

CAKES – Calderdale & Kirklees Energy Savers

Kirklees Energy Service, KES, United Kingdom

Summary

The Calderdale and Kirklees Energy Savers (CAKES) scheme, launched in September 2000, was co-ordinated by Kirklees Energy Services (KES) which is a SAVE agency, in conjunction with Calderdale Metropolitan Borough Council (MBC) and Kirklees Metropolitan Council (MC). By providing advice, registered installers, fixed discount prices, preferential credit facilities and cash backs (funded by HECAAction, TXU, Scottish Power and the European Commission) this scheme offered householders (ineligible for other government funded Home Energy Efficiency schemes) in Calderdale and Kirklees financially viable, easily accessible and energy efficient heating and insulation measures. Despite initial setbacks with unprofessional installers, 'CAKES' enabled the installation of many energy efficient measures in these districts, thereby reducing escaping energy, utility bills and most importantly CO₂ emissions. This scheme is highly replicable, especially where councils/municipalities are willing to offer a lump sum of money for cash backs and if the scheme is reproduced in a small region, then expanded.

End-user area	Target Audience	Technical
<input type="checkbox"/> New buildings	<input checked="" type="checkbox"/> Citizens	<input checked="" type="checkbox"/> Energy efficiency
<input checked="" type="checkbox"/> Refurbishment of buildings	<input checked="" type="checkbox"/> Households	<input checked="" type="checkbox"/> Heating
<input type="checkbox"/> Transport and mobility	<input checked="" type="checkbox"/> Property owners	<input type="checkbox"/> Cooling
<input type="checkbox"/> Financial instruments	<input type="checkbox"/> Schools and universities	<input type="checkbox"/> Appliances
<input type="checkbox"/> Industry	<input type="checkbox"/> Decision makers	<input type="checkbox"/> Lighting
<input type="checkbox"/> Legal initiatives (municipal regulations, directives, etc)	<input type="checkbox"/> Local and regional authorities	<input type="checkbox"/> CHP
<input type="checkbox"/> Planning issues	<input type="checkbox"/> Transport companies	<input type="checkbox"/> District Heating
<input type="checkbox"/> Sustainable communities	<input type="checkbox"/> Utilities	<input type="checkbox"/> Solar energy
<input checked="" type="checkbox"/> User behaviour	<input type="checkbox"/> ESCOs	<input type="checkbox"/> Biomass
<input checked="" type="checkbox"/> Education	<input type="checkbox"/> Architects and engineers	<input type="checkbox"/> Wind
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Financial institutions	<input type="checkbox"/> Geothermal
	<input type="checkbox"/> Other	<input type="checkbox"/> Hydro power
		<input type="checkbox"/> Other

Context

The installation of energy efficient measures assists Britain to obtain their 2010 CO₂ reduction target under the Kyoto Agreement and Home Energy Conservation Act (HECA). Research shows that the average household in the UK creates around six tonnes of CO₂ every year. By employing energy efficient measures the same household could save £ 200 annually, which is the equivalent of around 2 tonnes of CO₂. Approximately 80 % of this can be saved through wall and loft insulation and a condensing boiler with efficient heating controls. The 'CAKES' scheme was run in the Kirklees and Calderdale districts, which have a population of 582,271, and are situated in West Yorkshire, England. Approximately 61.5 % of the working population are employed, earning an average of

£16,092 per annum. It is assumed that more households in these districts would employ energy efficient measures if installations were more financially viable.

Objectives

'CAKES' aimed to install more energy efficient measures in Kirklees and Calderdale households, thereby reducing CO₂ emissions and assisting Britain to obtain their CO₂ target. To do so, 'CAKES' offered householders a 'one stop shop' that offered financially viable and easily accessible installation of energy efficient insulation and heating. Specific strategies included:

- Promoting the 'CAKES' scheme and offering Energy Efficient advice;
- Developing a local installer network and tendering registered installers for energy efficient insulation and heating;
- Offering householders discounted fixed prices for energy efficiency work;
- Offering householders preferential loan facilities for energy efficiency work;
- Offering householders cash backs if applicable – 25 % off the cost of insulation or improving their heating system, by putting in a condensing boiler, up to a maximum of £300 per household.

Process

'CAKES' was accessed by contacting KES on a freephone number. KES offered householders a 'one stop shop' to energy efficiency advice; discount installation prices and information about how to access cash backs and preferential loan schemes. Householders eligible for other energy efficient schemes were re-referred, while eligible householders were referred to an approved installer (via an internal installers network), who arranged an inspection with the householder. After completed works, the installer invoiced the householder and, upon payment, householders were eligible to receive relevant cash backs from 'CAKES'. Customer satisfaction was measured through monitoring works (including tracking and 10 % inspection), questionnaires sent out with cash backs (this encouraged a higher percentage return) and telephone surveys.

'CAKES' offered the following energy efficient heating and insulation measures; cavity wall insulation, loft insulation (200-250 mm and 100-150 mm), draught proofing (doors/ windows), gas heating controls, hot water tank jacket, floor insulation and condensing boilers. To make these measures financially viable and thus more appealing for householders, KES negotiated discounted, fixed, competitive prices and stringent quality and customer care standards for insulation and heating works with installers. The contract was tendered, via newspaper adverts, and awarded to appropriate, registered installers. The successful installers attended KES energy efficiency training in order to signpost the householder to other areas of savings in energy efficiency.

To enable more households to access 'CAKES', terms and legal agreements for a credit package (secure loan), to pay for householder's energy efficiency measures, were negotiated with three Credit unions. Loan funds were transferred to appointed credit unions, and energy awareness training was offered to increase referrals to the scheme.

Promotional schemes implemented over CAKES' first six months included; surveys distributed with the Electoral Roll (20,000 in Kirklees and 10,000 in Calderdale); on-line information; advertising in the Yellow Pages/Thomson's local; posters and leaflets produced for display and distribution; launch at Energy efficiency week; payslip advertising; competition prizes at events plus promotion through media editorial and press releases of 'success stories' in free media.

As the scheme developed some problems became apparent. Firstly, a number of installers were not turning up for appointments. This was rectified by specifying more stringent ‘customer care’ in the re-tender. Also, the selected credit unions set certain criteria for loans, making them inaccessible to some households. Therefore, KES developed an internal loan scheme. Additionally, the 5 % referral fee for installers for heating measures was not sufficient to fund CAKES’ administration; therefore it was necessary to increase it to 10 %.

Funding the scheme also proved problematic, as, once the original funding was distributed, utilities only offered £ 75 cash back on condensing boilers. Resolving this involved KES requesting council’s to raise the cash back. However, only two local authorities have obliged to date.

Financial resources and partners

Kirklees MC had overall responsibility for ‘CAKES’, while Calderdale MBC was the main partner. KES, a not for profit organisation (who provide the EEAC function for Kirklees, Calderdale and Wakefield), managed, monitored marketed and delivered the scheme.

Installers were charged a 10 % referral fee for insulation measures and 5 % for heating, these fees funded ‘CAKES’ administration. Credit unions, Castle and Minster Credit Union Ltd, Borough and Parish Community Credit Union Ltd and Colne Valley Savers Credit Union Ltd, offered preferential loans to householders. Initially, the energy saving trust, under the HEC-Action initiative, funded the cash backs, when these funds were depleted TXU and Scottish Power (utility companies) funded them as part of their Energy Efficient Commitment obligations. Household contributions made up the majority of the installation costs. Table 1 displays the funding breakdowns.

Table 1: Funding Breakdown for CAKES/WYSE¹

	2000-2001	2001-2002	2002-2003	2003-2004
TXU	-	-	€86,539.96	-
Scottish Power	-	€7,042.25	€17,408.45	-
Calderdale MBC	€7,042.25	€7,042.25	€7,042.25	€3,552.50
Kirklees MC	€176,056.33	-	-	€3,552.50
Referral Fees	-	€39,358.96	€28,982.94	€6,667.10
HEC Action	€35,211.27	-	-	-
Householder Contributions	€104,381.45	€547,155.85	€474,145.01	€111,496.71
KES expenditure for cash backs	€43,574.41	€149,980.15	€96,180.23	€12,206.83

Note: 2003-2004 figures only up until 14/09/03.

¹ ‘CAKES’ changed to ‘WYSE’ (West Yorkshire Saving Energy) on the 6th of November 2002, due to the main funding from Kirklees MC and Calderdale MBC ceasing and utilities taking over this role. Utility funding can be used in the national geographical area, enabling the scheme to be expanded to West Yorkshire.

Results

Table 2 displays the number of household who were involved in the scheme.

Table 2: Household Take up

	2000	2001	2002	2003	Total
Kirklees	72	337	248	70	727
Calderdale	12	247	249	24	532
Wakefield	1	74	83	33	191
Other	-	-	5	-	5
Total	85	658	585	127	1455

Note: 2003 figures only up until 14/09/03.

Table 2 shows that a total of 1455 households in all districts were involved in 'CAKES'. The majority of these households were in Kirklees and the greater part of work took place in 2001. Table 3 displays the measures installed.

Table 3: Measures Installed

Measure	2000	2001	2002	2003	Total
Cavity Wall Insulation	38	279	168	56	541
Condensing Boiler	25	170	251	39	539
Draught proofing (doors/ windows)	2	68	58	-	128
Gas Heating controls	-	86	136	13	235
Loft Insulation (200 – 250mm)	17	245	199	28	489
Loft Insulation (100-150 mm)	16	36	16	9	77
Floor Insulation	2	4	4	-	10
Hot Water Tank Jacket	-	37	23	1	61
Total	100	925	855	146	2080

Note: 2003 figures only up until 14/09/03.

Table 3 shows that, to date, a total of 2080 energy efficient measures have been installed. Cavity wall insulation has been most often installed, followed closely by condensing boilers, while floor insulation has been installed least of all. The larger amounts of installations in 2001 and 2002 are most probably caused by the fact that the scheme was run for the whole of these years and because the majority of measures were installed in winter. Table 4 displays the savings that were achieved through the installation of energy efficient measures.

Table 4: Savings achieved through Installation

	kWh Saved (pa)	€ Saved (pa) (KWh saved x € 0.046) ²	CO ₂ Savings (kg/ pa)
2000	307, 808	14, 159	58, 392
2001	2, 796, 250	128, 627	533, 183
2002	2, 333, 216	107, 328	446, 878
2003	496, 343	22, 832	95, 575
		Total Lifetime t CO₂ Savings	34, 304.24

Note: Results for kWh saved and CO₂ savings calculated from HEED database calculations.

Note: Figures only up until 14/09/03.

Table 4 shows a lifetime CO₂ saving of 34, 304.24 tonnes when compared with the life cycle of the measures installed. Overall the above results suggest that ‘CAKES’ has achieved high installation levels of energy efficient measures in a number of households in Kirklees and Calderdale. In turn this has assisted to reduce CO₂ emissions. Thereby, ‘CAKES’ is assisting Britain to obtain their CO₂ target for Kyoto and HECA.

Alongside the above savings, ‘CAKES’ has helped to develop an approved discount local installer network. This will not only benefit subsequent schemes within KES but may result in prices of energy efficient measures being driven down in the general community. Most importantly, ‘CAKES’ has increased thermal comfort in households, alongside increasing individuals’ disposable income (savings in utility bills). Moreover, ‘CAKES’ has helped to raise energy efficiency awareness in West Yorkshire and had increased local employment.

Lessons learned and repeatability

‘CAKES’ was very successful, fulfilled most of its objectives and had many positive aspects in its implementation. Primarily, ‘CAKES’ offered householders a ‘one-stop-shop’ for the installation of energy efficient heating and insulation, thus saving individual’s potential cost and eliminating potential difficulties involved when locating a quality installer. Scheme accessibility was furthered by offering financially viable energy efficient measures (alongside loan schemes), offering installation by approved and registered installers, and having an organisation (KES) to resolve any problems with installers and to provide reliable, detailed and quality energy efficiency advice. The marketing approach that gained the most interest from householders was public interest stories in free, local papers.

The key lessons learnt from this scheme to date include:

- Specifying stringent ‘customer care’ standards in the tender to installers was essential to ensure on-going community involvement.

² This figure (€ 0.046) was calculated from a representative sample of households who had energy efficient measures installed. Wherein, 5 % used electricity, 95 % used gas, and gas prices were at € 0.043 and electricity at € 0.107.

- ❑ Building a team of registered and reputable installers who offer superior customer service and have an interest in energy efficiency was crucial for customer satisfaction and thus the ongoing success of the scheme.
- ❑ The setting up of a loan scheme that offers an open criteria is more accessible for householders and thus generates more implementation of measures.
- ❑ Substantial cash backs are essential for householder involvement. Establishing these involves finding attractive reasons for organisations/ companies to fund a scheme. I.e. councils fulfilling their HECA commitments and utilities fulfilling their energy efficiency commitment.
- ❑ A Referral fee of 5 % for heating measures was insufficient for administration costs for this scheme, 10 % was more appropriate.

'CAKES' provides support for other municipalities to promote the installation of energy efficient measures by making installation easily accessible and financially viable. The network of installers and the set pricing structure that were developed through 'CAKES' could be used by other KES internal schemes and also by other not for profit energy efficiency organisations.

We believe that the 'CAKES' scheme is highly replicable. Successful replication should involve building on the above-mentioned lessons learnt and focussing on the positive aspects of implementation. Successful replication could be furthered where councils/ municipalities are willing to offer a lump sum of money for cash backs and where the scheme is repeated in a small region, then expanded as experience, knowledge of installers and any other problems that may arise, is gained.

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