



HOME ENERGY CONSERVATION ACT (HECA)

Report

MARCH 2013

CONTENTS

1.0	INTRODUCTION & BACKGROUND	3
2.0	LEGAL FRAMEWORK	3
3.0	NATIONAL CONTEXT.....	5
4.0	STRATEGIC COMMITMENTS	8
5.0	ENVIRONMENTAL PERFORMANCE	9
6.0.	ACTION PLAN.....	12

1.0 INTRODUCTION & BACKGROUND

Whilst the causes of climate change continue to be debated, the effects of changing weather patterns are being seen across the globe from melting ice caps to droughts and flooding.

A consensus has emerged that the pace of climate change can be slowed down by reducing the levels of carbon released into the atmosphere, and that this can best be achieved through raising awareness of energy efficiency and the use of renewable energy technologies.

As fossil fuel reserves deplete and the cost of energy continues to rise, an increasing number of households face fuel poverty. Local authorities are uniquely placed to address issues in local communities and, through promoting home energy efficiency measures and supporting organisations to increase access to affordable warmth, are able to bring benefits to residents.

This Home Energy Conservation Act (HECA) report sets out the practicable measures that Charnwood Borough Council (CBC or 'the council') will take to ensure improved energy efficiency for all residents of the borough.

2.0 LEGAL FRAMEWORK

This HECA report takes into consideration requirements from the following rulings:

2.1 HOME ENERGY CONSERVATION ACT 1995

The Home Energy Conservation Act requires local authorities to publish annually an energy conservation and efficiency progress report and submit this to the Department of Energy & Climate Change (DECC).

2.2 WARM HOMES & ENERGY CONSERVATION ACT 2000

The Warm Homes & Energy Conservation Act places a commitment on government to reduce the number of households in fuel poverty. DECC considers a household to be in fuel poverty if it needs to spend more than 10% of its income

on fuel for adequate heating (usually 21°C for the main living area and 18°C for other occupied rooms).

2.3 CARBON PLAN 2008

Part 2 of the Carbon Plan sets out the following requirements:

- i) To reduce greenhouse gas CO₂ emissions by 29% by 2017; 35% by 2022; and 50% by 2027 – for buildings this means a reduction between 24% and 39% lower than 2009 levels for 2027
- ii) To insulate all cavities and lofts, where practical, by 2020
- iii) By 2030, between 1-3.7m additional solid wall installations and between 1.9-7.2m other energy efficiency installations
- iv) By 2030, 1.6-8.6m building low level carbon heat installations such as heat pumps
- v) By 2050 emissions from UK buildings to be 'close to zero'

2.4 CLIMATE CHANGE ACT 2008

The Climate Change Act requires a significant reduction in carbon emissions by local authorities over time. The Act also introduces powers for government to require public bodies to carry out a risk assessment and make plans to address the risks that have been identified.

Further guidance published in 2012 specifies the improvements that are necessary.

2.5 ENERGY ACT 2011

The Energy Act enshrines the government's commitment to reducing greenhouse gas emissions and makes provision for improving the energy efficiency of homes through Green Deal and the Energy Company Obligation (for more information, see section 3 below).

3.0 NATIONAL CONTEXT

Government has introduced various initiatives to provide the framework within which local authorities can work to reduce carbon emissions and improve energy efficiency in domestic properties.

3.1 GREEN DEAL

Launched in January 2013, the Green Deal scheme provides householders and businesses with upfront capital to carry out energy efficiency improvements to their properties (e.g. installing cavity, loft and wall insulation, energy efficient boilers and renewable energy technologies).

The cost of installing energy efficiency measures will be repaid over time through a charge on the property's electricity bill, which must not be any higher than the expected savings.

The Green Deal will mean homes are easier to heat so consumers will save on their energy bills and lower energy consumption will reduce the impact on the environment.

3.2 ENERGY COMPANY OBLIGATION (ECO)

There are two broad elements to qualifying for ECO funding: 'hard to treat homes' and 'unable to pay'.

The scheme requires 15% of the funding to be spent in 'rural areas'. The legislation defines 'rural areas' as settlements of less than 10,000 people – in Charnwood, this includes all areas excluding Loughborough, Birstall, Shepshed and Syston.

Hard to treat homes

Broadly, 'hard to treat homes' comprise properties with solid walls. However there are other criteria which can qualify, for example, the property being off mains gas or having difficult cavities.

The Leicestershire Together Carbon Reduction Strategy has estimated the number of solid wall properties in Charnwood at 15,000 and the number of properties off mains gas at 17,000. It is feasible that a number of properties may fall into both categories (i.e. have solid walls and be off mains gas).

Unable to pay

The qualifying criteria for 'unable to pay' are set out below:

1. All properties within the 15% most deprived Lower Super Output Area (LSOA) as measured by the Income Domain of the Indices of Multiple Deprivation – in Charnwood there are two:
 - Loughborough Bell Foundry (E1025699)
 - Loughborough Warwick Way (E1025725)
2. Occupants of qualifying properties in receipt of means tested benefits. The eligibility criteria are as set out for the former CESP and CERT Priority Groups.

3.3 FEED IN TARIFFS

Feed in Tariffs (FITs) have been designed by government to encourage the take up of electricity generating technologies (for example, solar panels and wind turbines).

A FIT means that if you have an eligible installation, you could be paid for the electricity you generate and use. A FIT could also be paid for generation of surplus energy that is exported back to the grid. This means that households get paid more for the energy that they do not use which encourages energy efficiency.

3.4 RENEWABLE HEAT PREMIUM PAYMENT

This scheme provides a one-off payment to householders to help them buy renewable heating technologies (for example, solar thermal panels, heat pumps and biomass boilers).

The money does not have to be paid back but you may have to agree to provide information about your energy usage (for example, by completing a survey or

having a meter installed) so that government can learn more about what people think of these technologies and how they perform in a variety of conditions.

3.5 RENEWABLE HEAT INCENTIVE (DOMESTIC)

The details of the Renewable Heat Incentive will be available for domestic properties from summer 2013. As with FITs, the incentive is a payment for generating heat from renewable sources. The scheme is designed to provide financial support to encourage individuals, communities and businesses to switch from using fossil fuel for heating, to renewable sources such as ground source heat pumps and wood chip boilers.

Savings are made through eliminating or reducing use of gas or oil, both of which are becoming increasingly expensive year-on-year. Payments are made for the hot water and heat generated and used by households.

3.6 NEW BUILD

From 2016 all new build homes must be built to the zero carbon standard, i.e. each individual home must generate all required energy for heating, ventilation, fixed lighting, hot water and building services.

3.6 ENERGY PERFORMANCE CERTIFICATES (EPCs)

EPCs consider, for example, loft insulation, domestic boiler, hot water tank, radiators and double glazing to provide information about how energy efficient a building is.

Homes are ranked on a scale of A to G. The most energy efficient homes – which should have the lowest fuel bills – will be in band A.

The certificate also provides information about the impact of carbon emissions from the building on the environment using a scale of A to G.

3.7 SMART METERS

Smart meters record energy consumption [electrical, gas or water] at hourly intervals or less, and communicate this information, at least daily, back to the utility for monitoring and billing purposes, and so will bring an end to estimated billing.

Hence smart meters will provide customers with more accurate information about their energy consumption, which may enable them to more effectively control and manage their energy use to reduce emissions and potentially increase savings.

The mass roll-out of smart meters is expected to start in 2014 and be completed in 2019. The majority of consumers will receive their smart meters during the mass roll-out.

3.8 NEW HOMES BONUS

The 2013/14 New Homes Bonus allocation¹ for Charnwood (Year 3) is as follows:

Total allocation: £2,163,658

Allocation for 734 dwellings: £847,265

4.0 STRATEGIC COMMITMENTS

The Corporate Plan 2012-16 outlines the following strategic objectives for the council:

- Invest in our council houses and provide decent homes, making best use of local business
 - Providing £60million to repair and improve council homes, installing thousands of new kitchens, boilers and other improvements
 - Refurbishing all pre-cast reinforced concrete homes
- Ensure the council maintains a leading role in local efforts to reduce the impacts of climate change by:
 - Actively supporting the government's Green Deal initiative
 - Increasing the amount of waste diverted from landfill

¹ More information is provided at <https://www.gov.uk/government/policies/increasing-the-number-of-available-homes/supporting-pages/new-homes-bonus>

- Actively engaging with our partners to develop effective plans to manage the risk from flooding
- Promoting more environmentally friendly housing for all new homes built within Charnwood

Additionally, the council will monitor performance of the following National Indicators:

- NI 185 – reducing CO2 emissions from council operations
- NI 188 – adapting to climate change

5.0 ENVIRONMENTAL PERFORMANCE

The environmental impact of Charnwood residents is summarised below.

5.1 CARBON DIOXIDE EMISSIONS

YEAR	INDUSTRY & COMMERCIAL	DOMESTIC	ROAD TRANSPORT	GRAND TOTAL	POPULATION (000s – mid year estimate)	PER CAPITA EMISSIONS
2005	498.1	381.6	252.7	1,132.4	157.9	7.2
2006	515.5	379.3	255.6	1,150.4	159.6	7.2
2007	496.9	371.8	259.1	1,127.9	161.2	7.0
2008	483.3	371.4	245.4	1,100.1	163.3	6.7
2009	419.8	332.7	238.4	990.9	165.0	6.0
2010	445.8	360.0	237.1	1,042.9	166.8	6.3

The table above provides summary data of carbon dioxide emissions per capita in the Charnwood area (previously NI 186). Overall, there has been a year-on-year reduction of carbon dioxide emissions, to 2009, in Charnwood.

5.2 ELECTRICITY CONSUMPTION

YEAR	AVERAGE DOMESTIC ELECTRICITY CONSUMPTION (kWh) PER CONSUMER
2007	4,541
2008	4,271
2009	4,219
2010	4,164

Consumption of electricity by households in Charnwood has fallen significantly between 2007 and 2010.

5.3 GAS CONSUMPTION

YEAR	AVERAGE DOMESTIC GAS CONSUMPTION (GWh) PER CONSUMER
2004	1,204
2005	1,209
2006	1.169
2007	1,148.5
2008	1,119.8
2009	1,032.6
2010	1,037.1

Domestic gas consumption has followed a downward trajectory over the past seven years. However there was a slight increase in gas usage 2009 and 2010.

5.4 ROAD TRANSPORT FUEL USAGE

YEAR	DOMESTIC FUEL USAGE (TONNES) – PERSONAL & FREIGHT
2005	88.0
2006	89.3
2007	90.1
2008	87.2
2009	84.8
2010	83.0

Levels of fuel usage for road transport increased between 2005 and 2007 (from a 2005 baseline) but have subsequently shown a year-on-year reduction over the following five years. Consumption at 2010 is the lowest for seven years.

5.5 TOTAL CONSUMPTION

YEAR	TOTAL DOMESTIC ENERGY CONSUMPTION (GWh) *
2005	1,502.6
2006	1,461.1
2007	1,443.0
2008	1,401.4
2009	1,310.8

The table above (where total consumption includes petroleum products, natural gas and electricity) shows a year-on-year decrease in domestic energy consumption.

It is likely that this reduction in energy usage is attributable to rising energy costs rather than the installation of energy efficiency measures in homes.

5.6 FUEL POVERTY

Fuel poverty occurs when a household spends more than 10% of its net income on fuel to heat the home to an adequate standard of warmth as well as meeting other fuel needs (i.e. lighting, appliances, cooking and water heating).

The convergence of the following four factors leads to fuel poverty:

- Low income
- High fuel prices
- Poor energy efficiency of homes
- Under occupancy (households experiencing the most extreme fuel poverty live in larger than average homes)

The table below shows fuel poverty levels in Charnwood.

NO OF HOUSEHOLDS IN CHARNWOOD	FUEL POOR HOUSEHOLDS	% HOUSEHOLDS IN FUEL POVERTY
66,292	10,385	15.7%

The schemes outlined in section 3 above include measures introduced by government to improve the energy efficiency of homes and hence reduce poverty whilst simultaneously reducing carbon emissions.

6.0. ACTION PLAN

The council will shortly complete a comprehensive programme of works to improve the thermal efficiency of its own housing stock through the installation of energy efficiency measures as part of the decent homes programme. The works will improve the average SAP (standard assessment procedure) rating.

The table below details HECA actions that will be taken by the council to improve energy efficiency of residents' homes in Charnwood.

	ACTION	TARGET DATE
1.	Run a series of features through our publications and on our website to raise the profile and increase understanding of energy efficiency and renewable technologies	31 Mar 14
2.	Promote water saving measures and rainwater harvesting for domestic use	31 Mar 14
3.	Assist private sector households with Green Deal and ECO grants	31 Mar 14
4.	Promote domestic recycling	31 Mar 14
5.	Deliver 120 free Green Deal assessments	31 Mar 14
6.	Showcase one private sector home that has been brought up to current energy efficiency standards	31 Mar 14
7.	Deliver three domestic Green Deal outreach events	31 Mar 14
8.	Deliver Green Deal business outreach event in central location in Charnwood	31 Dec 13
9.	Install solar photovoltaic panels for an estimated 35 vulnerable households experiencing fuel poverty in	31 Mar 13

	ACTION	TARGET DATE
	Charnwood	
10.	Replace 10 inefficient boilers (that are rated F/G or are broken)	30 Jun 13
11.	Deliver repairs or improvements to 10 existing inefficient heating systems	30 Jun 13
12.	Provide free energy monitors to 200 fuel poor households to assist in monitoring and reducing energy use	30 Jun 13
13.	Improve the energy efficiency of residential housing by provision of Household Energy Audits	31 Aug 13
14.	Encourage the uptake of renewable technologies and the Feed-in Tariff scheme by promoting renewable energy	ongoing
15.	Raise awareness of the minimum energy efficiency standards for rented properties required under the Energy Act 2011	ongoing
16.	Where necessary use powers under the Housing Act 2004 to require landlords to rectify excess cold hazards under the HSSRS	ongoing
17.	Inspect all private sector houses where the council places homeless people to ensure basic energy efficiency levels are met	ongoing