

DARTFORD

BOROUGH COUNCIL

**Home Energy
Conservation Act (1995)
Dartford Home Energy
and Fuel Poverty Action
Plan 2012 - 2015
March 2013 Report**

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1. Summary

Like all Councils we have a vital role to play in cutting energy consumption, tackling fuel poverty and reducing reliance on fossil fuels.

As community leaders, service providers and the local planning authority we can help to tackle these issues across the breadth of our activities. This plan covering the period from 2012 to 2015 is our response to these challenges and expectations.

The plan summarises the national and legislative context of the borough's energy efficiency work. It examines the current situation, our strategic commitment and our direct environmental impact. The plan looks at examples of how we are already helping the community to be energy efficient, for example through grants for insulation and renewable energy schemes.

The document contains an analysis of the Council's greenhouse gas emissions and the current position around energy and fuel poverty.

The Plan sets out our vision for a more energy efficient Dartford. It contains a series of actions for delivery between 2012 and 2015. The plan concludes by explaining how we will measure progress and outlines some more detailed examples of how we are already putting our approach into action. We will develop a new Home Energy Conservation Report in 2015 which will provide an update on the actions contained in this report.

The actions within the Plan include some listed for reporting within the Climate Local Kent Commitment (see Cabinet Report 24 January 2013) and also the Kent Environment Strategy (see Cabinet Report 25 November 2010).

2. Why we need this plan

Views and opinions about the causes of climate change and the need to reduce carbon emissions may differ, but the rising costs of energy, depletion of fossil fuel reserves and growing level of fuel poverty provide a strong argument for cutting energy consumption and moving to more sustainable sources of energy.

The Council recognises that it has a vital role to play in cutting energy consumption, tackling fuel poverty and reducing reliance of fossil fuels. Through our role as community leaders, service providers and as the local planning authority, we can help to tackle these issues across the variety of our activities. This Plan is our response to these challenges and expectations.

The Councils involvement in environmental issues either makes good business sense for us, has a clear community benefit, or both. In other words, it is about making choices that not only have a positive environmental impact, but also generate a return in financial or community terms.

For example, the decision to install photovoltaic panels on some of the Council owned properties was taken as it cuts energy costs and generates an income for the Council as well as reducing consumption of natural resources. Assisting residents with insulating their homes has a positive impact because it reduces household fuel

bills and helps address fuel poverty. As well as increasing the energy efficiency of homes it can also make a positive contribution to improving health.

3. THE NATIONAL CONTEXT

This section outlines the national and legislative context for this plan. While carbon reduction targets act as a key driver for national energy policies, our approach is motivated by a desire to generate business or community benefits as well as reducing our environmental impact.

The Energy Act 2011

The UK has a legally binding target to reduce its greenhouse gas emissions by at least 80% by 2050, to be achieved through action at home and abroad. In June 2011, the Government enshrined in law a new commitment to halve greenhouse gas emissions by the mid 2020s. Both targets are against a 1990 baseline.

In October 2011 the Energy Bill received Royal Assent and became the Energy Act 2011.

The Act provides for a step change in the provision of energy efficiency measures to homes and businesses through the Green Deal and a new Energy Company Obligation. It also includes measures on energy security, low carbon technologies and fair competition in the energy markets. The Council recognises its duty in helping to delivery some elements of the Act

Green Deal

Recently, there have been changes to energy efficiency schemes. The Carbon Emission Reduction Target (CERT), where utilities monies were available to offer cavity wall and loft insulation, came to an end in November 2012. The Warm Front Scheme which provides grants to improve heating and/or insulation in a home ended on 19 January 2013, but has been replaced with Green Deal and Energy Company Obligation. The Green Deal was due to be launched in Autumn 2012.

Through the Green Deal scheme energy saving improvements to a home or a business can be undertaken without having to pay all the costs up front. Over 40 energy saving improvements are available through Green Deal including:

- Insulation – eg loft and cavity wall insulation
- Heating
- Draught proofing
- Double glazing
- Renewable energy technologies e.g. solar panels or wind turbines.

Energy Company Obligation

A new Energy Company Obligation (ECO) will focus on providing energy efficiency measures to low income and vulnerable consumers and those living in hard to treat properties such as solid wall or hard to treat cavity walls. The funding comes from

the big energy suppliers. Many householders in older properties and those on benefits or low incomes may qualify for extra financial help through the Energy Company Obligation

Renewable Energy Targets and Incentives

The 2008 Renewable Energy Directive sets a target for the UK to achieve 15% of its energy consumption from renewable sources by 2020.

In April 2010 the Government launched Feed In Tariffs (FITs). These are designed to encourage the installation of small scale, low carbon, electricity generating technologies, such as solar photovoltaics or wind turbines. For every unit of electricity generated, the owner receives a guaranteed payment (FIT) from their electricity supplier. They also receive a payment (export tariff) for any surplus electricity they export back to the grid.

In March 2011, the government announced the details of the Renewable Heat Incentive. This scheme is designed to provide financial support that encourages individuals, communities and businesses to switch from using fossil fuel for heating to renewables such as ground source heat pumps and wood chip boilers.

Memorandum of Understanding

In March 2011, the Secretary of State for Energy and Climate Change, and the Vice Chair of the Local Government Association, signed a Memorandum of Understanding, designed to recognise the pivotal role that local councils have in taking action to:

- Reduce energy consumption from their own estate and operations and from homes, businesses and transport infrastructure
- Create more appropriate renewable energy generation
- Participate in national initiatives at the local level, particularly the roll out of the Green Deal, smart metering and renewable energy deployment

4. WHERE WE ARE NOW

This part of the plan sets out the local context. It begins with a look at our strategic commitments. It summarises our direct environmental impact and provides examples of how we are already helping the community to be more energy aware.

The second half of this section examines the district's environmental footprint and provides an analysis of the current position for each of the themes.

Where are we now.... As a council

Our Strategic Commitments

The Corporate Plan sets the strategic context for this plan. Three of the themes are relevant to this area of work:

- Health and well being

- Environment and transport
- Housing and Stronger communities

Within these themes:

Aim: To reduce overall health inequality in Dartford and to provide for a rich and varied quality of life

Objective: HW1: reduce overall health inequality in the Borough

Aim: To promote an environment which is attractive, adapted to climate change and which provides a realistic choice of travel options

Objective: ET1: reduce carbon emissions

Objective: ET2: Ensure that development in Dartford is sustainable, with high standards of design, layout and energy efficiency

Aim: to facilitate quality, choice and diversity in the housing market and to create strong and self-reliant communities

Objective: HS1: to meeting the housing needs of the Borough

Objective: HS3: Increase the percentage of both the private rented and public housing stock reaching the Decent Homes Standard.

Kent and Medway Green Deal Partnership

The Kent and Medway Green Deal Partnership (KM GDP) has been set up to enable Kent to maximise the ECO funding which could be levered into the County. The KM GDP bring together, at a strategic level, all the key partners who would be essential in delivering a successful retrofit programme.

Kent Environment Strategy

On 25 November 2010 Cabinet agreed to support the development and implementation of the Kent Environment Strategy insofar as it is consistent with Dartford's corporate priorities and to the extent that resources will allow.

Climate Local Kent

Climate Local consists of a Climate Local Commitment which local authorities can sign up to. In response to this Kent County Council (KCC) through the Kent Forum proposed a countywide approach for the Kent districts call Climate Local Kent. This involved signing up to a broad statement of commitment and working towards 11 Climate Local Kent Targets. Climate Local Kent is based on targets actions set out in the Kent Environment Strategy.

The Council endorsed the Climate Local Kent Commitment at Cabinet meeting on 24 January 2013.

OUR ENVIRONMENTAL PERFORMANCE

In 2008/09 the Council took part in the Carbon Trust Local Authority Carbon Management Plan. A Carbon Management Plan was produced with an agreed target for Dartford Borough Council to reduce its carbon emissions from its activities by 35% from the 2007 baseline by 2012. A list of carbon related project is available and included works at Claywood Caravan Site, new boilers on Acacia Hall site, Boiler Optimisers at Civic centre/Acacia Hall, loft insulation in communal areas at some supported housing sites, pipe/flange lagging etc.,

GREENHOUSE GAS EMISSIONS

The Department of Energy and Climate Change (DECC) now require Local Authorities to measure and report their greenhouse gas emission from their own estate and operations. Each Local Authority is requested to publish Greenhouse Gas Report from the end of July 2011 annually in the new format.

The table below relates to the period 1 April 2008 to 31 March 2012 and shows significant reduction in emissions over the four year period report. As part of the Greenhouse Gas Emissions reporting the Council recalculated its base year to account for changes in the Council's assets.

GHG emissions data for period in Tonnes of CO ₂ e				
	2011/12	2010/11	2009/10	2008/09
Scope 1	866	1056	1175	1468
Scope 2	1184	1740	2159	1820
Scope 3	792	718	884	851
Total gross emissions	2842	3514	4218	4138
Carbon offset	0	0	0	0
Green tariffs	0	0	0	0
Total annual emissions	2842	3514	4218	4138

Scope 1: emissions from combustion in owned or controlled boilers, vehicles and plant. Therefore we have included natural gas. It also includes fuel consumption from vehicles owned and operated by Dartford Borough Council

Scope 2: emissions from purchased electricity for our buildings and other electricity consuming sites including car parks, CCTV cameras etc.

Scope 3: emissions from kilometres travelled for business purposes in employee owned vehicles (also known as grey fleet) and also recorded mileage etc., from the contracted waste and recycling service.

Changes in emissions:

The relatively mild winter of 2011/12 has influenced heating demand and consequently gas consumption in the built estate

The change in utility suppliers in June 2011 has resulted in more accurate meter readings than previously received

A number of projects took place as part of the Carbon Trust Local Authority Carbon Management Programme which delivered a reduction in electricity or gas consumption in a variety of buildings.

The use of Systemslink Software provides better recording of data and checking of electricity and gas bills and has enabled a much clearer picture of utility use across the Councils portfolio of buildings.

OUR LEADERSHIP ROLE

As a service provider and community leader we do a wide range of things to encourage and help residents and businesses. These include:

- Running regular money advice sessions for residents
- Promoting home energy efficiency measures and encouraging the take up of grants for insulation and heating improvements. We have been promoting a free cavity wall and loft insulation scheme.
- Working with registered social landlords on energy efficiency initiatives and to build up a better picture of the energy efficiency of the social housing stock.
- By adopting supplementary planning documents this encourages development that incorporates sustainable design techniques such as energy efficiency, renewable energy and water conservation

WHERE ARE WE NOW ... AS A DISTRICT

Local Authority Level Tenure Summary

(data provided by Energy Saving Trust)

	Total houses (number)*	Owner Occupied (%**)	Private rented (%**)	Social Rented (%**)	Rented from Other (%**)
Dartford	40353	74%	7%	16%	2%

House numbers taken from the Home Energy Efficiency Database

Percentages taken from the Neighbourhood Statistics website: www.neighbourhood.statistics.gov.uk

Energy Consumption

Figure 1 shows that average domestic energy consumption in Dartford in 2010 was 17% below 2005 levels of consumption.

Dartford	2005	2006	2007	2008	2009	2010
Electricity	4496	4446	4414	4236	4143	4149
Gas	17913	17305	16693	16059	14706	14579
TOTAL	22409	21751	21107	20295	18849	18728

Figure 1. Average Domestic Energy Sales (kWh) (Department for Energy and Climate Change data)

Carbon Emissions

Each year the Department for Energy and Climate Change publishes carbon dioxide (CO₂) emissions estimates for all local authority areas. Wherever possible these are based on energy consumption data, emissions from sites where pollution is regulated and other local information such as traffic, population, employment and household fuel types.

This data provides us with a useful proxy measure for energy consumption and transport within the district. Reducing CO₂ emissions can support improvements in air quality and help reduce health risks for people with certain respiratory illnesses.

Table shows that in 2010 Dartford's emissions per capita were 8.1 tonnes CO₂ compared with Kent (7.7 tonnes CO₂) and England (7.6 tonnes CO₂).

per capita CO ₂ emissions estimates (tonnes) ktCO ₂						
year	2005	2006	2007	2008	2009	2010
Dartford	9.8	9.8	9.4	9.2	8	8.1
Kent (excludes Medway)	9.5	9.6	9.2	8.5	7.3	7.7
England	8.8	8.7	8.5	8.2	7.4	7.6

Figure 2a shows Dartford emissions by sector between 2005 and 2010. The road transport sector accounts for 42% of total emissions with the remainder shared between domestic and industry sectors.

Figure 2b shows that Dartford's Transport emissions are above the Kent average. The Dartford industry and domestic sector are slightly lower than the Kent average. The Borough has substantially more through traffic than neighbouring districts.

Figure 2a DARTFORD						
Emissions	2005	2006	2007	2008	2009	2010

by sector						
Industry/ commerce	3.5	3.7	3.5	3.5	2.5	2.5
Domestic	2.3	2.3	2.2	2.2	2.0	2.1
Road transport	4.0	3.8	3.7	3.5	3.5	3.4
Total	9.8	9.8	9.4	9.2	8.0	8.1

Full Local CO2 emission estimates: Dataset: Per Capita CO2 emission estimates (tonnes)

Figure 2b KENT						
Emissions by sector	2005	2006	2007	2008	2009	2010
Industry/ commerce	4.4	4.5	4.2	3.7	2.8	3.1
Domestic	2.4	2.4	2.3	2.3	2.1	2.2
Road transport	2.7	2.7	2.7	2.5	2.4	2.4
Total	9.5	9.6	9.2	8.5	7.3	7.7

DECC Local and Regional CO2 emissions per capita

FUEL POVERTY

A household is defined as fuel poor if it needs to spend more than 10% of its income on fuel to maintain an adequate level of warmth. This definition has been reviewed and it is anticipated that a new definition for fuel poverty will be introduced in 2013. Every £1 spent on reducing fuel poverty reduces National Health Service spend by £15.

In 2010 11.2% of households in Dartford were recognised as being in fuel poverty

Figure 3. DARTFORD: FUEL POVERTY

Dartford	2006	2007	2008	2009	2010
Estimated number of households	37561	Data missing	37670	38255	38626
Estimated number of households in fuel	2330	Data missing	3399	4527	4313

poverty					
% fuel poor	6.2%	Data missing	9.0%	11.8%	11.2%

From : DECC: sub regional fuel poverty data

From the Fuel Poverty Department for Energy and Climate Change LSOA data sheet for 2008 – 2010 within the following wards there are areas of fuel poverty:

Bean and Darenth	Joydens Wood	Littlebrook
Newtown	Princes	Longfield/New Barn/Southfleet
Sutton at Hone/Hawley	Swanscombe	Town
West Hill	Wilmington	

EXCESS WINTER DEATHS

Excess winter deaths are greatest in elderly people and for certain disease groups and can be associated, at least in part, with low indoor temperatures. Energy efficiency and fuel poverty interventions can be effective in addressing some premature winter deaths.

Figure 4 below shows the trend in excess winter deaths in Dartford for the period August 2002 – July 2010. In Dartford the excess winter deaths ratio was 14.7% compared with the Kent average of 17%. Excess winter deaths are defined as the difference between the number of deaths during the four winter months (December to March) and the average number of deaths during the preceding autumn (August to November) and the following summer (April to July).

Figure 4 shows the variation between the different districts in Kent. Data at local authority level shows that Canterbury has the highest excess winter death ratio, followed by Maidstone, with Dover having the lowest ratio. Most of the local authority districts have ratios that are relatively close to the Kent average.

Excess winter deaths ratios for local authority areas in Kent, August 2002 – July 2010 (Source Kent and Medway Public Health Observatory)

Figure 4	Numbers of deaths, period and ratio		
	Spring Summer Autumn	Winter	Excess Winter Deaths ratio
Ashford	4,785	2,744	14.7
Canterbury	7,843	4,812	22.7
Dartford	4,129	2,368	14.7
Dover	6,154	3,424	11.3
Gravesham	4,371	2,500	14.4
Maidstone	6,677	4,022	20.5
Sevenoaks	4,995	2,955	18.3

Shepway	5,920	3,492	18.0
Swale	6,092	3,543	16.3
Thanet	8,867	5,169	16.6
Tonbridge & Malling	4,650	2,645	13.8
Tunbridge Wells	4,852	2,879	18.7
NHS Eastern and Coastal Kent	39,661	23,184	16.9
NHS West Kent	31,223	18,361	17.6
Kent	69,335	40,553	17.0

Cavity Wall and Loft Insulation

Over the years different Government schemes have been offered to encourage energy efficiency measures with an emphasis on cavity wall and loft insulation. From data provided through DECC the figures for installations in Dartford over recent years are reported in the table below:

Number of Cavity Wall Insulations by Local Authority: Dartford

	2008/09	2009/10	2010/11	2011/12
Homes in location	40353			
Cumulative Count	562	935	1315	1728
Number of Installs in period		373	380	413
Count per 10,000 households	139	232	326	428

Number of Loft Insulations by Local Authority: Dartford

	2008/09	2009/10	2010/11	2011/12
Homes in location	40353			
Cumulative count	780	1769	2671	3493

Number of installs in period		989	902	822
Count per 10,000 households	193	438	662	866

Dartford – Insulation Potentials Summary

Source: data supplied by Energy Saving Trust

	Number of private sector houses	Solid walls	Solid walls %	Filled Cavities	Filled Cavities %	Empty Cavities	Empty Cavities %		
Total	33044	10201	31%	10208	31%	12634	38%		
	Number of private sector houses *	No loft space	No loft space %	Lofts 0 – 60mm	Lofts 0 60mm (%)	Loft 60mm – 200mm	Loft 60mm – 200 mm (%)	Loft > 200mm	Loft > 200 mm (%)
Total	33044	3153	10%	6575	20%	20423	62%	2892	9%

*a certain proportion of flats included in this total are estimated to have no lofts

Renewable Energy

From the April 2010 to May 2011 over 33,000 households in England installed solar photovoltaic panels onto their roofs. Since the introduction of the Feed in Tariffs in April 2010, Dartford residents and the Council itself have installed renewable energy technologies.

Figure 5: DARTFORD: DOMESTIC SOLAR PHOTOVOLTAICS INSTALLATIONS

Figure 5	End of June'10	End of Sept'10	End of Dec'10	End of Mar'11	End of June'11	End of Sept'11	End of Dec'11	End of Mar'12	End of June'12
Homes in location	40353								
Cumulative number of domestic	3	13	16	21	31	63	114	294	326

PVs installed									
Number of installs per quarter		10	3	5	10	32	51	180	32
Number of domestic PV installs per 10,000 households	0.7	3.2	4.0	5.2	7.7	15.6	28.3	72.9	80.8

5. WHERE WE WANT TO BE BY 2015 - Dartford Home Energy and Fuel Poverty Action Plan 2012 - 2015

This section of the plan sets out our ambitions for where we want to be in relation to energy efficiency by 2015. We are also working towards the targets in the Kent Environment Strategy and Climate Local Kent. We will develop a new set of actions in 2015, to tie in with the Reporting Period requested the guidance received from the Department of Energy and Climate Change (DECC).

The Kent targets are to:

- Work towards a 34% reduction in emissions by 2020 (2.6% reduction per year). This will include the domestic sector and industry/commerce sectors.

Our aims are to:

- Increase the amount of energy generated in the District from renewable sources from 2011 levels
- Reduce the number of households in fuel poverty from 2009 levels
- Monitor and report on the measures and carbon saving enabled through the introduction of Green Deal and the Energy Company Obligation.

6. HOW WE WILL GET THERE

This part of the plan contains a series of actions for delivery between 2012 and 2015. We have chosen actions that are in our sphere of control or influence and grouped them under the same headings used in the Dartford Sustainable Home Energy Strategy and Action Plan 2005 – 2008.

Dartford Home Energy and Fuel Poverty Action Plan 2012 - 2013 Local Energy Efficiency Ambitions and Priorities

The Climate Local Kent Commitment was endorsed at Cabinet 24 January 2013 which includes the following targets:

- We will work towards a 34% reduction in emissions by 2020 (2.6% reduction per year)
- We will support the retrofit of 1000 homes across Kent in 2013 through the work of the Kent and Medway Green Deal Partnership
- The Council prepares an annual Greenhouse Gas Emissions Report which can be downloaded from the Council website.

Actions to Improve Energy Efficiency in Residential Properties in the Borough - 2012 - 2015

A RAISING AWARENESS		
Number	Target	Date
A1	Provide information and presentations to Landlords, including the Landlord's Forum, on legislative changes concerning energy efficiency	ongoing
A2	Promote government and other grants and discounts for the installation of renewable energy systems to interested parties	ongoing
A3	Provide training to DBC officers to enable them when visiting homes to provide information on energy efficiency and grants if appropriate	2014
A4	Provide information to Members on relevant energy efficiency projects	As necessary
A5	Undertake presentations for external groups on request	As necessary
A6	Promote the introduction of the National Smart Metering Scheme to residents	2014/2015
B Schools and Education		
B1	Explore the feasibility of working with Dartford Youth Council to promote energy efficiency	2013/2014
C Gathering Information		
C1	Collect and collate information from Energy Performance Certificates data on assessed properties in the Borough to map potential areas for energy efficiency measures and provide a focus for additional energy efficiency works.	2013/2014
C2	Develop a system that enables the targeting of measures for vulnerable residents	2013/2014
C3	Collate information on the energy rating of all dwellings in the council stock and	2013/2015

	develop systems for keeping this data up to date following energy efficiency improvements	
D providing information		
D1	Provide residents with information about energy efficiency measures and grants using media opportunities	ongoing
D2	Raise Landlord awareness of changes to Energy Performance Certificate criteria	2013 - 2015
D3	Run a series of features on the website to raise the profile and increase understanding of energy efficiency and renewable technologies and put processes in place to ensure information in kept up to date	ongoing
E Improving Housing Stock		
E1	Target landlords to participate in the private sector landlords scheme	Ongoing to 2015
E2	Look at the feasibility of energy efficiency measures in Sheltered Housing Accommodation	Ongoing to 2015
E3	Ensure the programme of planned works in the Councils housing stock links in with funds available including ECO funding	2013/2014
E4	Investigate new energy efficiency products being introduced and undertake trials where appropriate. Voltis Voltage Optimisation Unit is currently being trialled and monitored	2013
E5	Work in partnership with Kent and Medway Green Deal Partnership to deliver energy efficiency measures and reduce energy consumption within Kent	2013-2015
E6	Work in partnership with an Energy Efficiency Scheme provider until the Kent and Medway Green Deal Partnership is operational	2012/2013
E7	Develop and monitor the Phase 1 Kent and Medway Green Deal scheme within the Swanscombe area (200 properties)	2013/2014
E8	Work in partnership with Creative Environmental Networks to ensure that the remaining Kent Regional Housing Board monies available in Dartford are used for vulnerable residents	2013

F Engage with Partners		
F1	Investigate input from external agencies from health and care organisations on the different activities being planned	2013/2014
F2	Be members of Kent wide partnerships for energy efficiency, affordable warmth and climate change	ongoing
F3	Work with partners to progress energy efficiency actions including health sector, voluntary organisations etc.,	ongoing
F4	Work in partnership with other agencies to develop new projects such as the Collective Switching Scheme and Winter Intervention Support Kent	ongoing
F5	Work with Kent County Council (along with other local authorities and agencies) to deliver Green Deal/Energy Company Obligation	ongoing
G Renewable Energy		
G1	Promoting renewable energy and the feed in tariff through the media	ongoing
G2	promoting renewable heating incentives through the media	2013/2014
G3	support the installation of renewable energy in Corporate and Council buildings and monitor progress	ongoing
H Fuel Poverty		
H1	Introduce and promote a Collective Switching Scheme to residents in the Borough.	2013
H2	Aim to reduce fuel poverty in the Borough through promotion of the ECO scheme and monitoring take up	2013/2014
I Plan and Monitor Activities		
I1	Report on and revise this action plan every two years	2015
I2	Monitor the effectiveness of energy efficiency activities undertaken on behalf of Dartford Borough Council	ongoing

7. HOW WE WILL MEASURE PROGRESS

We will report progress to Officers and Councillors on an annual basis. Information will be published on the Council's website as required by the Department of Energy and Climate Change guidance.

We will use the following measures to assess progress towards our aims and the actions set out in Section 6.

- Dartford Greenhouse Gas Emissions report (published annually)
- Dartford Average domestic energy– Department of Energy and Climate Change data
- Dartford emissions by sector per capita CO2 emissions estimates (tonnes) - full Local CO2 emission estimates dataset - Department of Energy and Climate Change Local and Regional CO2 emissions per capita
- Fuel Poverty figures – DECC sub regional fuel poverty data includes lower super output areas
- Excess Winter Deaths – Kent and Medway Public Health Observatory
- Domestic Solar Photovoltaics installations – DECC data
- Green Deal and Eco measures installed – Kent and Medway Green Deal Partnership

8. OUR EXAMPLES

SOLAR PHOTO VOLTAIC PANELS (Solar PV)

In 1 April 2010 Government introduced the Feed in Tariff (FIT), whereby any electricity produced over and above the electricity usage level of the property to which the Solar PV is fitted can be sold back to the national grid at a level set by the Government. The figure received for electricity generation which is set by the Government and paid per kilowatt and has changed a number of times since FITs commenced. Once your system has been registered, the tariff levels are guaranteed for the period of the tariff (up to 20 years) and are index-linked.

The aims of the Solar PV is to reduce the energy expenditure of the affected tenants and positively impact on their fuel poverty, and to contribute towards meeting the Government targets.

The Council has installed a number of Solar PV systems on Council properties in the Borough:

PROPERTY NUMBERS			
Willow Road	73	Cedar Road	1
Elm Road	5	Chestnut Road	6
Hawthorn Road	7	Mead Road	2
Maple Road	2	Crusader Court	31
Laurel Close	5	Olive Avenue	8
Beech Road	3	The Homestead	

The data from the installed PV systems is linked to a portal system from which details for each property are available. The portal system collects information for the properties shown above and for these the following information is available:

Feed in Tariff (£s)	Earned to date	From install to 14/2/13	£93,576.59
CO2 saved (kg)	Saved to date	From install to 14/2/13	115610.591 kg (115.610591 tonnes)

In addition Solar PV has been installed on Lenderyou Court, Mill Court, Warren Court and Thatcher Court. Information from these properties will be highlighted within the data collected and reported on for the Greenhouse Gas Emissions Report.

ENERGY EFFICIENCY MEASURES - insulation

Over the years Dartford Borough Council has worked in Partnership with a number of companies to offer Insulation schemes to our residents.

With the ending of CERT funding anticipated for end of 2012/beginning of 2013 the Council undertook a tendering process to operate an insulation scheme in the Borough. Aran Services won the tender to operate the scheme and a Service Level Agreement was put in place to run until March 2013. The scheme started in July 2012 with a targeted approach via mailshots undertaken on the Councils behalf. The scheme offered free cavity wall, grant funded loft insulation and if appropriate solid wall insulation. The initial focus of the scheme was private owner properties, with a separate mailshot to Landlords. In addition Aran Services were asked to assess some of the Council Housing Stock and Supported Housing. The British Gas Here to Help scheme had operated within the Council Housing Stock previously in order to insulate the appropriate buildings; unfortunately they were not able to gain entry to some properties

Private Sector Properties	Breakdown	
Number of Enquiries 422	Able to Pay	291
	Elderly Priority Group	16
	Priority Group	81
	Super Priority Group	34
Total 422	422	

A large proportion (92.8%) of the enquiries came from owner occupied properties

The number of installs at the time that the CERT funding was withdrawn:

Number of Installs	Breakdown	
Completed 140	Cavity wall	15.05%
	Loft Insulation	26.89%
	Loft Insulation/Cavity Wall	52.68%
	Loft Insulation/Solid Wall	2.15%
	Solid Wall	3.23%

From the measures installed this saved Dartford residents a total sum of 1,440 tonnes of CO2 (lifetime savings) and 225 tonnes CO2 for solid wall insulation

Resident Breakdown of Installs

Resident Breakdown	Able to Pay	60.22%
	Elderly Priority Group	7.52%
	Priority Group	19.35%
	Super Priority Group	13.00%

A key aim of this scheme was to reach owner occupier able to pay residents. The figures show that a large number of the enquiries and measures installed fell into this grouping. The targeted and branded mailshots undertaken by Aran Services in Partnership with the Council played a large part in the success of the scheme.

There are a number of outstanding properties where the survey has been undertaken and the insulation work could be installed if additional CERT funding became available.

In addition there are a number of properties who are waiting for a survey which will be cancelled if the customer doesn't want to be transferred to Green Deal or qualifying for ECO funding

Survey undertaken insulation could be undertaken if CERT funding becomes available		Awaiting survey, to be given the option of transferring to Green Deal or qualifying for ECO funding	
Cavity Wall	19	Cavity wall	9
Loft Insulation	24	Loft insulation	14
		Cavity wall/loft insulation	83

Total	43	Loft and solid wall insulation	3
		Solid Wall insulation	18

Council Housing Stock

Through the Aran Services scheme 81 Council housing properties (which had not been reached by the British Gas Here to Help Scheme) had measures installed under the CERT funded scheme. These are broken down below:

Cavity wall	7
Loft insulation 100 (150 – 250 mm)	35
Loft insulation 170 (100 – 270 mm)	8
Loft insulation 200 (50 – 250 mm)	35

There are a number of other Council properties where surveys have been undertaken and the Council is deciding how to proceed with these

WARM FRONT

The Government's Warm Front Scheme has been offered to households on certain income related benefits for a number of years. During this time it has been operated by different companies including EAGA and Carrillion. In addition there have been changes in criteria, funding levels have changed and some years there have been early closures in the scheme due to oversubscription.

The Warm Front Scheme closed on 19 January 2013 to be replaced by Green Deal and Energy Company Obligation (ECO).

Over the years Dartford Borough Council has undertaken specific mailshots to targeted residents on the necessary benefits. In addition the scheme has been promoted widely in the Borough.

Our final mailshot took place in November 2012 explaining that the scheme would be ending in 2013. As a result the referrals received from Dartford residents increased to November 2012 – 61 referrals, December 2012 – 39 referrals and January 2013 – 18 referrals. We are waiting on more recent data from Warm Front on the outcomes for 2012 – 2013.

The tables below show the most recent years data for Dartford in relation to the Warm Front Scheme.

Warm Front	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012	2012 - 2013	total
Dartford						

Referrals received for year	287	432	179	146	148 *	
household assisted rent	6	15	31			
household assisted other	205	189	282	54	70 *	
spend for year	£420,191	£518,943	£463,297	£156,982	£59,903 *	£1,619,316

*data only available to February 2013

Dartford - Warm Front	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012	2012 – 2013 *	
boiler replacement gas	105	97	100	35	21	358
boiler replacement LPG	1	3	1	2	1	8
boiler replacement oil	0	2	1	0	0	3
boiler replacement warm air	1	0	1	0	0	2
cavity wall insulation	11	17	9	3	0	40
CFL	222	160	92	0		474
draughtproofing	18	30	15	2	1	66
electric storage heaters	7	3	10	0	1	21
FIDHWT	1	0	0	1	0	2
gas central heating	9	18	9	8	2	46
gas wall heaters	2	0	0	0	0	2
heating repairs	10	2	2	4	8	26
loft insulation top ups	13	20	18	5		56
loft insulation virgin	42	42	6	0	2	92
oil central heating	0	0	0	0	0	0
tank jackets	3	2	1	0	0	6
electric central heating	0			3		3

*data only available to February 2013

9. GLOSSARY

Adaptation: Action that helps cope with the effects of climate change – for example construction of barriers to protect against rising sea levels, or conversion to crops capable of surviving high temperatures and drought

Carbon Emissions Reduction Target (CERT): This is a statutory obligation designed by the Government to compel energy suppliers and generators to reduce

carbon emissions in homes. (The Government was committed to continuing CERT until December 2012).

Code for Sustainable Homes: The Code for Sustainable Homes is a government owned national standard for the sustainable design and construction of new homes. The Code goes further than the current Building Regulations but is entirely voluntary. The Code measures the sustainability of a new home against nine criteria, rating the whole home as a complete package. It covers carbon dioxide emissions, water, materials, surface water runoff, waste, pollution, health and well being, management and ecology.

Decent Homes Standard: The Decent Homes Standard is the minimum standard that all social housing should meet. A decent home will meet the following four criteria:

The current statutory minimum standard for housing

It is in a reasonable state of repair

It has reasonably modern facilities and services

It provides a reasonable degree of thermal comfort

Energy Company Obligation: The Energy Company Obligation (ECO) will work alongside the Green Deal. Where the cost of energy improvements outweighs the savings, or people need extra financial help, energy companies will be able to step in to provide a top up loan under the ECO. The focus will be on vulnerable and low income households and those living in harder to treat properties, such as solid walled properties. There are three elements of ECO funding:

Carbon Emissions Reduction Obligation (CERO)

Home Heating Cost Reduction Obligation (HHCRO)

Carbon Savings Community Obligation (CSCO)

Feed-in Tariffs: Feed-in Tariffs (FiTs) are designed to encourage the installation of small scale low carbon electricity-generating technologies such as solar photovoltaics or wind turbines. For every unit of electricity generated, the owner receives a guaranteed payment (FiT) from their electricity supplier. They also receive a payment (export tariff) for any surplus electricity they export back to the grid.

Fuel Poverty: A household is considered to be fuel poor if it needs to spend more than 10% of its income on fuel in order to heat its house to an acceptable level of warmth. An acceptable level of warmth is defined as 21 c for the main living area and 18 c for other occupied rooms

Green Deal: The government planned to launch the Green Deal in Autumn 2012. It is a national scheme to provide householders and businesses with upfront capital to carry out energy efficiency improvements to their properties. The costs of installing the 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. This is referred to as the 'golden rule principle.'

Fossil Fuels: Natural resources, such as coal, oil and natural gas, containing hydrocarbons. These fuels are formed in the Earth over millions of years and produce carbon dioxide when burnt. Registered Social Landlords: Registered Social Landlords (RSLs) are not for profit housing providers approved and regulated by the government through the Housing Corporation. The vast majority of RSLs are also known as housing associations.

Renewable Heat Incentive: The Renewable Heat Incentive is a government scheme designed to provide financial support to encourage individuals, communities and businesses to switch from using fossil fuel for heating to renewables such as ground source heat pumps and wood chip boilers.

Supplementary Planning Document: Supplementary Planning Documents (SPDs) provide guidance on local planning matters. They can take a number of forms but can generally be categorised into two broad types:

Area based SPDs – these include master plans and development briefs dealing with a specific parcel or parcels of land

Topic based SPDs – these provide additional information on a specific local issues, such as design guide

Carbon Dioxide (CO₂): Carbon dioxide is a gas in the Earth's atmosphere. It occurs naturally and also a by-product of human activities such as burning fossil fuels. It is the principal greenhouse gas produced by human activity

Carbon Dioxide (CO₂) equivalent: Six greenhouse gases are limited by the Kyoto Protocol and each has a different global warming potential. The overall warming effect of this cocktail of gases is often expressed in terms of carbon dioxide equivalent – the amount of CO₂ that would cause the same amount of warming.

Greenhouse Gases (GHGs): The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Less prevalent, but very powerful greenhouse gases are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). They absorb thermal infra-red radiation emitted by the Earth's surface, the atmosphere and clouds.

Kyoto Protocol: A protocol attached to the Un Framework Convention on Climate Change, which sets legally binding commitments on greenhouse gas emissions. Industrialised countries agreed to reduce their combined emissions to 5.2% below 1990 levels during the five year period 2008 – 2012. It was agreed by governments at a 1997 UN conference in Kyoto, Japan, but did not legally come into force until 2005.

Mitigation: Action that will reduce man made climate change. This includes action to reduce greenhouse gas emissions or absorb greenhouse gases in the atmosphere.

Renewable Energy: Renewable energy is energy created from sources that can be replenished in a short period of time. The five renewable sources used most often are: biomass (such as wood and biogas), the movement of water, geothermal (heat from within the earth), wind and solar.

Smart Meter: Smart meters are the next generation of gas and electricity meters and they can offer a range of intelligent functions. The Government is requiring energy companies to install 53 million gas and electricity meters at 30 million domestic and smaller non domestic properties. Most householders will have smart meters installed between 2014 and 2019, although some energy companies are starting to install smart meters now.

Energy Performance Certificates: Energy Performance Certificates (EPC) were introduced as part of the Home Information Pack in 2007. The requirement for a full Home Information Pack was suspended in May 2010, but the Energy Performance Certificate is still required. The Energy Performance Certificate contains details of a property's energy efficiency and uses a scale from A to G for this and the impact of the property on the environment through carbon emissions. The areas assessed include the insulation within the property, whether double glazing has been fitted, whether energy saving light bulbs are used the type of heating system. The Energy Performance Certificate then gives the ratings and offers advice on improving energy efficiency within the property. The average property in the UK currently rates between D and E for energy efficiency and environmental impact with A being the highest rating. An EPC is now needed in order to access the Green Deal.

Solar Photovoltaic (PV): the effect that certain materials generate electricity upon exposure to light. Photovoltaic technology is used in solar panels on your roof that generate electricity for your home

kWh (kilo watt hours): Measure of electricity as generated by the solar system. Defined as power (watt) used for a period of time (hours). All the domestic appliances use a certain power for a certain time. They all use electricity. Solar system outputs are measured on a yearly basis, and a 1 kWp system can generate around 800 kWh per year.

kWp (kilo watt peak): The number of kilo watts (1000 watts) a photovoltaic system will produce in peak conditions, which is the basic measure of performance under standard testing conditions. Needs to be combined with solar potential, insulation and the derate factor to get the actual system outputs in kWh on a specific roof.

Feed in tariff : for each kWh generated you will receive a government incentive. The amount depends on the solar system size whether it is a new built, retrofit or ground mounted system. In systems below 4 kWp it currently is 15 pence per kWh generated. This incentive is guaranteed for 20 years, tax free, and will rise in line with inflation.

Export tariff: when you don't use the electricity in your own home, you can sell it back to your electricity supplier. Current rates are 4.5 pence per kWh exported, and all electricity companies are legally obliged to pay these tariffs. This tariff is tax free and will also be adjusted to inflation.