

# Home Energy Programmes Summary Report 2009/2013

## 1. Introduction to the Programmes

The Scottish Government's Home Energy Programmes comprised the following four programmes which operated over the period 2009-10 to 2012-13:

### 1.1 Boiler Scrappage Scheme (BSS)

The Boiler Scrappage Scheme operated from May 2010 to March 2013 and was managed by the Energy Saving Trust (EST). It offered owner occupiers a £400 subsidy to help meet the cost of replacing inefficient boilers with new more efficient alternatives. The boiler being replaced had to be in working order and have a SAP (2009) efficiency rating of less than 70% in order to qualify for the scheme.

Following the success of the Boiler Scrappage Scheme, the Private Sector Landlord Boiler Scrappage Scheme was launched in November 2010 and operated in 2010-11 and 2011-12.

### 1.2 Universal Home Insulation Scheme (UHIS)

The Universal Home Insulation Scheme (UHIS) was introduced in 2010-11, replacing the Home Insulation Scheme (HIS). UHIS was a free-to-all scheme which provided energy efficiency measures, such as loft and cavity wall insulation in selected areas. UHIS closed to new applicants in March 2013 but work will continue to complete installations for a further year.

UHIS was available in areas selected and put forward by local authorities, who were also responsible for the administration of the scheme.

### 1.3 Home Insulation Scheme (HIS)

The Home Insulation Scheme (HIS) was designed to improve the energy efficiency of houses by promoting and installing free or discounted loft and cavity wall insulation and other energy saving measures. It was managed by the Energy Saving Trust (EST) and backed by the Scottish Government, with additional funding from local authorities, housing associations and energy companies.

HIS was an area-based scheme. Areas covered by the scheme were chosen according to criteria including levels of fuel poverty and emissions, the potential number of treatable houses and the potential for complementary funding.

### 1.4 Energy Assistance Package (EAP)

The Energy Assistance Package provided a range of measures to support those likely to have difficulty paying their fuel bills or keeping their home sufficiently warm. EAP was designed so that almost everyone could get some form of help. The package had four stages:

- Stage 1 offered free expert energy advice to anyone who phoned the Home Energy Scotland Hotline. This advice was provided by Energy Saving Scotland advice centres (ESSACs).
- Stage 2 provided benefits and tax credit checks and information on low cost energy tariffs to those at risk of fuel poverty.
- Stage 3 provided a package of standard insulation measures (cavity wall and loft insulation) to older households and those on one of a range of benefits.
- Stage 4 offered a package of enhanced energy efficiency measures (insulation and/or new or repaired central heating) to those who were most vulnerable to fuel poverty.

The Home Energy Scotland Hotline continues to operate in 2013-14 and the services provided under stages 1 and 2 continue to be available. With the replacement of CERT with ECO, Stage 3 has effectively been replaced by the Affordable Warmth Scheme. Stage 4 of the Energy Assistance Package was superseded by the Energy Assistance Scheme in April 2013.

## 2. Headline results

<b>2.1 Overall</b>	<b>2012-13</b>	<b>All years</b>
Households <u>offered</u> energy advice or assistance. (These may not be unique, i.e. some households may benefit on more than one occasion and these would be counted each time.)	287,825	<b>829,888</b>
Total Scottish Government programme expenditure (to date)	£61,844,953	<b>£221,801,041</b>
Climate change impact in tonnes CO <sub>2</sub> saved over the lifetime of the measures (projected)	1,292,046	<b>4,492,580</b>
Net gain in household income over the lifetime of measures (projected)	£311,363,853	<b>£1,047,594,882</b>

<b>2.2 BSS</b>	<b>2012-13</b>	<b>All years</b>
Total Scottish Government expenditure	£8,262,000	<b>£16,770,000</b>
Number of boilers expected to be replaced	19,768	<b>39,324</b>
Number of boilers expected to be replaced in relation to 30,000 target (2011-12 and 2012-13 only).	19,768	<b>32,280</b>

<b>2.3 UHIS</b>	<b>2012-13</b>	<b>All years</b>
Total Scottish Government expenditure (to date)	£16,426,702	<b>£40,663,976</b>
Number of households engaged	215,028	<b>352,278</b>
Number of households assisted (estimate)	35,103	<b>86,237</b>

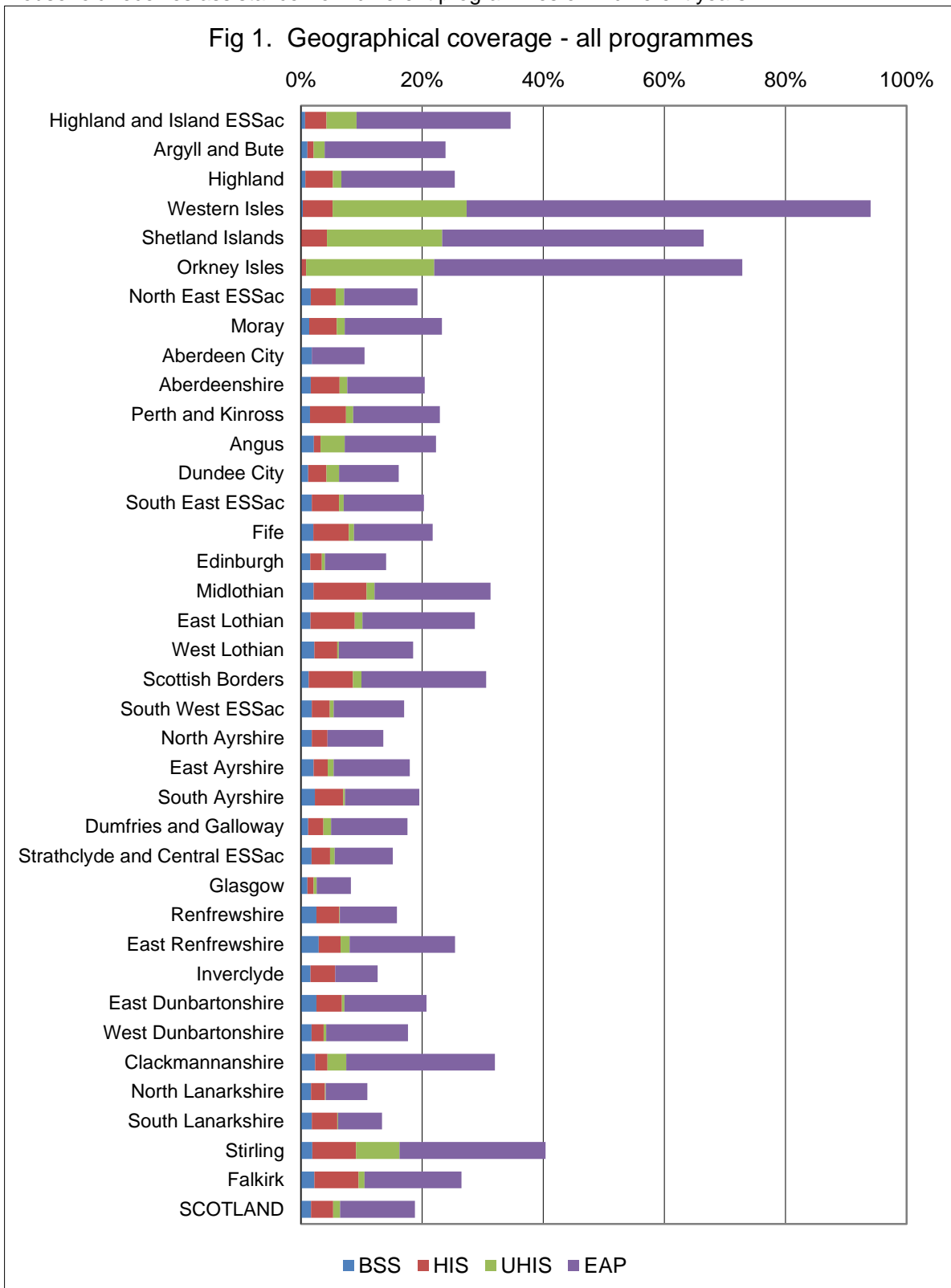
<b>2.4 HIS</b>	<b>2012-13</b>	<b>All years</b>
Total Scottish Government expenditure	N / A	<b>£22,763,264</b>
Number of households engaged by FY09/10 and FY10/11 schemes.	N / A	<b>146,760</b>
Number of households assisted by FY09/10 and FY10/11 schemes.	N / A	<b>27,521</b>

<b>2.5 EAP</b>	<b>2012-13</b>	<b>All years</b>
Total Scottish Government expenditure (estimated)	£37,156,251	<b>£141,603,801</b>
Referrals generated by HES:		
(a.) Households enquiring about EAP	55,876	<b>304,145</b>
(b.) Households given advice (stage 1)	51,732	<b>286,715</b>
(c.) Benefits and tax check referrals	9,933	<b>48,692</b>
(d.) Social Tariff referrals	10,735	<b>69,515</b>
(e.) CERT-EAP (stage 3) referrals	870	<b>24,720</b>
(f.) Stage 4 referrals	20,215	<b>75,267</b>
Number of households assisted:		
(a.) Households taking up EAP	53,029	<b>291,526</b>
(b.) Customers receiving additional income from a benefits and tax check	402	<b>3,125</b>
(c.) Social Tariff:		
i. Households moved to Social Tariff or Rebate	2,851	<b>11,095</b>
ii. Customers benefitting from a payment method switch	90	<b>812</b>
(d.) Households who received insulation from stage 3	149	<b>6,730</b>
(e.) Households who received an installation from stage 4	11,280	<b>39,873</b>
Total households receiving physical measures:	11,429	<b>46,603</b>

## 2. Analysis of households receiving assistance

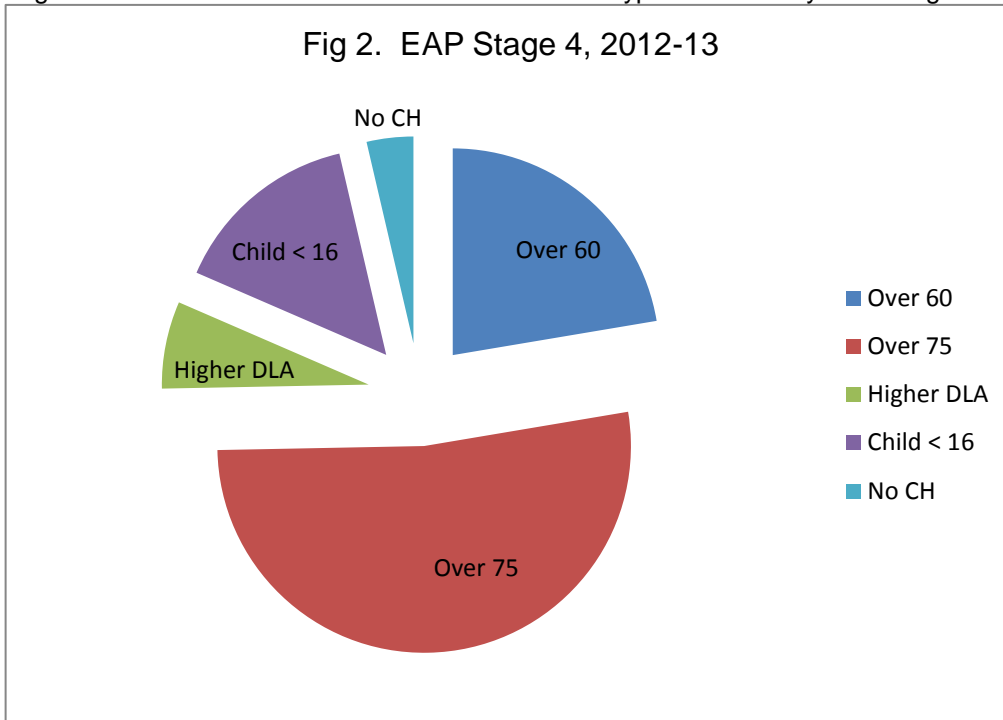
### 2.1 Geographical coverage - households

Figure 1 below shows the 440,000 households receiving energy advice or assistance over the lifetime of the programmes for each of the four programmes, by local authority and ESSAC area, as a percentage of the total number of households in each authority. Note that not every household will have received a physical measure, and that there may be some double counting where the same household receives assistance from different programmes or in different years.



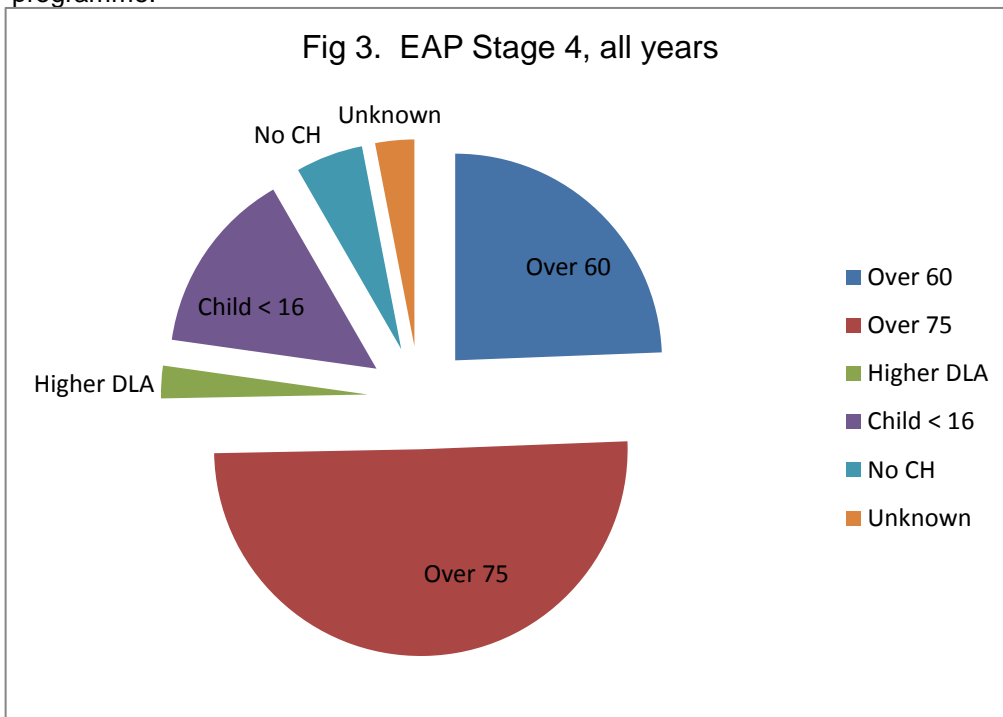
## 2.2 Household types (data available for EAP Stage 4 only)

Figure 2 below shows the breakdown of household types assisted by EAP Stage 4 in 2012-13:



**No CH** = no central heating, **Higher DLA** = higher rates of disability living allowance, **Child < 16** = includes all subcategories of households with a child under the age of 16 and expectant mothers.

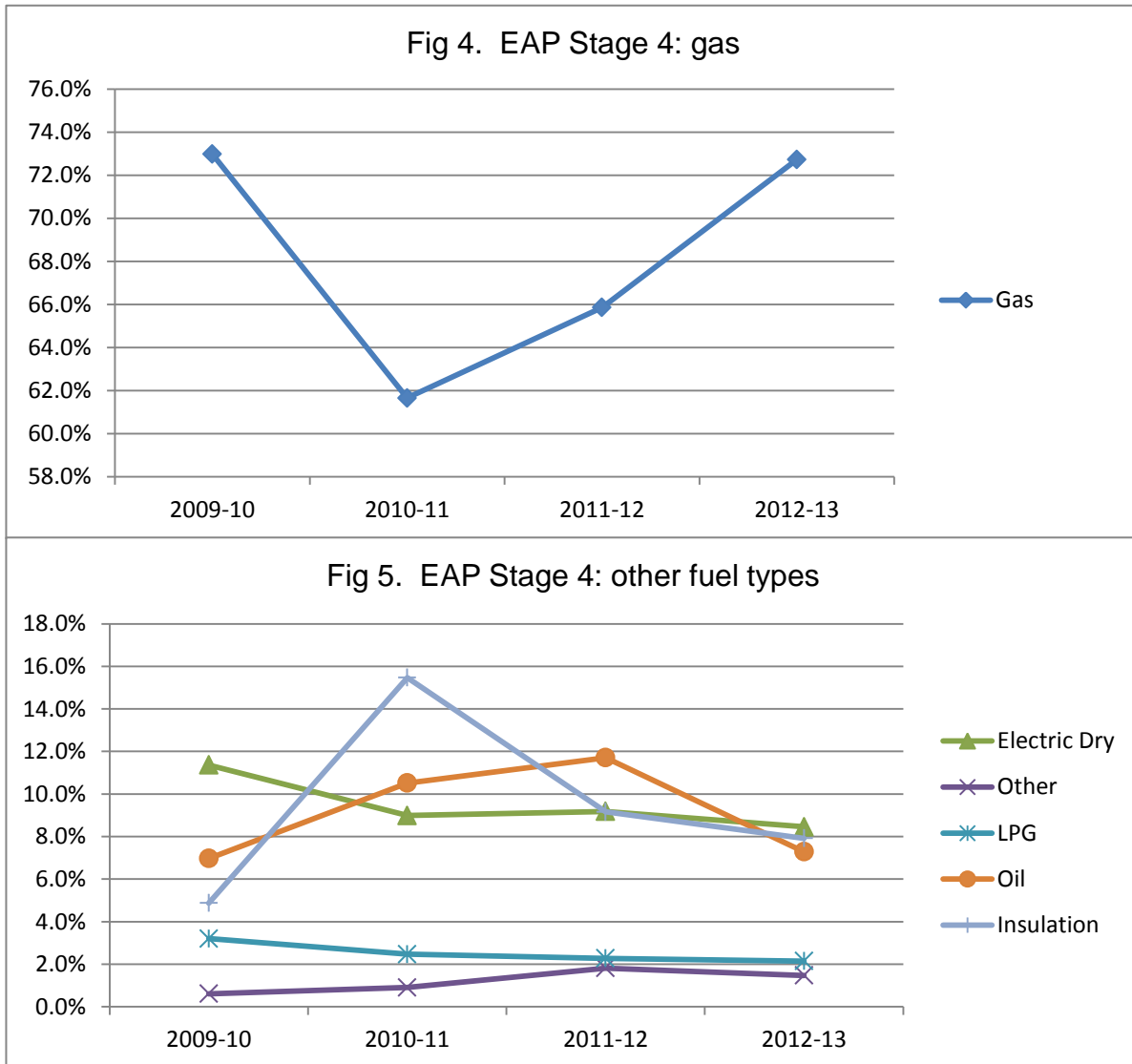
Figure 3 shows the breakdown of household types assisted by EAP Stage 4 over all four years of the programme:



Note that, over the lifetime of the programme, roughly three quarters of stage 4 installations have gone to households with older individuals. Note also that the category to which an application is allocated and for which an installation is reported can sometimes be ambiguous, for example where two people in the household qualify in different categories.

### 2.3 Fuel types (data available for EAP Stage 4 only)

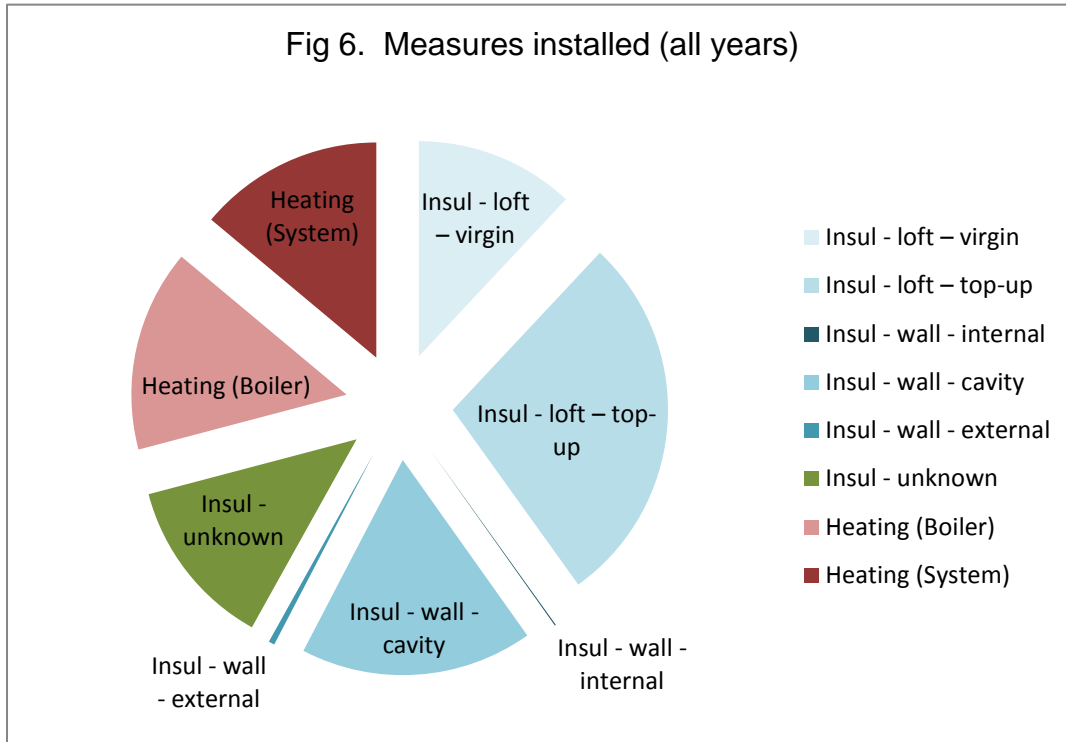
Figures 4 and 5 below show the trend in fuel type for EAP stage 4 installations across the four years of EAP. "Other" includes Electric Wet, ASHP, District Heating and Solid Fuel. "Insulation" covers EAP stage 4 installations in which no central heating system was installed or repaired but either a standard package of insulation measures or insulation of a mobile home was provided.



### 3. Measures installed

Of over 250,000 physical measures installed over the lifetime of the programmes, some 70% were insulation measures. Figure 6 on the next page shows the relative proportions of the different measures. "Unknown" includes EAP stages 3 and 4 and the UHIS insulation measures not falling into the five reporting categories.

Fig 6. Measures installed (all years)



#### 4. Outcomes

##### 4.1 Fuel poverty - households

For these programmes, it is difficult to determine whether any individual beneficiary was or was not in fuel poverty. Figure 7 below represents all fuel poor households in Scotland. If all beneficiaries of all programmes across the lifetimes of those programmes were unique households in fuel poverty, then two thirds of fuel poor households would have benefited. (The red sector represents those fuel poor households who would not have received assistance.) The darker, "base" sectors represent the proportion of fuel poor households who would have benefited from the programme if they were no more or less likely to benefit than any other household. The lighter, "targeted" sectors shows the additional impact of each programme if it was 100% successfully targeted at fuel poor households.

Fig 7. Fuel poor households (all years)

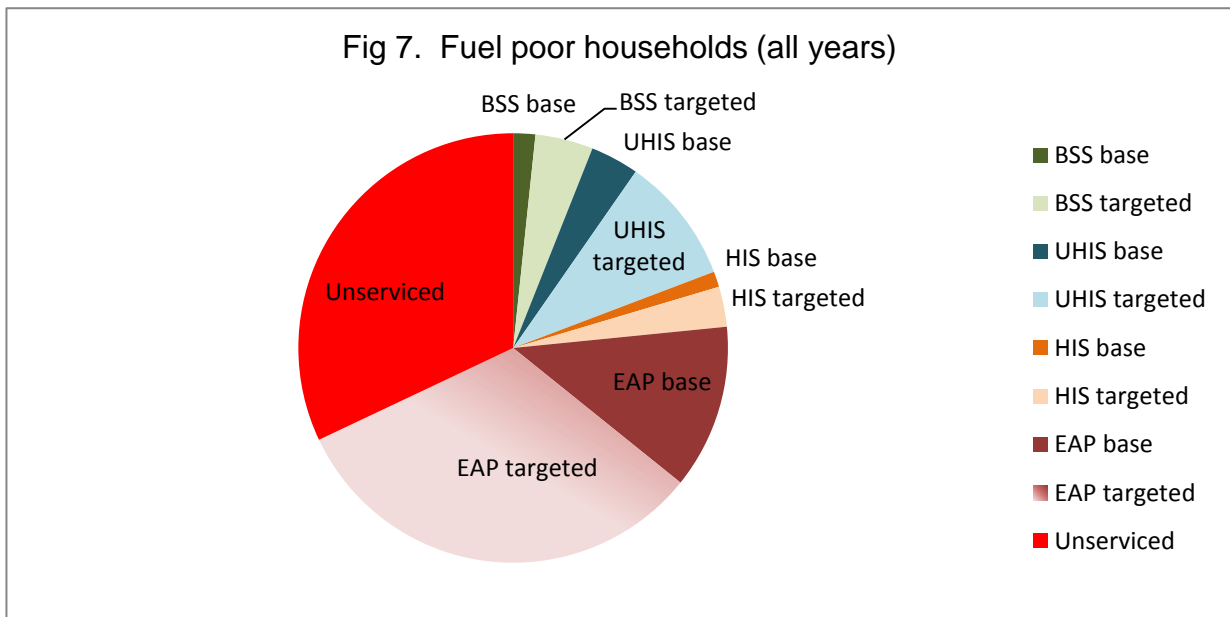
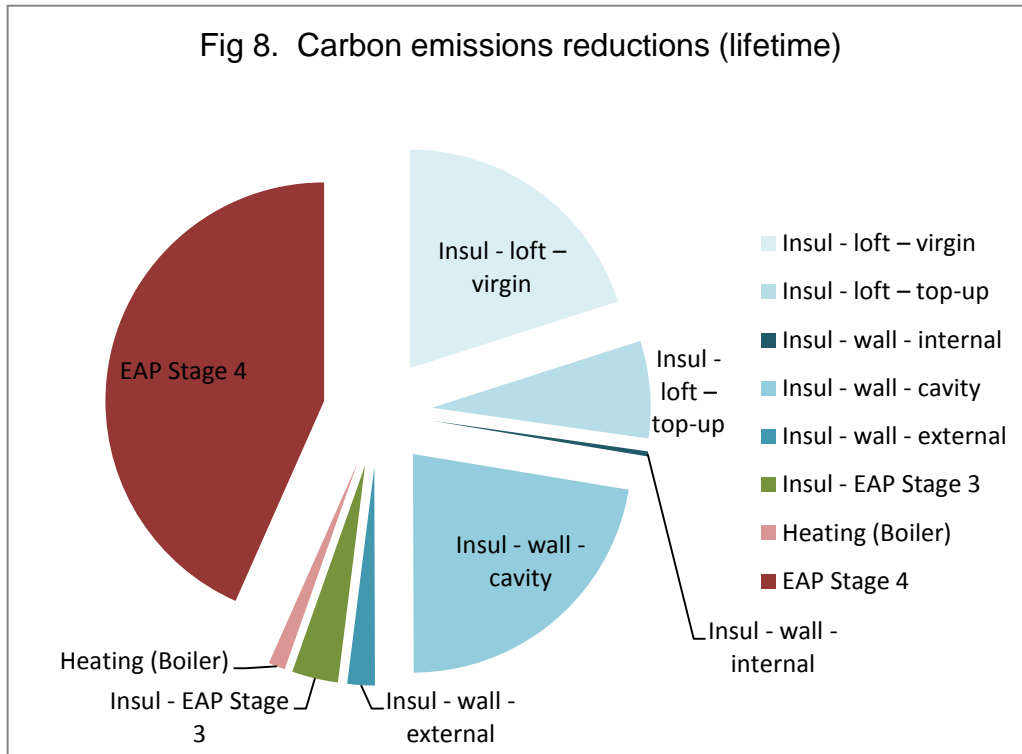


Figure 7 is calculated on the same basis as figure 1: households receiving energy advice or assistance. For BSS, UHS and HIS, this means households receiving assistance through physical measures and for EAP households taking up help from any of stages 1 to 4.

#### 4.2 Climate change - physical measures

The chart below shows the breakdown of the contribution to the 4.2 million tonnes CO<sub>2</sub> lifetime emission reduction between measures. The contributions indicated by the blue sectors derive from insulation measures from UHIS and HIS. Note that EAP Stage 4 includes some insulation measures and that it is not possible to allocate a CO<sub>2</sub> reduction to "other" UHIS measures.



#### 5. Expenditure and effectiveness

The table below shows the performance of each programme with respect to climate change and fuel poverty. The carbon reduction cost to Scottish Government only includes Scottish Government expenditure; it would be increased if it included any householder contribution to installation or maintenance. The household income gearing (£ saved on energy costs / £ spent) only includes Scottish Government expenditure; it would be reduced if it included any householder contribution to installation or maintenance.

Scheme	Climate change	Fuel poverty (Household income gearing as a proxy)
		Ratio
Ranked in order of performance (worst to best) - but this does not take account of other important issues such as customer choice, customer service and complaints, delivery time and administrative costs.	Carbon reduction cost (£ / tonne CO <sub>2</sub> ).	Household income gearing (£ saved / £ spent).
	<b>£ / tonne</b>	<b>Ratio</b>
	<b>Low is good.</b>	<b>High is good.</b>
BSS 10/11, 11/12	311	0.7
HIS 09/10, 10/11	72	3.3
EAP 09/10, 10/11, 11/12	60	3.8
UHIS 10/11, 11/12	22	10.6

This table does not include 2012-13 data, as this is not complete for all programmes. BSS savings are calculated in a different manner to the other schemes and therefore are not directly comparable.

## **6. Lessons for future programmes**

### **6.1 Reporting lessons**

1. Programmes designed to address fuel poverty need to measure fuel poverty before and after in order to measure the impact of the programmes.
2. Carbon savings need to be calculated in a consistent manner across all programmes with the methodology clear from the outset. For the Energy Companies Obligation (ECO), the DECC-Ofgem methodology provides a common basis.
3. Prompt reporting from delivery partners needs to be incentivised and late or erroneous reporting discouraged through sanctions where appropriate.
4. Clear definition of terms is essential to get accurate lower-level reporting data. For example, it is important to be clear on what constitutes "administrative expenditure" or "marketing".
5. Forced categorisation (rather than free or loose text) allows easier calculations. For example, forcing UHIS "other measures" into specific categories would allow a CO<sub>2</sub> saving to be attributed to them.
6. Data submission in ways that require validation by the data provider would increase reliability and facilitate aggregation. For example, this could be achieved by providing a protected Excel worksheet for data submission with validation rules built into it.
7. Reporting needs to capture and present the right data in order to allow lessons to be learnt and improvements to be made to programme delivery as the programmes are running and areas of concern (e.g. high rates of attrition) to be identified, analysed and addressed.

### **6.2 Delivery lessons**

1. The customer journey must be made as simple and effortless as possible, not least to reduce attrition (customers leaving without a service).
2. "Trust pathways" need to be built to connect vulnerable people to relevant services, not least to minimise the opportunity for "cowboy" installers to take advantage.
3. The number of customer dependencies (e.g. having to organise loft clearance or asbestos removal) need to be minimised.
4. Identification and management of the right set of Key Performance Indicators, monitored on a regular basis, is the best way to drive up performance.
5. The most popular measures, the most carbon efficient and the best for tackling fuel poverty are not necessarily the same. For example, insulation is often very effective but not always popular.
6. Achieving behaviour change and the correct use of a new heating systems are important factors in reducing costs and emissions but are very hard to measure.
7. Front-end integration (i.e. arrangements that ensure the customer has access to all relevant assistance triggered through first contact) is an important factor in ensuring maximum benefit and minimum effort for the customer.
8. Take-up is maximised through providing measures free at point of delivery. However, late cancellations of installations (which can be costly to the delivery agent) are more likely when the customer has not made a financial commitment.
9. The customer experience (quality of product, smoothness of customer journey, swift and effective action to deal with complaints) is critical. The integrity of the Scottish Government 'brand' is also an important factor in customer confidence.
10. The right level of resourcing, skills and knowledge is required through the whole supply chain, but the role of the managing agent (which varies by programme) is central. Managing agents must have the appropriate knowledge and expertise in marketing, customer handling, finance (funding streams), technical matters and contract administration.
11. Different customers have different wants and needs. The Boiler Scrappage Scheme offered flexibility on the installer which was attractive to some customers. However, others needed / preferred the managed journey provided by the other programmes.
12. Aesthetics are important to the customer - a purely functional offer may not be sufficient.