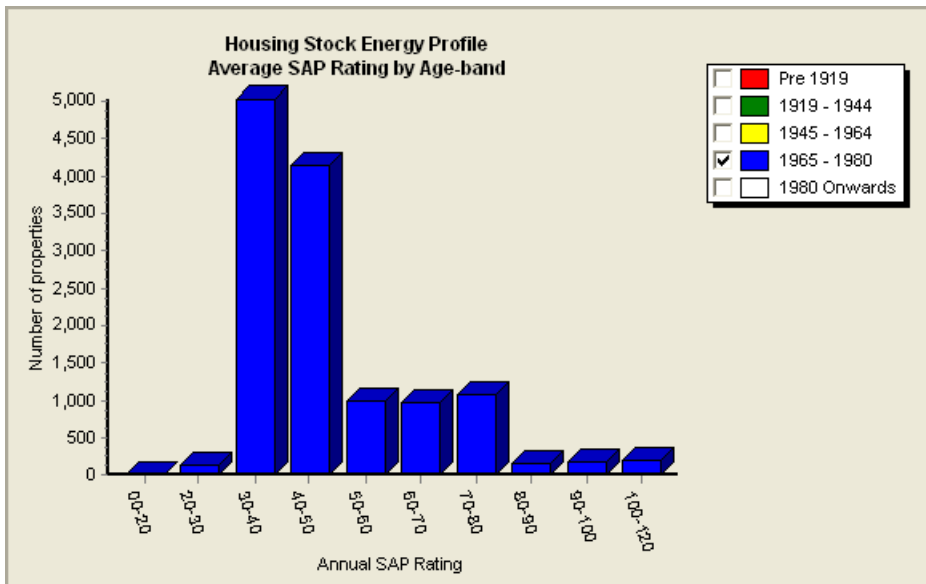
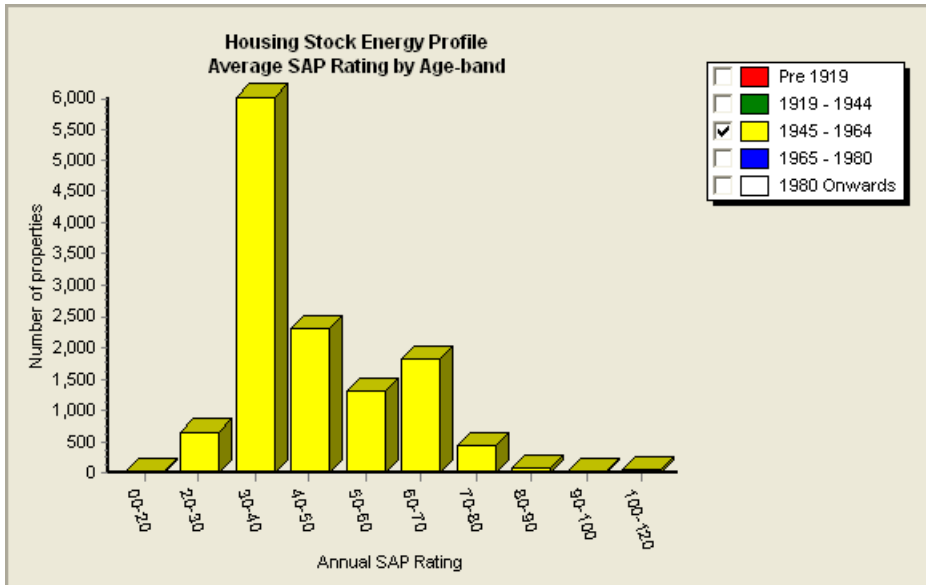
- Annual carbon dioxide emissions by tenure



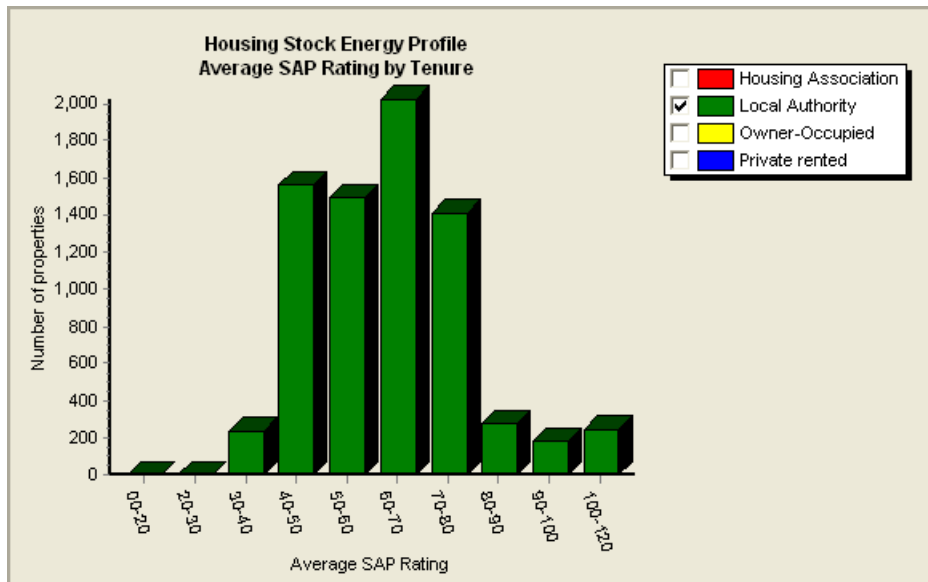
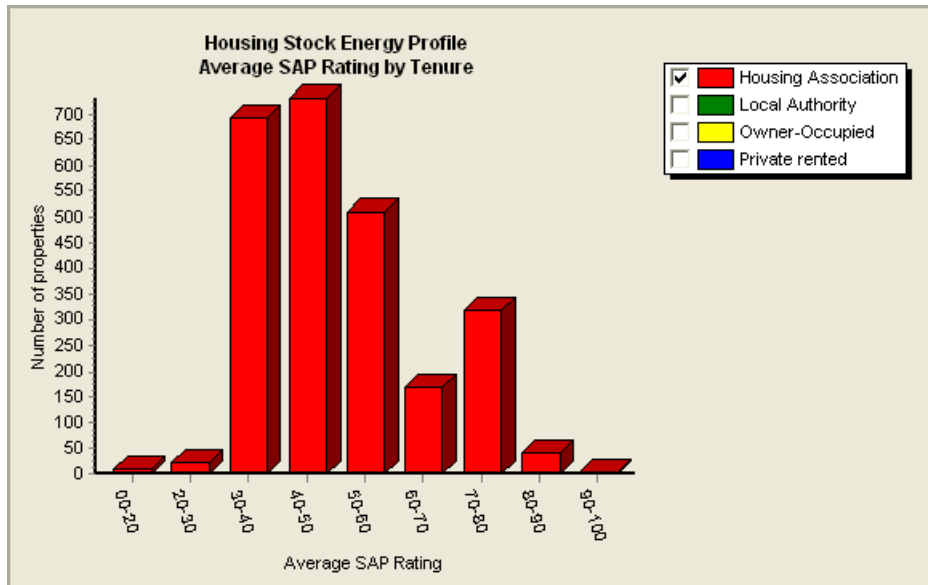


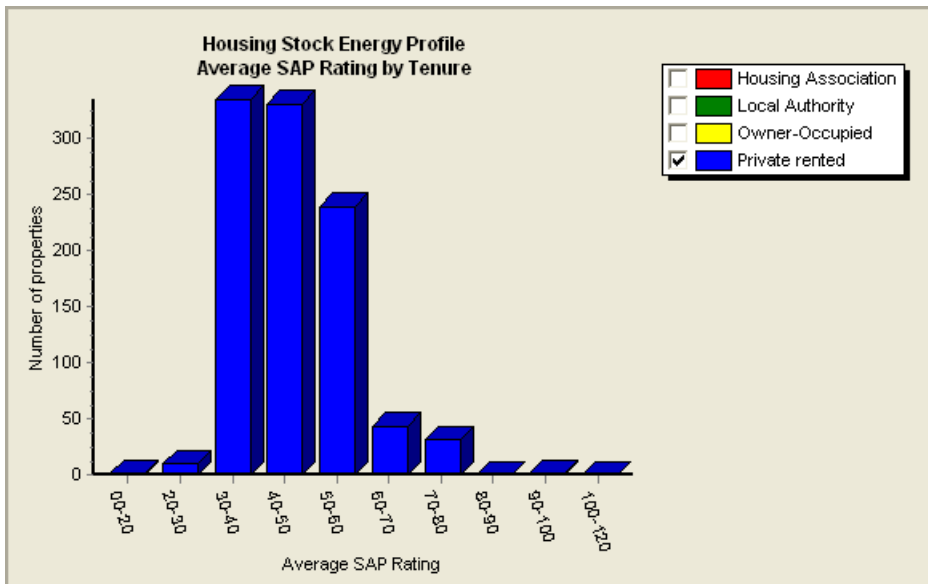
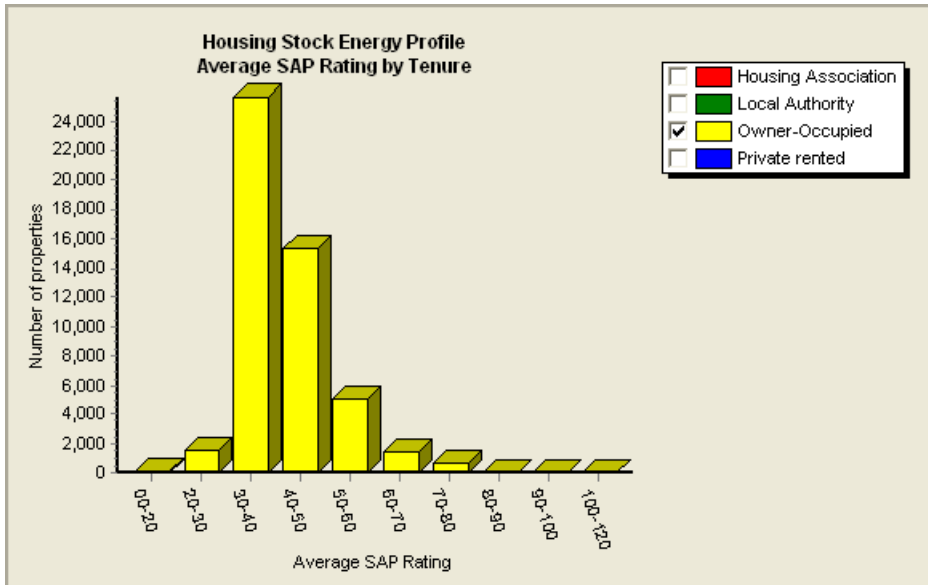
- Average SAP rating by age-band



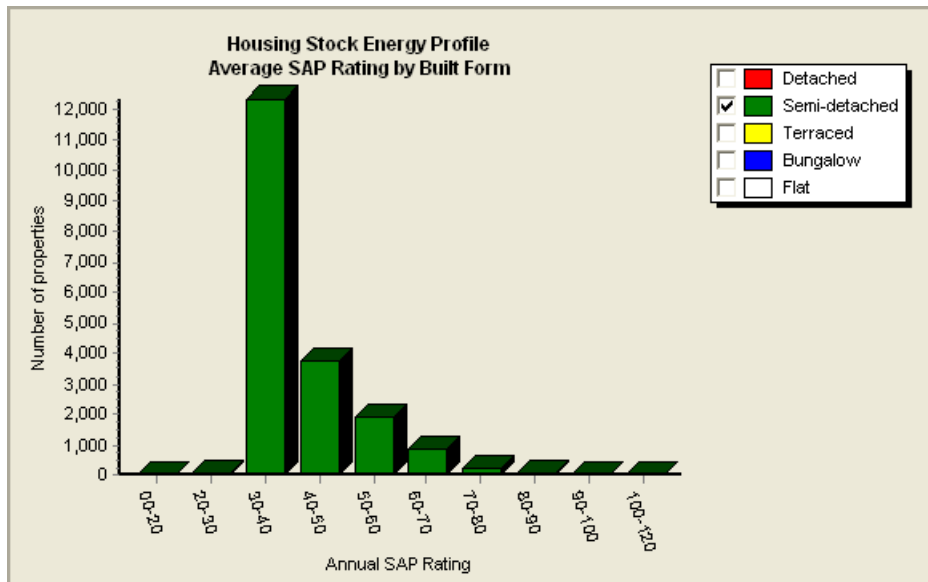
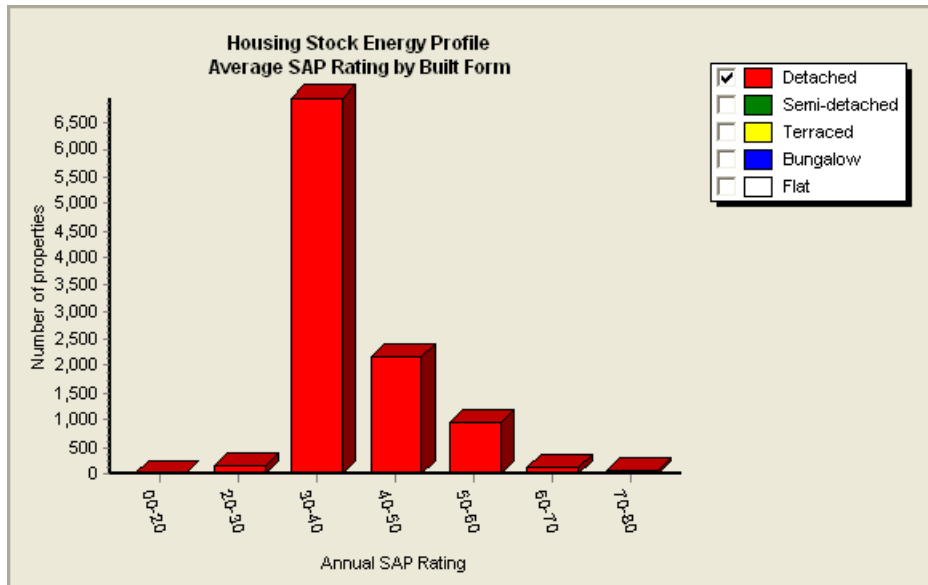


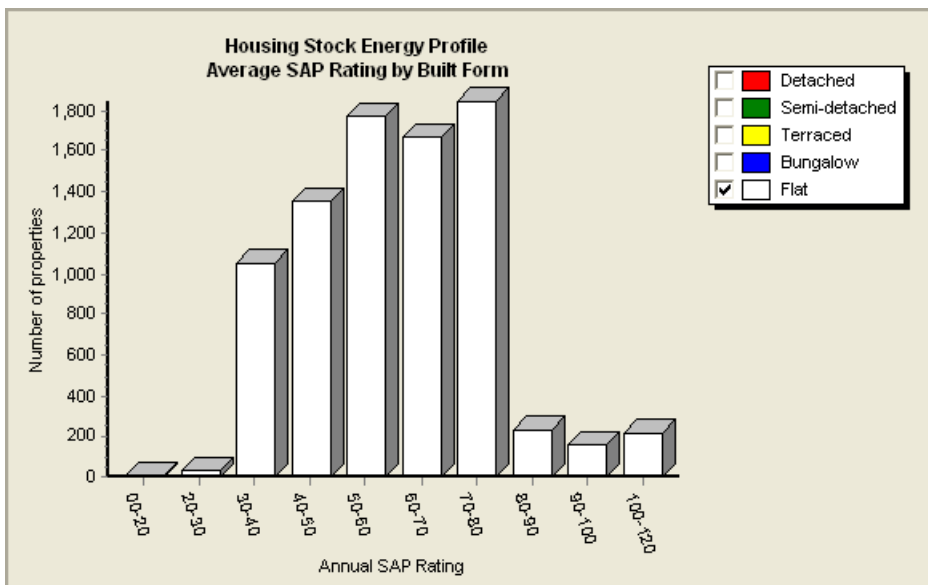
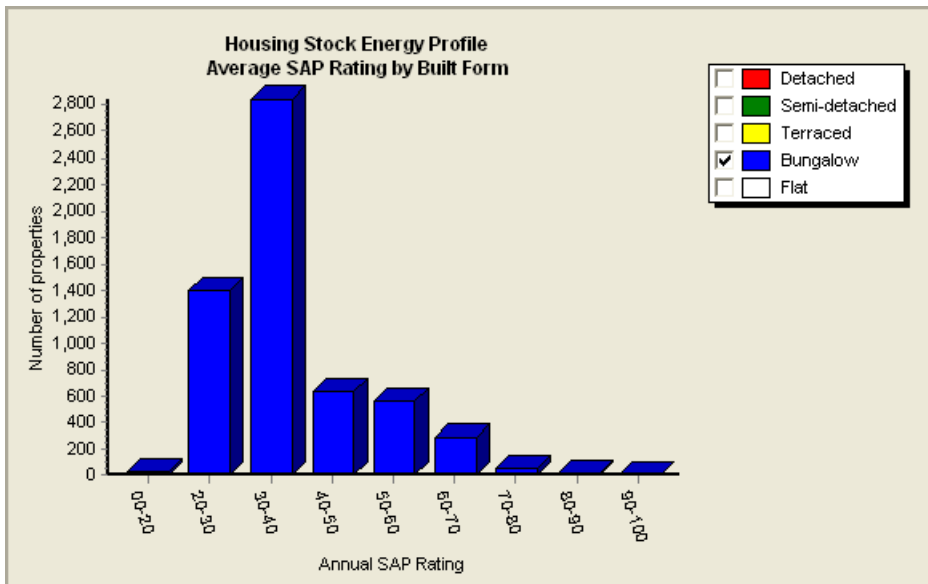
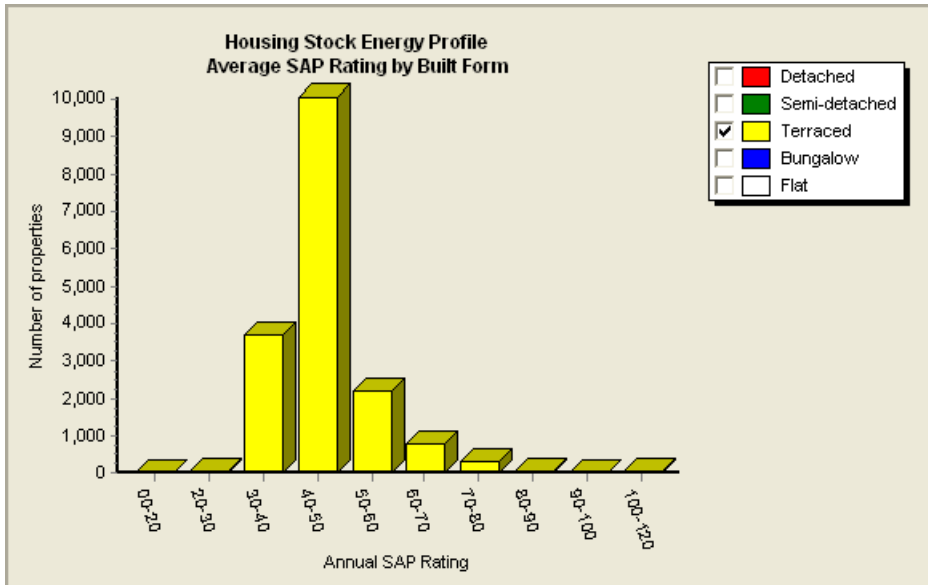
- Average SAP rating by tenure





- Average SAP rating by built form





Appendix 4

Anglia Energy Services – details

The Anglia Energy Services (AES) Scheme

Background

This award winning scheme was originally designed to help a local authority meet its HECA targets and assist in the achievement of its affordable warmth strategy. AES now offers a range of benefits to Registered Social Landlords, public and private sector landlords whilst assisting Energy Conservation Authorities to attain their environmental targets.

In 2003 The National Home Improvement Council awarded a Certificate of Merit to the scheme in the category Best Public/Private Partnership in the UK.

The scheme enables an authority to generate funds that can be used to augment other sources of income to target particular groups of households or energy efficiency measures. The money can be used for match funding as it is not government (national or local) money.

The scheme is based upon an idea created from a discussion with a top Queen's Council, officers from Fenland District Council and Peterborough Environment City Trust (PECT). The working model was developed because no statute existed for a local authority to operate such an activity and receive payment. The QC's view was that any local authority operating a scheme involving energy supplies and fees would be trading and therefore working "ultra vires".

The cost of developing the scheme was funded by a grant provided by the Energy Saving Trust, under its Energy Services Grants package, to develop Energy Services Companies (ESCo).

The Scheme, Energy Supplies

When houses belonging to a registered social landlord (RSL) become void the gas and electricity supplies are transferred to a preferred energy supplier. The supplier has been selected on a best value tender process that was fully transparent with all details provided to the companies that tendered. The tender scoring was weighted to give greater emphasis to social benefits such as a range of options for payment, a range of places to pay, no reliance on prepayment meters (and subsequent high costs) to clear debt, low record of disconnections etc. rather than on the price of the energy supplied.

When a changeover has been made the landlord becomes the customer of the energy company and is able to use gas and electricity supplied to the house at normal contract conditions. At this stage a donation is made by the supplier to the Managing Agent. This donation is held by the Managing Agent, Peterborough Environment City Trust (PECT), and allocated to the community energy fund of the participating organisation.

When the new tenant moves in gas and electricity supplies are immediately available from a known supplier and responsibility for the supplies is transferred to the new tenant.

An unusual and probably unique fundamental of the scheme is that it can be marketed to owner occupiers and existing tenants. The decision to do this was based upon market research and subsequent analysis by an Energy Saving Trust consultant. In this way lower cost energy supplies (than the historical suppliers) will be available to people without them having to deal with doorstep salesmen, tele-sales or confusing leaflets.

AES does however maintain an even handed approach. The scheme is managed by PECT, a registered charity, and operated by the Anglia West Energy Efficiency Advice Centre (one of the EST's network of EEAC's). The Centre is obliged to give advice which is impartial and independent and to that end information about any energy supplier (and where available their competitive prices) is available so that customers can be given advice about any supplier in addition to free advice on all aspects of energy efficiency in the home.

The overall scheme is not geared to negotiating price discounts on fuel supplies nor does it aim to provide the lowest price energy supplies, but the prices must be competitive or the supplier would not be selected. However the level of donations to the Community Energy Fund and other service and delivery benefits can be negotiated.

The Scheme, Other Services

By accessing the energy supplier's EEC funding, the scheme offers insulation and heating packages at known fixed prices to owner occupiers. It also helps the local authority to access other funding for energy efficiency improvements to its own housing stock. Further donations are made to the Community Energy Fund by the energy supplier if the work is done through these schemes - the donations may be in addition to the discounts available as contributions towards the measures.

The Benefits

- creates a fund that can be used to assist local authorities achieve affordable warmth for householders.
- ensures that incoming tenants do not take on responsibility for debts incurred by the previous tenant (something that happens all too easily).
- ensures that the incoming tenant has gas and electricity supplies available when they move in.
- enables tenants to purchase gas and electricity at competitive rates within a best value package without having to trace the existing suppliers or having to make a detailed investigation of energy companies.

- provides the landlord with energy supplies from a known supplier at contract rates to carry out maintenance and testing of electrical, gas and heating systems – the landlord does not have to purchase energy at “deemed contract” prices
- builds up a database of gas and electricity supply identification numbers for the landlord for future reference which will make changing energy supplies easier
- provides tenants with access to subsidised energy efficient products from the energy supplier
- provides a negotiation route for energy supplies for special cases which would be extremely difficult for individual customers e.g. credit supplies for young householders
- is a scheme which can form one component of a local authority’s affordable warmth strategy for all householders in their area – tenants and owner occupiers
- provides free independent energy efficiency advice to all householders
- identifies and enables the solution of supplier discrepancies or other problems before tenants move in – e.g. denial from shipper that the supply exists, vandalised meter installation

Marketing

Market research was carried out before AES was set up. Further research was carried out by independent marketing consultants using focus groups and telephone research to develop a marketing strategy. Following that strategy promotional resources have been created that include leaflets, posters, logo, letter heads, promotional characters and messages. Quality assurance is provided by a marketing consultancy which is a PECT partner and an independent behavioural psychologist. These resources are available for use.

Organisation

AES is managed by Peterborough Environment City Trust through the Anglia West Energy Efficiency Advice Centre. To co-ordinate the interests of all the organisations participating in the schemes a strategy group, Anglia Energy Services has been set up. This group includes representatives of the managing agent, an advisor and a representative from each participating organisation.

Each participating organisation has its own agreement with the Managing Agent.

Operation

Void scheme - appropriate information is collected by the landlord’s housing officer and input to the scheme data base held and operated by the landlord. The data is sent to the managing agent who deals with the energy supplier to get the supply transferred. The landlord arranges for any meter with a debt to be cleared by “Transco” (gas) or “Twentyfour 7” (electricity). Incoming tenant details are sent to the managing agent and the supply is transferred to the new tenant. Security – copies of the system are held by each participating

landlord and the managing agent together with an “off site” copy: copies of data files are held by the landlord, the managing agent and an “off site” back up copy. The contract for supply is between the tenant and the energy supplier.

Owner Occupier and existing Tenant scheme – basic details are collected from the prospective customer by managing agent (response to leaflet, telephone call etc.) and are sent on to the energy supplier. The contract for supply is between the householder and the energy supplier.