

# Retrofitting the existing housing stock in the South East to 2016

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*Action Plan to reduce carbon emissions and alleviate fuel poverty 2008 to 2011*

*The South East of England Development Agency*

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*Government Office for the South East*

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GOVERNMENT OFFICE  
FOR THE SOUTH EAST

*South East Regional Assembly*

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*Energy Saving Trust*

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*Climate South East*

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**Prepared by the Centre for Sustainable Energy, the Association for the Conservation of Energy and Dr Richard Moore, August 2008**

## Foreword

The South East England Development Agency (SEEDA), in conjunction with the Government Office for the South East (GOSE), the Regional Assembly, Energy Saving Trust (EST) and Climate South East, have developed this action plan to map out the activity required to reduce the region's residential carbon emissions by 20% by 2016 and assist with the delivery of national fuel poverty targets, through improving energy efficiency and implementing low and zero carbon (LZC) technologies in the existing housing stock.

The energy required to heat and run homes in the South East led to emissions of 22.5 megatonnes of carbon dioxide (MtCO<sub>2</sub>) in 2003<sup>1</sup> with private housing (owner-occupied and private-rented) accounting for 90% of these emissions. Improving the energy efficiency of the existing housing stock and stimulating the market for low and zero carbon (LZC) technologies must be a priority if we are to achieve our energy policy goals, which include reducing the incidence of fuel poverty at a time of high and rising fuel prices.

The current rate of sustainable energy activity (both nationally and locally) is not sufficient to meet national<sup>2</sup> or proposed regional targets. If the region is to meet its targets for emissions by 2016 a step-change in the rate of improvement will be required. Continuing with 'business as usual' is neither economically rational, socially beneficial nor environmentally sound. Nicholas Stern's seminal review of the economics of climate change highlights the need to meet this challenge: "There is still time to avoid the worst impacts of climate change, if we take strong action now".

This action plan has been designed to deliver the step-change in regional activity required to meet the targets. The region's progress towards the 2016 target must be seen as a springboard for achieving longer-term (national) 2020 and 2050 targets for CO<sub>2</sub> emissions. The South East Regional Economic Strategy supports this vision:

### *Regional Economic Strategy – Climate Change and Energy targets*

*To reduce carbon dioxide emissions attributable to the South East by 20% from the 2003 baseline by 2016 as a step towards the national target of achieving a 60% reduction on 1990 levels by 2050, and increase the contribution of renewable energy to at least 10% of energy supply in the South East by 2010 as a step towards achieving 20% by 2020.*

This action plan is accompanied by a strategy which includes detailed analysis<sup>3</sup> of the regional opportunities and priorities. It summarises the strategy's aims, priorities, targets and actions, identified by the analysis and a process of stakeholder engagement. The primary focus of the strategy is the end-use of energy in the home. The region plans to develop complimentary research that supports the delivery of regional targets for residential water efficiency and sustainability as defined by the South East Regional Economic Strategy.

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<sup>1</sup> Defra 2003

<sup>2</sup> WWF, 'How much?' (2008) and FoE, Home Truths (2008)

<sup>3</sup> SEEDA and GoSE (2008), Retrofitting the existing housing stock in the South East to 2016, CSE, ACE and Dr Richard Moore

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## 1. Targets, aims and objectives

### 1.1 Strategy's targets

***CO<sub>2</sub> reduction target:***

***To achieve a 20% reduction in residential CO<sub>2</sub> emissions by 2016, relative to 2003, working in partnership with and through national programmes, regional organisations, and local partners***

***Fuel poverty target:***

***To eliminate fuel poverty where practicably possible in the South East by 2016, with the aim to improve all properties to a minimum standard of efficiency i.e. SAP 65***

In order to monitor progress against the targets proposed in this strategy it will be necessary to review activity and performance at regular intervals. It is therefore the region's intention that the progress of all local authorities against National Indicators 186 and 187<sup>4</sup> will be tracked on an annual basis, with GOSE extracting the relevant sections from the National Audit Office reports. The region also plans to formally review its progress in the final quarter of 2010 and the first quarter of 2013. These two dates furthermore offer an opportunity to:

- Review the regional impact of the Carbon Emissions Reduction Target's (CERT) activity and set priorities for CERT's successor, the Supplier Obligation
- Review the region's progress in eradicating fuel poverty in vulnerable households
- Review the implementation of the Code for Sustainable Homes – level 3 of the Code will be mandatory from 2010
- Review progress against carbon budgets as defined by the Committee on Climate Change under the forthcoming Climate Change Act
- Review progress of the current SEEDA corporate plan, which ends on the 31st March 2011, and inform the subsequent plan

### 1.2 Strategy's overarching aim

- A1. To provide a regional framework that stimulates increased deployment of sustainable energy and water efficiency measures in existing housing, working in conjunction with existing national, regional and local initiatives
- A2. To ensure the most energy inefficient properties are improved to a minimum standard of efficiency, that is SAP 65
- A3. To identify and develop opportunities for new sources of funding to retrofit the existing housing stock
- A4. To support the development of community focussed sustainable energy initiatives
- A5. To promote and help generate long-term behavioural change at the householder level

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<sup>4</sup> 'Per capita CO<sub>2</sub> emissions in the local authority area' (186) and 'Tackling fuel poverty - % of people receiving income based benefits living in homes with a low and high energy efficiency rating' (187).

The region must ensure that the targets and aims shown above form the basis for setting priorities for tendered services and funded programmes that target the residential sector. Ensuring that all homes achieve a minimum of SAP 65 by 2016 will ensure that the South East achieves its carbon targets and helps minimise the impacts of rising fuel prices on households. The longer term eradication of fuel poverty will also require a national strategy that also addresses fuel prices, incomes and wider social deprivation.

The delivery of this action plan will require the region to identify new sources of funding and other means of supporting sustainable energy measures. The 'able-to-pay' sector may possess the funds to install the measures identified by the strategy; however, ensuring uptake may require the energy sector to redefine the way it provides services. The transition from energy products to energy services will be an important stimulus for economic development and environmental improvement in the region.

## 2. Regional baseline of emissions and fuel poverty

### 2.1 Current emissions (MtCO<sub>2</sub>) and proposed targets

The end-use of fossil fuels and electricity in the 3.4 million households in the South East was responsible for 22.5 MtCO<sub>2</sub> in 2003 (see table 2.1). The region has set a target to reduce CO<sub>2</sub> emissions by 20% on 2003 levels by 2016, which equates to a reduction of 4.5 MtCO<sub>2</sub>.

**Table 2.1: National and Regional Emissions and Targets for 2016 and 2050 (MtCO<sub>2</sub>)**

	1990 emissions	2003 emissions	2005 emissions	2016 targets	2050 targets
UK	155.5	163.7	149.5	121.4	62.2
England	130.1	136.6	122.1	101.6	52.0
<b>South East</b>	<b>21.8</b>	<b>22.5</b>	<b>20.4</b>	<b>18.0</b>	<b>8.5</b>

The UK's residential sector was responsible for 155.5 MtCO<sub>2</sub> of emissions in 1990<sup>5</sup>. The forthcoming Climate Change Act will legally commit the UK to reducing its CO<sub>2</sub> emissions by 60% by 2050. Based on the 1990 baseline of total UK residential emissions and the distribution of CO<sub>2</sub> emissions in the UK in 2005, the South East region would need to reduce total residential emissions to 8.5 MtCO<sub>2</sub> to achieve the national target of 60% by 2050.

### 2.2 Current levels of fuel poverty

**Table 2.2: Fuel Poverty in the South East**

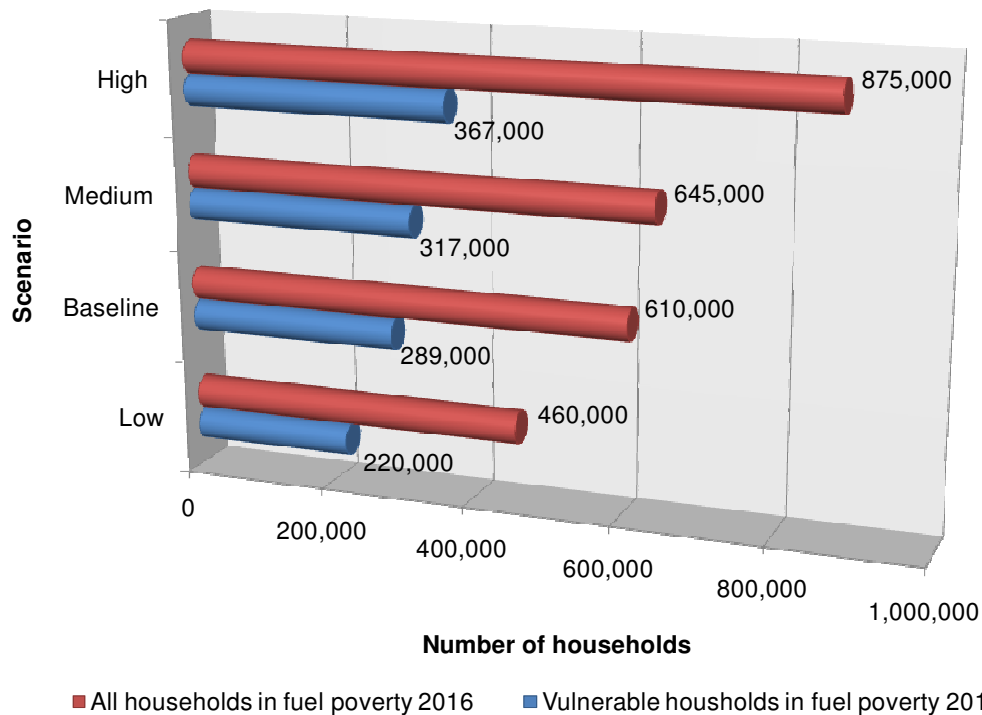
	2005	2008	2010	2016
Fuel poor (1,000s of households)	169	360	424	610
	4.9%	10.2%	12.0%	17.3%
<b>Total households (1,000s)</b>	<b>3,418</b>	<b>3,530</b>	<b>3,530</b>	<b>3,530</b>

Fuel price scenarios have been used to project estimates of fuel poverty in 2010 and 2016. Four different scenarios were modelled: a low, medium, high and a baseline scenario. Table 2.2 shows the actual levels of fuel poverty in 2005 and 2008 and the modelled levels of fuel poverty under the baseline scenario for 2010 and 2016. In 2005, there were 169,000 fuel poor households (4.9%) in the South East. The rising cost of energy over the

<sup>5</sup> Defra, 2006

last four years<sup>6</sup> has been the main reason for fuel poverty more than doubling in the region to an estimated 360,000 households (10.2%) by the end of March 2008.

**Figure 2.1: Fuel Poverty in the South East**



The strategy estimates that at least 40% of fuel poor households are currently not eligible for Warm Front grants because the increase in fuel prices has put people in fuel poverty who are not in receipt of the qualifying benefits. There are therefore likely to be in the region of 150,000 fuel poor households in the South East that are not eligible for the Government's primary fuel poverty reduction programme. Under the worst-case scenario of high fuel price increases, there will be an estimated 875,000 fuel poor households in the South East by 2016 (see Figure 2.1). Even under the low fuel price scenario, this number would still be high compared to today at 460,000.

In delivering the region's targets for the reduction of CO<sub>2</sub> emissions it is important to note that emissions tend to increase with higher disposable incomes. At the same time, however, the highest-earning 40% of households potentially offer the most cost-effective carbon savings. Despite this trend there are still significant numbers of fuel poor households in hard to treat<sup>7</sup> homes with relatively high emissions. Whilst fuel poor households are likely to take back much of the potential savings as increased comfort, the measures installed ultimately stay with the dwelling and not the household. In other words, a property insulated under a fuel poverty scheme may be subsequently occupied by a more affluent household (with associated higher emissions) thus resulting in higher long-term carbon savings.

<sup>6</sup> Between 2003 and the beginning of 2008 the costs of gas and electricity have risen by 60% and 50% respectively

<sup>7</sup> Homes with solid walls and/or without access to the gas network and/or no loft space under the roof and/or in high-rise buildings.

### 3. Retrofitting the existing housing stock

#### 3.1 Headline target

The detailed regional analysis presented in the strategy underlying this action plan examined the impact of a number of scenarios on both CO<sub>2</sub> emissions and fuel poverty. The analysis showed that the region requires a programme of deployment which ensures that all properties achieve a target SAP 65 in addition to installing all highly cost-effective (short payback) measures (explained under 'Scenario 1a' below). The region's progress towards the 2016 target should be seen as springboard for achieving longer-term national 2020 and 2050 targets for carbon emissions. The deployment of the 'Target SAP 65' scenario will provide the necessary market stimulation to increase the capacity to install solid wall insulation and renewables on a significant scale between now and 2050.

#### ***Deployment of measures to 2016***

***“Energy improvement programmes must therefore aim to ensure that a target SAP 65 is achieved where ever possible, in addition to installing those short payback measures included in scenario 1a” (see below for explanation of 1a)***

#### 3.2 Scenarios explained

##### ***Target SAP 65***

In the analysis, the 'Target SAP 65' scenario examined the package of measures needed to enable all households in the region to achieve a SAP rating of 65. SAP 65 is notionally thought to protect householders from fuel poverty; that is, the thermal efficiency of their property is no longer the overriding factor that causes them to fall into fuel poverty. It is worth noting that rising fuel prices are likely to have moved this threshold to SAP 72, however, SAP 65 is now intrinsically linked with NI 187 as well as many regional and local housing strategies and as such remains appropriate.

##### ***Scenario 1a***

Scenario 1a represents those measures viewed as cost-effective in HM Treasury's 2007 Budget – these are cavity wall, loft and hot water cylinder insulation, draught-proofing, efficient boilers and heating controls<sup>8</sup>. In principle, this scenario represents what is taken to be the *market potential* for emissions reductions – i.e. reductions in emissions that in theory should come about with little to no government intervention because they are highly cost-effective. However, for many reasons – including public apathy and a lack of buy-in as to their environmental necessity and financial benefit – these measures are often not taken up under normal market conditions.

#### 3.3 The impact of achieving a 'Target SAP 65'

The 'Target SAP 65' scenario eliminates fuel poverty in 57% of households. The majority of households that remain in fuel poverty will have been in serious (15 to 20% of disposable income spent on fuel) or severe (more than 20% spent on fuel) fuel poverty prior to the energy improvements. This is likely to be due to a combination of very low incomes, severe under-occupancy and/or because the property was hard to treat initially.

<sup>8</sup> HM Treasury (2007); in the analysis and modelling, all new boilers are assumed to be fitted with modern efficient heating controls – i.e. room thermostat, timer and thermostatic radiator valves.

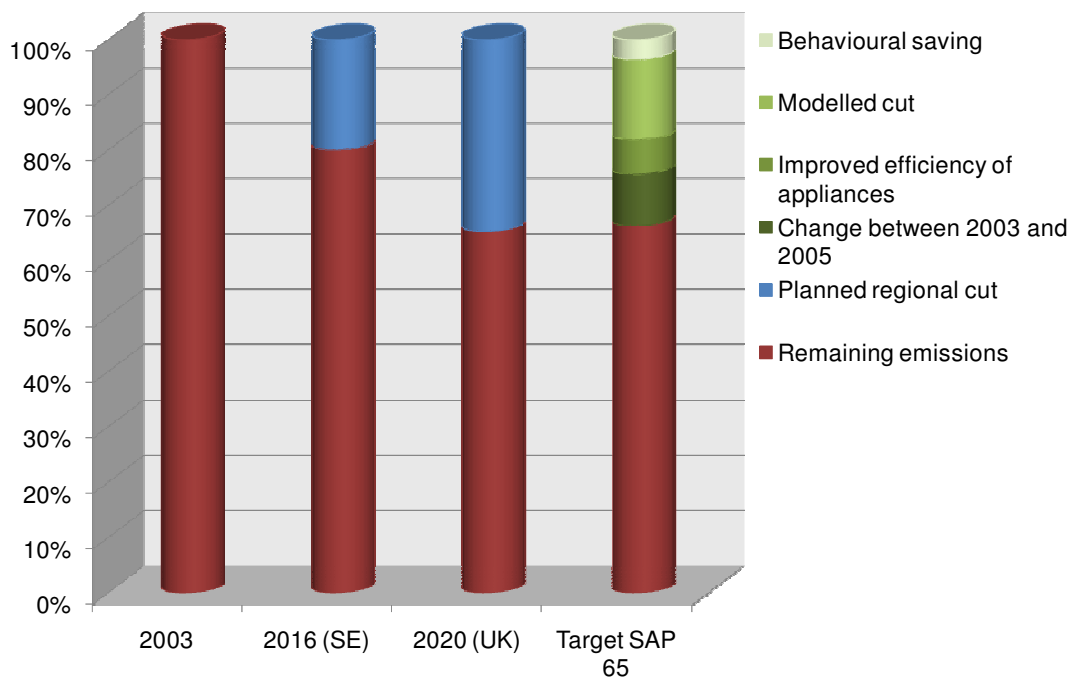
Table 3.1 and Figure 3.1 show that the 'Target SAP 65' scenario could reduce carbon emissions by 7.5 MtCO<sub>2</sub> (33.5% of the region's 2003 emissions). This surpasses the 2016 regional target and also comes close to the UK's National Energy Efficiency Action Plan 2020 target – a 31% reduction on 1990 levels or remaining emissions of 14.7 MtCO<sub>2</sub>.

**Table 3.1: Target SAP 65 modelled carbon savings (MtCO<sub>2</sub>)**

<b>Breakdown of emissions &amp; savings</b>	<b>2003</b>	<b>South East 2016</b>	<b>UK 2020</b>	<b>Target SAP 65*</b>
Remaining emissions	22.5	18.0	14.7	15.0
Planned regional cut		4.5	7.8	
<b>Modelled energy savings</b>				
Change between 2003 and 2005				2.1
Improved efficiency of appliances				1.4
Modelled reduction (including lighting)				2.0
Decarb. assumed by BERR <sup>9</sup> to 2016				1.3
Behavioural saving				0.8

\* Accounts for additional emissions from new housing

**Figure 3.1: Progress to 2016 and 2020 targets under Target SAP 65 scenario**



### 3.4 Costs and benefits associated with delivering scenarios to 2016

Table 3.2 below summarises the total economic benefit of achieving a target of SAP 65 in every dwelling. Gross value added (GVA) refers to the benefit to the region of the economic activity stimulated by the increased installation of measures. The 'Economic Value of Carbon'<sup>10</sup> of £26.5 per tonne of carbon (tC) is based on Defra's shadow price of carbon.

<sup>9</sup> Department for Business, Enterprise & Regulatory Reform

<sup>10</sup> <http://www.defra.gov.uk/environment/climatechange/research/carboncost/pdf/HowtouseSPC.pdf>

The measures installed under the 'Target SAP 65' scenario would cost the region over £6.5 billion with an associated GVA of £1.9 billion. Whilst the total cost of £6.5 billion may seem high, the Stern Review estimated the cost to the economy of mitigating the harmful impacts of climate change to be ten times the cost of acting now. Furthermore, for every £1 invested in measures under the SAP 65 scenario, approximately £1.35 of lifetime fuel savings is generated. If a value is assigned to saved carbon emissions, the SAP 65 scenario generates £1.72 for every £1 invested.

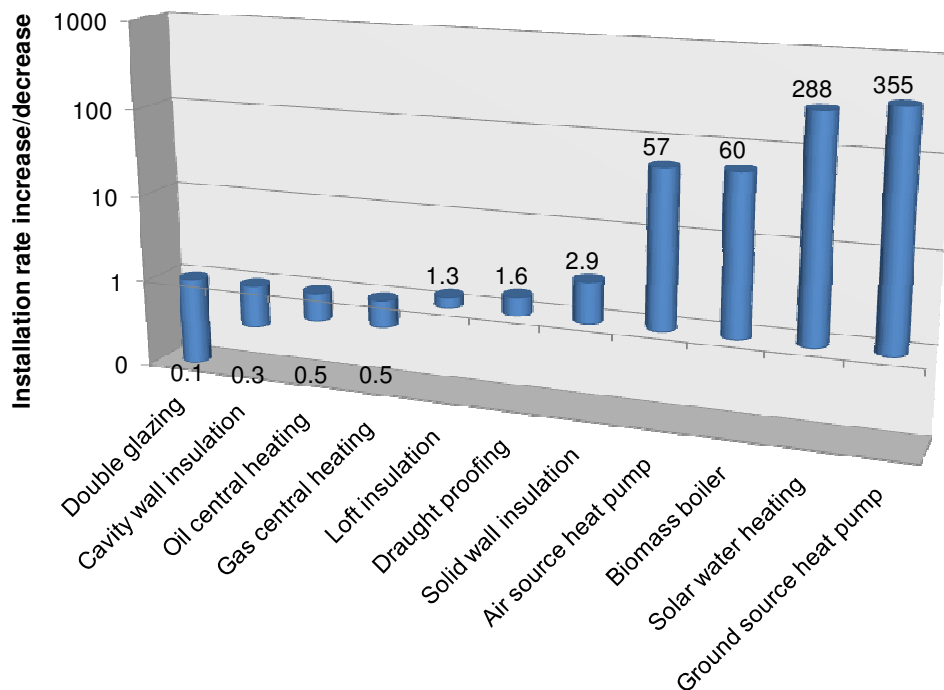
**Table 3.2: Summary of total economic benefit for 2016 scenarios**

Target SAP 65 scenario	Costs/benefits (£m)
Modelled Savings (MtCO <sub>2</sub> )	3.39
Total costs	-£6,518
Total measures	5.162
GVA	+£1,900
Lifetime fuel savings	+£8,254
Value of Carbon Economic	+£433.6
Total Benefit lower	+£10,500
Total Benefit upper	+£11,330

**Net Benefit** **+£3,979**

Deploying this scenario would generate a significant amount of employment regionally. Achieving a 'Target SAP 65' would require an nearly 2,400 additional full-time equivalent jobs to complete the necessary installations, with an estimated GVA of over £8,000 per position.

**Figure 3.2: Relative step change in activity required to deliver a Target SAP 65 (logarithmic scale base 10)**



Implementing this scenario will require a step change in the installation of measures regionally, particularly for solid wall insulation and micro-renewables. Figure 3.2 shows the proportional change in installations required. Three times the current annual rate of activity is required for solid wall insulation, rising to 290 and 350 times the current rate for solar water heating and ground source heat pumps (GSHPs) respectively. The rates for standard insulation measures such as cavity wall insulation (CWI) are less than one. This means that their rate of installation would need to reduce, as these measures are currently being deployed in high numbers by energy suppliers in order to meet their CERT obligations and are therefore on schedule to be completed prior to 2016.

**Figure 3.3: Deployment path for modelled technologies**

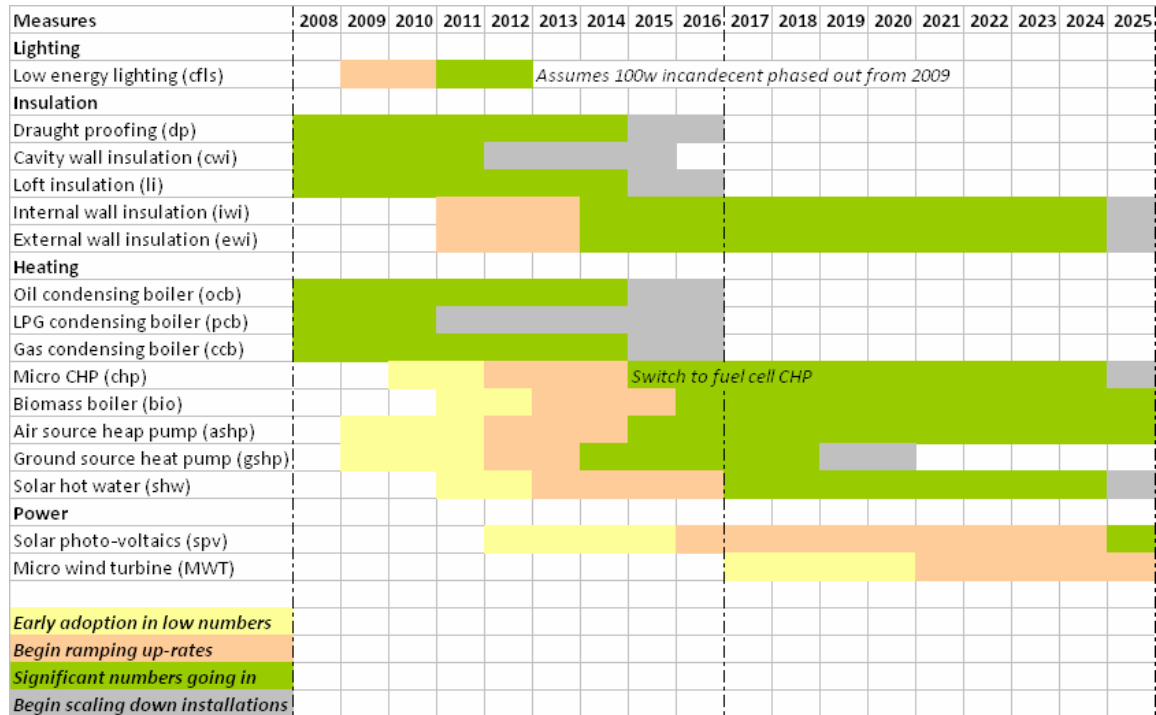


Figure 3.3 shows the timeline for the deployment of those technologies included in the model. In addition to the implementation of these measures, the decarbonisation of grid distributed electricity supply will be fundamental to the region and the UK meeting the long-term 2050 targets of a 60% reduction in CO<sub>2</sub> emissions. This is supported by reports published by IPPR<sup>11</sup>, FoE<sup>12</sup> and WWF UK<sup>13</sup>. Heat pumps and biomass provide the main carbon savings from the region’s heating requirement, particularly in off-gas areas.

<sup>11</sup> WWF 2007, 80% Challenge: Delivering a low-carbon UK, IPPR

<sup>12</sup> FoE 2008, Home Truths, Oxford UCI

<sup>13</sup> WWF 2008, ‘How low?’ CSE, ACE and Dr Richard Moore

## **4. Priority areas for action**

### **4.1 Stakeholders**

The strategy's delivery will require the involvement of a number of national, regional and local partners. These include GOSE, SEEDA, South East Regional Housing Board, local authorities, advice providers, the insulation sector, energy suppliers, Eaga, housing associations, registered social landlords (RSLs), and community groups.

The delivery of measures will ultimately require the support of local delivery agents with the ability to identify local issues and put together partnerships to tackle them. National policy is to a great extent implemented via local authorities, which have direct contact with households, businesses and community groups. Therefore local authority input and commitment to this action plan and the associated strategy will be essential, and many of the actions are likely to be wholly or partially owned by local authorities.

### **4.2 Priority areas**

The regional modelling and stakeholder engagement activity discussed in chapters 3 to 6 has identified the 33 actions detailed in the action plan. The combination of the evidence base provided by the modelling and the focus of these actions has led to the identification of five overarching objectives and priority areas for action.

#### ***P1 Targeting G and F rated private sector housing***

Energy Performance Certificates (EPCs) provide an opportunity to engage householders in improving the most inefficient housing. In October 2008, the requirement for an EPC will be extended to rented properties. The South East had over 783,000 households (22.9%) in the region with an F or G rating in 2005, which was slightly higher than the national level of 20.8%.

The analysis has shown that, in the majority of cases (cavity walled properties, flats and mid-terrace solid walled properties), a household can progress to an E-rating with relative ease. Ensuring that cost-effective measures are offered to households that need them, in an engaging manner, will be key to delivering the South East's carbon dioxide emission reduction targets.

The Rt. Hon Hilary Benn MP, Secretary of State for Environment, Food & Rural Affairs, has stated that the Government plans to contact every G to F household in the country in an attempt to reduce carbon emissions. Identifying G and F rated homes will require cooperation amongst key stakeholders including local authorities, energy agencies and the EST Advice Centres. The Government is currently consulting on whether the Home Energy Efficiency Database (HEED), maintained by the EST, should be the repository for EPC data. If the data is stored in HEED, this would be a key resource for identifying properties, providing that the data is made available to local authorities. Access to the EPC data is also a focus of the current consultation.

#### ***P2 Planning gains for the existing stock***

The region must ensure that Local Planning Authorities implement planning policies that maximises the opportunity to improve the thermal efficiency of the existing housing stock. The two main opportunities regionally are:

- The improvement of energy efficiency of an existing property when a new extension is added
- The creation of a fund for carbon abatement which developers pay into when they are unable to meet the Local Planning Authority's targets for energy efficiency or sustainability

The crucial issue associated with the second bullet point is the 'additionality' of the carbon fund. To ensure additionality, the carbon fund must support measures that achieve the same or greater reductions in carbon emissions as the loss on the proposed new development. The risk is the fund creates a distance between the proposed development and the actual carbon savings, and that distance then obscures the savings achieved. The management of the fund and the delivery agent of the measures are therefore a critical path in the delivery of the savings.

Milton Keynes Council provides a good example of the creation of a carbon abatement fund. The council has established a fund, which is managed by the local energy agency, United Sustainable Energy Agency (USEA), and overseen by a Carbon Management Officer recently appointed by the council. The council recently provided USEA with £220,000 and expect to raise £400,000 per year between now and 2010. This equates to an average of £400 to £500 for every new home built. The South East Regional Spatial Strategy recommends annual development of 28,900 to 32,000 homes per annum, which represents a total funding opportunity of £13 to £14 million.

Uttlesford District Council was the first local authority (in the region and nationally) to establish a carbon abatement fund. The Council's 'Supplementary Planning Document on Home Extensions' specifies that 'simple, cost-effective' measures are to be installed on the existing dwelling when planning permission is sought for an extension. A mandatory home energy check has to be completed prior to any installations, which will provide advice on the most suitable measures to pursue. Cost-effectiveness is defined, in this case, as having a simple payback of seven years or less. It is estimated that the implementation of this requirement will save around 159 tCO<sub>2</sub> per year.

### ***P3 Sustaining local support for residential sustainable energy initiatives***

Local authorities will be assessed against national performance indicators (NI) as part of the Comprehensive Performance Assessment (CPA). In addition, from April 2009, as part of the successor to the CPA, the Comprehensive Area Assessment (CAA), Local and Multi-Area Agreements will also be based on up to 35 of the new performance indicators. For the purpose of domestic carbon emissions and fuel poverty NI 186 and 187 are relevant (see section 1.1 above). The uptake of these indicators has not, however, been mandated by Government and there is therefore no guarantee that these NI's will be adopted. GOSE has helped the region secure a relatively high take-up of NI 186, but the profile of energy efficiency and carbon reduction targets needs to be retained uniformly.

The South East is not presently accessing its fair share of Warm Front compared to other English regions. Yearly expenditure per household between 2006 and 2007 in the South East was the third lowest of all English regions and fuel poor households in the South East received less per household than all other regions apart from London. The South East has a relatively low proportion of hard to treat housing compared to other English regions and therefore this cannot be the underlying cause of the low expenditure, suggesting instead that fuel poor homes in the South East are either by their nature hard to find, or there is a fundamental difference in regional and local infrastructure.

Warm Front expenditure also varies significantly by local authority within the South East region, with smaller local authorities with high total expenditure showing relatively good performance. West Sussex in particular has relatively high total expenditure per fuel poor

household and the presence of a strong affordable warmth partnership in the area, (the West Sussex Healthy Homes Partnership), may be a driver behind this.

#### ***P4 Further reaching community energy initiatives***

Local communities within the UK and the South East are increasingly seeking to gain a better understanding of their own emissions and also what climate change means for their community. There are a number of successful community initiatives in the South East mobilising both able to pay and fuel poor households to take action on climate change. Interestingly many of the initiatives involve partnerships between regional agencies, regional partnerships and sub-regional local authorities. For example, Kent County Council are funding Creative Environmental Networks (CEN) to manage six community-led initiatives in Kent, involving a range of communities i.e. both communities of geography and interest.

The Greening Campaign is the most successful regional example of a community-led initiative that has subsequently rolled their approach out to other areas. The campaign was originally launched in Petersfield, Hampshire and now works with other communities to help them develop their response to climate change. The campaign provides materials and expert technical support; however, the overall aims and priorities are set by the local community. The campaign has received funding from SEEDA, county councils and local parishes. Wherever possible the Greening Campaign helps local group's access funds that may be available to them.

The South East Climate Change Partnership is also working with a number of organisations and individuals actively involved in community initiatives. Within the South East Climate Change Partnership they have 20 to 25 organisations that are actively involved in their Communities Group (primarily councils and NGOs rather than the communities themselves). The community projects in the South East provide a good engagement opportunity for the delivery of this strategy. The SE Climate Change Partnership is looking at how these models could support local authorities' delivery on Local Area Agreements.

#### ***P5 Innovative funding structures for able to pay households***

The region will need to identify new methods of funding and supporting the deployment of measures regionally if they are to raise all properties to a SAP 65. Despite the necessary urgency to act and the associated media coverage regarding climate change and fuel price rises, we have not witnessed a noticeable step change in demand for standard insulation measures from the public – this is often referred to as 'The Behaviour Gap'.

Consumers place a very low value on ongoing energy costs compared with up-front capital costs. Consumers are only willing to pay an average of £2.91<sup>14</sup> up-front to make an annual saving of £1. This very low annuity factor compares with a typical energy industry figure in the range of £6-7 up-front for £1 of annual savings. This presents a considerable barrier for microgeneration technologies which are characterised by high up-front costs with low on-going costs.

The provision of energy services rather than products may stimulate more widescale demand for sustainable energy measures. For example, mobile phone companies provide free handsets and then recoup the cost over the lifetime of a customer's contract. Ensuring that householders are able to access low interest loans and / or contracted services may help stimulate demand for measures i.e. removing the barrier of high up-front capital costs.

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<sup>14</sup> Element Energy, The Growth Potential for Microgeneration, 2008

The region should explore the possibility of developing a low interest loan package that targets able to pay householders.

The recent round of Regional Housing Board funding through the Regional Housing Authority (RHA) has led to the creation of nine consortia offering a range of financial packages for the least efficient private sector vulnerable and low income households. The financial packages on offer are predominantly a combination of loan or grant assistance to help achieve Decent Homes Standard and Housing Health and Safety Rating System (HHSRS) targets, with some specific enhanced grants or top-ups for Warm Front. These schemes provide a number of different loan models that could be utilised for the able to pay sector.

## 5. Detailed strategy action plan

The section numbers shown in this detailed action plan correspond to the detailed strategy i.e. 5.1 denotes the analysis of stakeholder engagement. The relevant aims and priority areas that these actions help fulfil have also been highlighted e.g. A1 corresponds to aim one, providing a regional framework for sustainable energy measures.

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>5.1</b>	<b>Stakeholder engagement</b>								
<b>AP1</b>	Raise awareness of the regions RES and RE targets	Use strategy launch <i>and other suitable opportunities</i> to raise awareness of the regions existing targets and ensure the message is universally delivered to 2016	SEEDA	GoSE		A1 P3	6 months	Stakeholders frame their own activity in the context of regional targets	Low
<b>AP2</b>	Sustain and generate the support of stakeholders	a) Hold stakeholder events to feed-back progress and help stimulate action b) Develop a network of strategy supporters with an online forum that enables for organisations to share information and progress	SEEDA	GoSE Climate SE SE RHB Regional Assembly Energy Saving Trust (EST)		A1 P3	ongoing	Monitor feedback at the annual event	medium
<b>AP3</b>	Ensuring local authority officers, senior executive and members are engaged and actively working on energy issues	Facilitate an awareness raising campaign that helps identify energy efficiency and climate change champions at local authority member level	Improvement and Efficiency South East (IESE)	SEEDA EST GoSE Local authorities		A1 P3	18 months	Campaign uptake and engagement activity	High

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
AP4	Establish interim targets to track the strategy's progress	Region establishes interim targets to be formerly reviewed by the South East Carbon Reduction Strategy Group, with a more hands on yearly review of local authority progress against NI 186 & 187 (for all councils)	GoSE	SEEDA SE RHB Climate South East Regional Assembly EST Energy Saving Trust Advice Centres (EST advice centres)		A1 P3	6 months	Review National Audit Office reporting on local authority performance against Nibs	High
<b>5.2 Policies and drivers</b>									
AP5	Ensure local authorities identify areas that they can influence and then translate these into actions that will create tangible carbon savings	GoSE to commission guidance for local authorities wishing to develop their own NI 186 action plan. Encourage LA's to gain assistance from the EST via the ESTAC run 121 LA support programme, <i>subject to available annual resources</i>	GoSE	EST Carbon Trust SEEDA	√	A1 P4	1 year	Track development of guidance and uptake of services	High
AP6	Ensure local authority reporting on NI 187 is delivered consistently across the region	Review published procurement guidance for local authorities and encourage them to tender for reporting and monitoring services collectively – thus ensuring consistent delivery across all local authorities signed up to NI 187	IESE	EST GoSE		A1 P4	1 year	Track development of guidance	Medium

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>5.3 National schemes and delivery programmes</b>									
<b>AP7</b>	Improve sub-regional coordination of sustainable energy activity	Develop sub-regional sustainable energy partnerships that stimulate the increased deployment of measures and provide an ongoing framework for the delivery of the strategy's targets	EST	SEEDA GoSE LAs EST advice centres Regional Energy Agencies Eaga Energy suppliers	√	All	2 to 3 years	Track uptake of measures i.e. Eaga and CERT	High
<b>AP8</b>	Explore opportunities to secure additional funding for a more ambitious and holistic programme of activity that also tackles the wider carbon footprint targets in the RES	Examine the potential to engage businesses (i.e. Corporate Social Responsibility funding) and national grant programmes regionally with the aim of maximising opportunities to retro-fit energy efficiency, renewables and other sustainability measures i.e. waste, water etc. Ideally engage with the EST Green Homes programme.	SEEDA	EST Eaga WRAP Energy Suppliers Water companies Local authorities Contracted service providers i.e. Biffa	√	A1, A3, A5 P4, P5	1 year	Funding raised and a more holistic package of measures offered to householders regionally	High

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
AP9	Ensure the region hosts a number of CERT PG pilots for HTT measures and LZC technologies	Work with energy suppliers to ensure that South East local authorities delivering against NI 187 targets for fuel poverty gain maximum benefit from the CERT flexibility funding for the priority group	SEEDA	GoSE Local authorities		A1 P1	2 years	Track the number of pilot projects and CERT flexibility installations regionally	Medium
AP10	Improve the integration of CERT and Warm Front delivery across the South East region	Identify or develop a regional scheme that ensures the joined up delivery of Warm Front and CERT e.g. the Cross scheme <a href="http://www.funding.org.uk">www.funding.org.uk</a>	Local authorities	GoSE LAs ESTAC Eaga Energy suppliers Climate SE		A1 P4	3 years	As above	Low
AP11	Ensure that more consistent levels of Warm Front take up are achieved across the region	Encourage county and unitary authorities, particularly those that sign up to NI 187, to provide local support for sub-regional affordable warmth partnerships that cultivate further reaching referral networks	Local authorities	NEA GoSE Eaga LAs	√	A1 P3	3 years	Monitor yearly Warm Front expenditure and uptake by fuel poor household (using CSE's Fpi)	High
AP12	Examine new technological options for thermal imaging	Encourage the inclusion of detailed infrared technology in future European satellites	SEEDA	European Space Agency EST CSE		A1 P1	5 years	Feedback progress on thermal imaging via the strategy's dissemination network and events (see AP2b)	Low

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>5.4</b>	<b>Regional schemes and delivery programmes</b>								
<b>AP13</b>	Support the delivery of RHA schemes across all consortia partners	SEEDA and the SE RHB to hold a workshop / training session with RHA consortia to provide networking support for partners	SE RHB	SEEDA		A2 P1, P5	1 year	Feedback from training session and post session follow up correspondence	High
<b>AP14</b>	Ensure that data sharing opportunities are maximised to avoid duplication and improve targeting	Host a biannual data working group to facilitate collaborative targeting of households i.e. ensuring data is shared where ever possible and appropriate (to be confirmed once the Energy Saving Trust Advice Centre contracts commence)	EST advice centres	GoSE SEEDA CEN USEA		A1 P1	1 year	Biannual meeting established and held	Medium
<b>AP15</b>	Ensure the health sector are actively engaged at the regional level	Ensure Primary Care Trust (PCT) directors are encouraged to sign-up to the strategies network of supporters, the delivery of AP11 will facilitate this action	GoSE	PCT LAs EST advice centres Health Housing and Fuel Poverty Forum Climate SE		A4 P4	1 year	Ensure PCT's sign up as supporters to the strategy (see 2)	High
<b>AP16</b>	Ensure local health agencies and workers are engaged in the referral process for local delivery schemes	Provide training for local PCT's and frontline health staff to assess a householders circumstances and make referrals	GoSE	Local authorities PCT's EST advice centres ( <i>subject to identification of resources</i> )		A4 P4	2 years	Track numbers of front line staff trained and referrals generated	medium

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>6.1</b>	<b>Advice delivery</b>								
<b>AP17</b>	To make significant annual household carbon savings in the SE (estimated 400,000 lifetime tonnes carbon per annum)	The Energy Saving Trust will make this scale of saving through the provision of advice services in the SE	EST	Defra EST advice centres		A5 P1	Annual	Published results	High
<b>AP18</b>	To provide a bespoke, free, impartial, accurate and locally relevant advice service on energy efficiency, renewable energy and low carbon transport (estimated 200,000 homes per annum)	The Energy Saving Trust will commission, fund and manage a quality advice service across the region to achieve savings of this magnitude	EST	Defra EST advice centre's	√	A5 P1	Annual	Published results	High
<b>AP19</b>	Target affluent and receptive 'off gas' households with both insulation and renewables	Overlay the EST Market Segmentation tool and the EEPfh Insulation Strategy group's hard to treat database	EST	EST advice centres		A2, A5 P1, P4	18 months	ESTAC to monitor uptake of service	High
<b>AP20</b>	Ensure that targeting the G to F's is carried out systematically across the region	Establish a common process for targeting the G to F's that ensures local delivery partners are able to supplement any national or regional communications with information about local schemes	EST, subject to on-going government consultation on the use of EPC data	LAs EST advice centres		A2, A5 P1	1 year	Subject to EST & CLG	High

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
AP21	Examine the role of the HHSRS in targeting G to F properties in the privately rented sector	EEPfh Managed Housing Group should be consulted for views on the potential opportunity to engage local authorities to use the HHSRS to encourage landlords to improve private rented property i.e. how would the message be framed in a positive light that engages the landlord	GoSE	Energy Efficiency Partnership for homes (EEPfh) LAs EST EST advice centres		A1, A2, A5 P1	2 years	Review response from the EEPfh to determine next steps	low
AP22	Ensure that schemes target those households that need measures & these measures match the opportunity	Explore the possibility of using HEED, EST Market Segmentation data and thermal imagery to engage the able to pay sector i.e. build on existing work in Slough and Poole	EST	LA's EST advice centres		A1, A2, A5 P1, P4	ongoing	Review HEED coverage and ESTAC marketing	medium
AP23	Unlock the potential for community sustainable energy initiatives	Climate SE to facilitate a regional mapping exercise of community groups working on climate change. Ensure networking, sharing of good practice and opportunities.	Climate SE	SEEDA EST		A3, A4 P4		Review of community groups conducted	Medium

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
AP24	Cultivate more widespread locally led community sustainable energy initiatives	Regionally fund and encourage other partners to fund local community led initiatives with clear signposting to EST CAFE and Low Carbon Communities programme	SEEDA	EST advice centres Climate SE Energy Suppliers i.e. Scottish and Southern	√	A4, A5 P4	2 years	Community groups funded and measures implemented as a consequence	High
AP25	Examine the possibility of providing a more comprehensive hand-holding advice service for householders that doesn't require a significant subsidy	Use SEEDA's community fund to facilitate more involved advice provision, working in partnership with EST to identify opportunities within their Green Neighbourhood programme	SEEDA	EST Local authorities		A4, A5 P4	1 year	Take up of funding with 10 potential bidders to the Green Neighbourhood programme identified	High
AP26	Ensure that schools in the South East are engaged with the strategy and produce energy ambassadors of the future	Work with the eco-schools programme to promote the strategy and broaden and strengthen the number of stakeholders engaged	GoSE	SEEDA Eco-schools Local authorities		A1, A4 P4	3 years	Monitor the number of schools that sign up to the micro-site	medium
AP27	Help develop consumer confidence in the building sector	Explore the possibility of creating a voluntary code of conduct with the EEPfh Insulation and Heating Strategy Groups. The Government has given the backing to a Microgeneration Certification Scheme which could be built on for other building services	EEPfh	EST SEEDA Defra		A1 P3	3 years	Review response from the EEPfh to determine next steps	low

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>6.2</b>	<b>Regional growth areas</b>								
<b>AP28</b>	Develop a series of low carbon zones across the region	Explore the most attractive areas for LCZ's, linking current household emissions, community interest and opportunity to act	SEEDA	EST	√	A4 P1, P4, P5	2 years	Number of LCZ identified and developed	High
<b>AP29</b>	Develop a series of district level CHP schemes	Work with the CHPA and South East HECA Forum to identify proactive local authorities with medium and high rise clustered accommodation suitable for district level CHP, once identified the region should explore the potential of applying the funding model provided by the Aberdeen Heat Co	SEEDA	GoSE CHPA Local Authorities Regional Assembly	√	A4 P4	1 year	Workshop in the autumn, with CHPA  Practical Heat - B&H	High
<b>AP30</b>	Ensure opportunities for retro-fitting district level CHP are maximised (in association with major new developments including the Strategic Development Areas)	Assess the resource and opportunity for low carbon CHP in new developments and ensure Local Planning Authorities maximise the potential to supply existing homes with energy via section 106 agreements with developers	Regional Assembly	SEEDA Local authorities		A3 P2, P4	2 years	Resource assessment completed and section 106 wording developed	Low

ACTION	WHAT DO WE NEED TO DO?	HOW COULD WE DO IT?	LEAD PARTNER	PARTNERS	ENABLING ACTION	AIMS & PRIORITY AREAS	TIME-SCALE	HOW TO MONITOR SUCCESS?	PRIORITY
<b>6.3</b>	<b>New housing developments and opportunities for retro-fitting the existing housing stock</b>								
<b>AP31</b>	Ensure that a minimum standard of efficiency is achieved when an extension is built on any home in the region	Encourage local planning authorities to implement SPD's that ensure cost effective carbon reduction technologies are implemented when extensions are built on existing homes	GoSE	Regional Assembly, Local Authorities		A3 P2	2 years	SPD's implemented	medium
<b>AP32</b>	Ensure that the region maximises retrofit investment opportunities from all new developments, ie using a carbon tax on new build to fund retrofit elsewhere	Ensure any opportunities for use of tariffs to fund energy and water efficient retro-fitting are maximised by mapping out the timeline for Local Development Plans implementation regionally	Local Authorities	SECBE SEEDA GOSE		A3 P2, P5	2 years	Timeline mapped and those South East Local Planning Authorities implementing their plans are engaged at the appropriate time	medium
<b>AP33</b>	Ensure that local planning authorities, planning officers and councillors understand the potential opportunities for retro-fitting the existing stock when an extension or new home is built	Develop a training resource and deliver a series of regional workshops each year until 2010	IESE	SECBE EST Local authorities Regional Assembly		A3 P2	2 years	Number of homes improved	medium

## 6. Actions by audience and objective

TARGET AUDIENCE	GROUP	LEAD PARTNER	FRAMEWORK ACTIONS (A1)	TARGETING PROPERTIES (A2)	FUNDING OPPORTUNITIES (A3)	COMMUNITY FOCUSED INITIATIVES (A4)	HOUSEHOLDER BEHAVIOURAL CHANGE (A5)
SEEDA	Policy	1, 2, 8, 9, 12, 13, 24, 25, 28, 29	1, 2, 8, 9, 12	11, 13	8	24, 25, 28, 29	8, 13, 24, 25
GoSE	Policy	4, 5, 15, 16, 21, 26, 31	4, 5, 21, 26	21	31	15, 16, 26	21
EST	Policy and delivery	7, 14, 17, 18, 19, 20, 22	7, 14, 22	7, 19, 20, 22	7	7	7, 17, 18, 19, 20, 22
Local authorities	Policy and delivery	10, 11, 32	10, 11		32		
Regional Assembly	Policy	30			30		
Energy Efficiency Partnership for homes (EEPfh)	Policy	20, 27	20, 27	20			20
Climate SE	Policy and delivery	23			23	23	
SE RHB	Policy and delivery	10					
REIP	Policy and delivery	3, 6, 33	3, 6		33		