



Association for the Conservation of Energy

Westgate House
2a Prebend Street
London N1 8PT

020 7359 8000
pedro@ukace.org

Home energy efficiency 2010-2020

What programmes have delivered over the course of the last Parliament, and are likely to over the course of this Parliament

Summary

Household energy efficiency measures are the most cost effective long term solution to bring down energy bills, tackle fuel poverty and reduce carbon emissions. Yet public investment in energy efficiency has declined considerably following Government spending cuts.

This briefing assesses the number of energy efficiency measures installed, the number of households helped and the total investment during the last Parliament (2010-2015) and estimates what will be achieved during this Parliament (2015-2020). It concludes that:

- The annual number of major energy efficiency measures installed in homes has declined by 80% from 1.74m to 340,000 between the height of delivery in 2012 and 2015. Over the two Parliaments we estimate that the number of major energy efficiency measures installed will decline by 73% from 6m to 1.6m.
- The number of households helped has declined by 76% from 1.34m to 320,000 from the height of delivery in 2012 and 2015. Over the two Parliaments we estimate that the number of households helped will decline by 76% from 5m to 1.2m.
- The total level of investment has declined by 53% from £1.5bn to £0.7bn between the height of delivery in 2012 and 2015. Over the two Parliaments we estimate that the level of investment will decline by 53% from £6.8bn to £3.2bn.
- The main cause of the decline is the abolition of Warm Front, the only Exchequer-funded energy efficiency programme for households, and the cut to the Energy Company Obligation, levied on energy bills to pay for energy efficiency measures, particularly for the fuel poor. Although a supplier obligation is set to continue, the total level of investment has been cut in half.

Methodology

Most of the publicly available data on delivery under home energy efficiency programmes is for fiscal years (i.e. April 1 to March 31). This is how it is reported here. The programmes included are:

- Carbon Emissions Reduction Target (CERT, ran from April 2008 to December 2012)
- Community Energy Saving Programme (CESP, ran from August 2010 to December 2012)
- Energy Company Obligation (ECO, runs from January 2013 to March 2017)
- Successor to ECO (set to run from April 2017 to March 2022)
- Warm Front (the fuel poverty scheme in England, ran from 2000 to March 2013)
- Green Deal:
 - Cashback (ran during 2013 and 2014)
 - Communities (ran in 2013/14, allocating money to local authorities)
 - Home Improvement Fund (ran during 2014 and 2015)
- The suite of home energy efficiency programmes in Scotland (currently collectively known as HEEPS, in this incarnation running since 2013/14, concentrate mainly on fuel poverty)
- Nest and Arbed programmes in Wales (a Warm Front style programme and an area-based programme – Nest has been running since 2011/12 (HEES preceded it), Arbed since 2009; they concentrate mainly on fuel poverty)

The geographical scope is Britain (i.e. excluding Northern Ireland), mainly because the largest programmes – the supplier obligations (CERT, CESP, ECO) – cover Britain.

The latest available data on ECO gives us the state of play at the end of November 2015. Estimates for the number of measures subsequently delivered, investment and number of households helped are based on the pattern of delivery to date and how much of their targets the energy suppliers have so far delivered. This is then extrapolated forward to the end of the current ECO scheme (March 2017). So 2015/16 is half predicted and half actual data and 2016/17 is completely predicted.

From 2017/18 onwards, the new supplier obligation will replace ECO. The details of the new scheme have not yet been decided, but it is known how many households ECO's successor is supposed to target, and how much it is supposed to cost each year as this was announced in the last Autumn Statement. It is assumed that the schemes in the Devolved Nations from 2017/18 onwards will continue at a similar level.

1 Numbers of major measures installed

Here, the four major sets of measures installed under all programmes are assessed. Since ECO began, they make up over 90% of all measures installed under all programmes. They are boiler replacements, cavity wall insulation (CWI), loft insulation (LI) and solid wall insulation (SWI, internal or external).

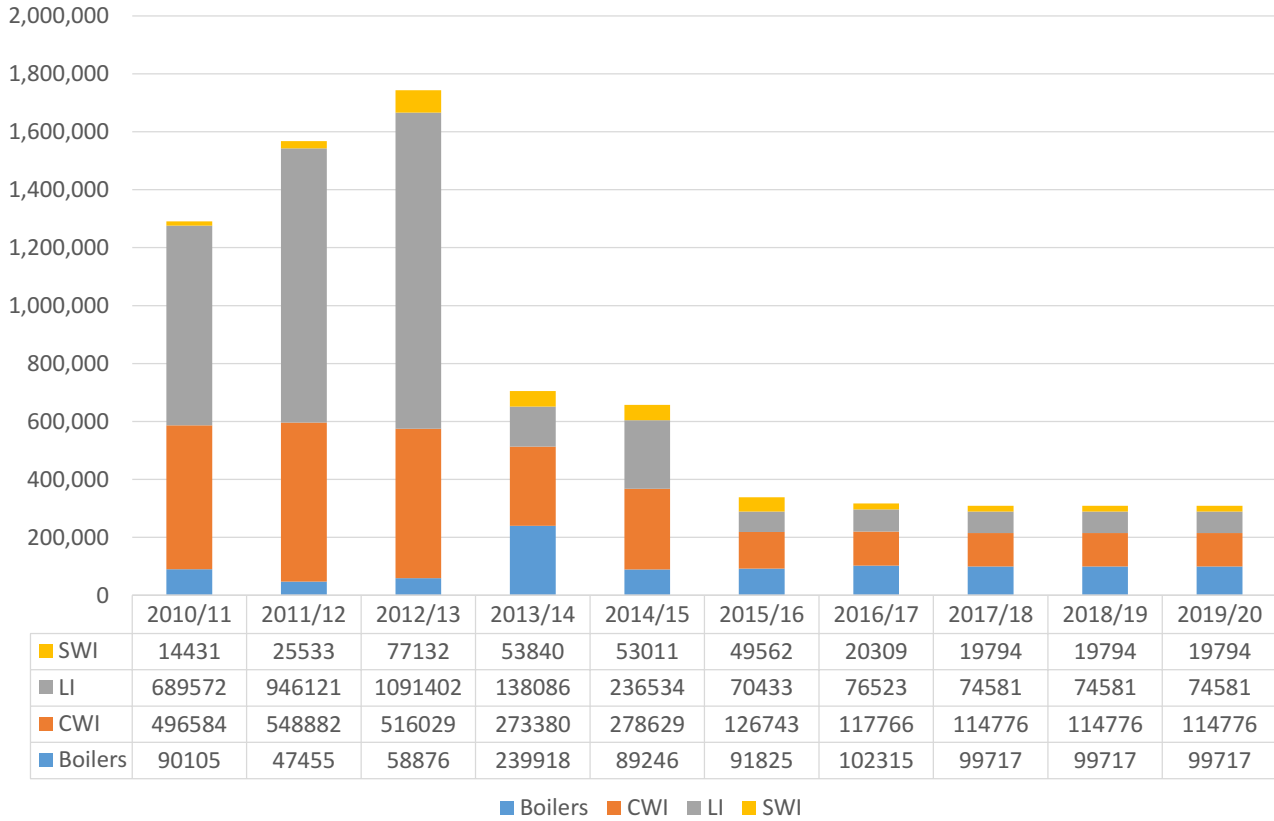


Figure 1: Number of major measures installed since April 2010

Notes:

- The dramatic fall between 2012/13 and 2013/14 was due to the switch from CERT and CESP to Green Deal and ECO.
- The subsequent drop between 2014/15 and 2015/16 is in large part due to the cuts to ECO targets, announced in late 2013, taking hold.

Looking across the Parliaments (comparing 2010-2015 to 2015-2020):

- Number of boilers installed under programmes looks like it will fall slightly from 526,000 to 493,000 – a drop of 6%
- CWI to fall from 2.1m to 600,000 – a drop of 71%
- LI to fall from 3.1m to 370,000 – a drop of 88%
- SWI to fall from 225,000 to 130,000 – a drop of 42%

2 Number of households helped

The total number of households assisted is shown below. This includes all households that installed measures other than one of the major four measures

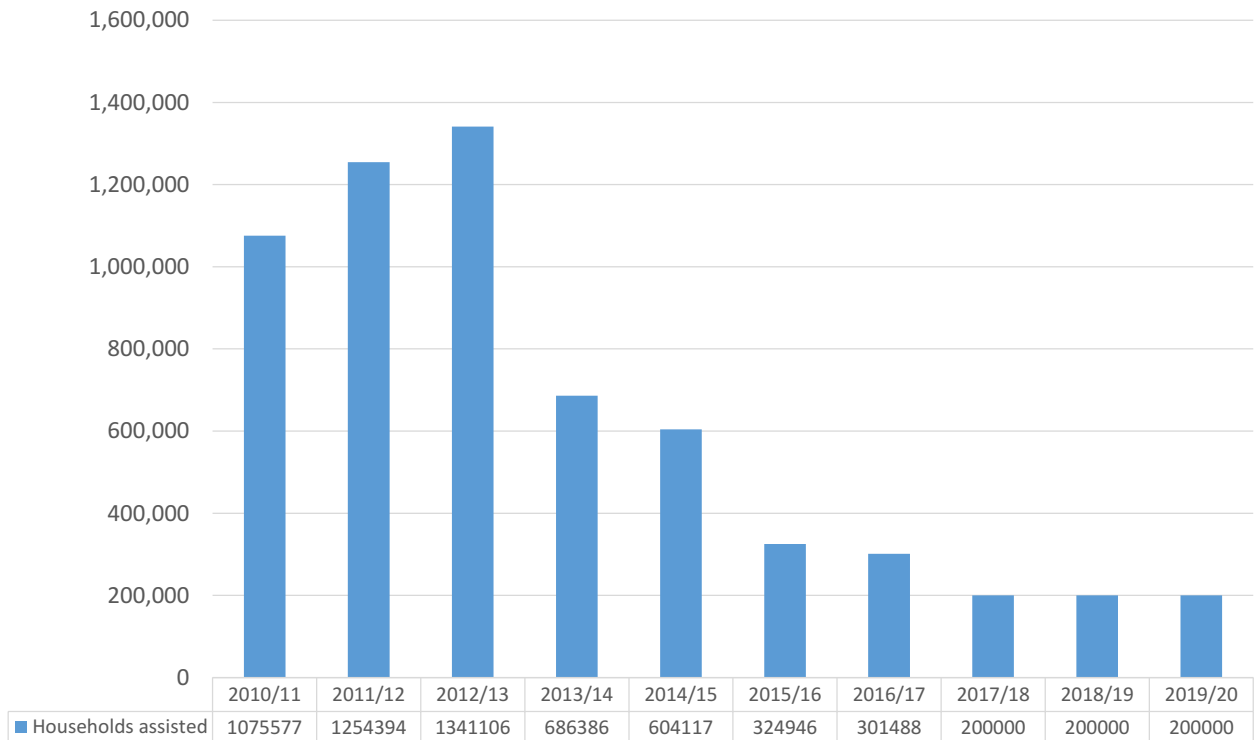


Figure 2: Number of households assisted since April 2010

In the last Parliament, very nearly 5m households received help. In the current Parliament, it currently looks like 1.2m will – a drop of 76%¹.

¹ The additional notes in the Appendix on Figure 1 and Figure 3 apply here as well.

3 Level of investment

The total annual level of investment since April 2010 is shown below. Public expenditure and supplier obligation expenditure is included.

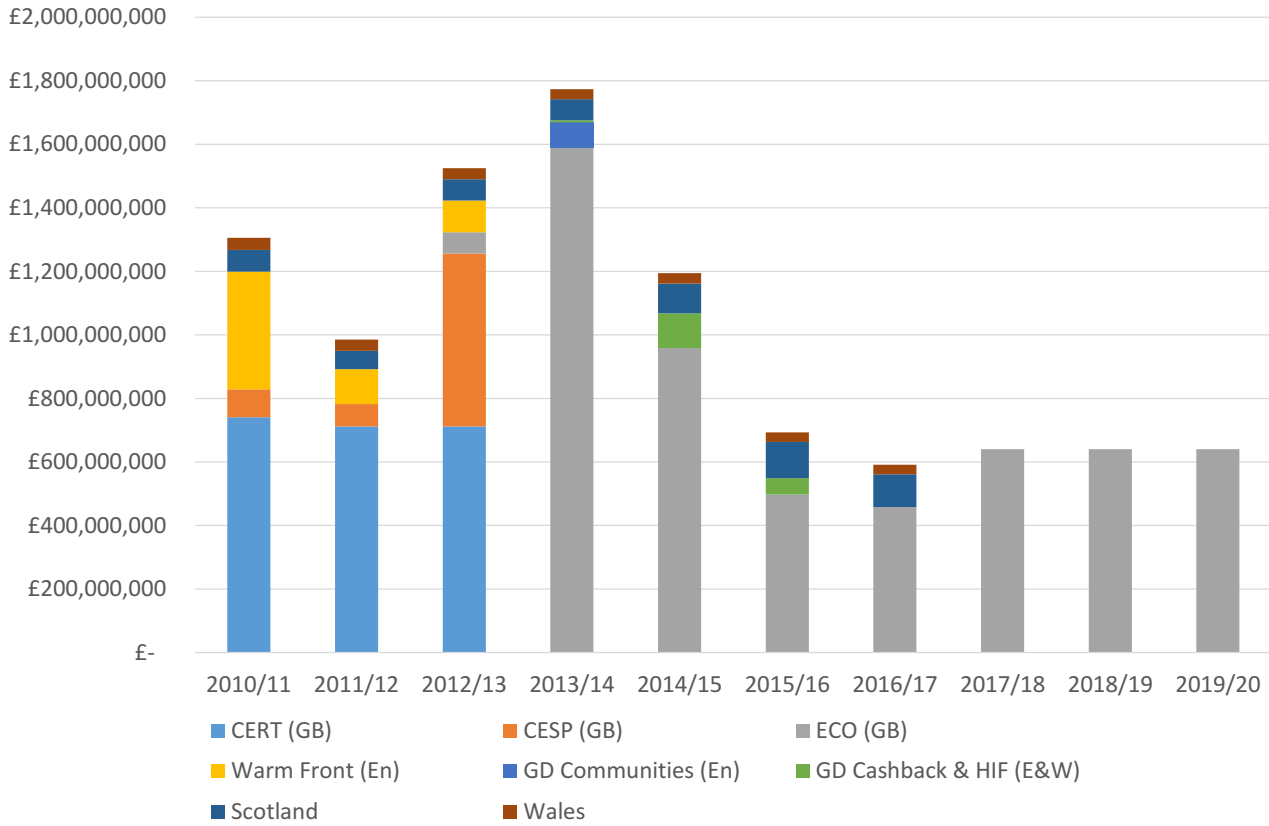


Figure 3: Level of investment since April 2010

	CERT (GB)	CESP (GB)	ECO (GB)	Warm Front (En)	GD Communities (En)	GD Cashback & HIF (E&W)	Scotland	Wales
2010/11	£ 740,933,333	£ 87,762,500	£ -	£ 370,595,000			£ 68,500,000	£ 38,000,000
2011/12	£ 711,750,000	£ 70,210,000	£ -	£ 110,000,000			£ 58,000,000	£ 35,300,000
2012/13	£ 711,750,000	£ 544,127,500	£ 67,028,877	£ 100,000,000			£ 67,200,000	£ 34,500,000
2013/14			£ 1,589,069,184		£ 80,000,000	£ 6,764,000	£ 66,300,000	£ 31,000,000
2014/15			£ 958,264,795			£ 109,283,000	£ 94,000,000	£ 33,000,000
2015/16			£ 497,486,219			£ 51,400,000	£ 114,000,000	£ 30,000,000
2016/17			£ 457,892,339				£ 103,300,000	£ 30,000,000
2017/18			£ 640,000,000					
2018/19			£ 640,000,000					
2019/20			£ 640,000,000					

In the 2010-2015 Parliament, investment was nearly £6.8bn. In the 2015-2020 Parliament, it currently looks like £3.2bn – a drop of 53%.

Notes:

- Supplier obligation investment (CERT, CESP, ECO) will have constituted 80% of total between 2010/11 and 2016/17. No announcements yet from Scotland and Wales regarding the size of their budgets from 2017/18, so I've not included the last three years, even though their schemes are highly likely to continue. There is no equivalent scheme on the horizon in England.
- Total public expenditure (i.e. excluding supplier obligations) over the period from 2010/11 to 2016/17 has averaged:
 - £15 per head of population in England
 - £78 in Wales
 - £107 in Scotland

- Expenditure was quite high in 2013/14 (relative to the number of measures delivered and the number of households helped), in part due to the setup costs of ECO (getting admin systems up and running, in part due to ECO delivering lots of SWI to begin with, and in part due to a one-off programme of £80m: the Green Deal Communities programme).
- The drop in 2014/15 corresponds to the changes to ECO. The changes allowed more of the cheaper measures to be installed (CWI and LI, principally).
- The drop in 2015/16 is mainly due to the cuts to ECO targets taking hold.

Appendix – Sources, notes and assumptions

Numbers of major measures installed	<p>Pre-2013 data is compiled official reports on the schemes we've covered:</p> <ul style="list-style-type: none"> Warm Front annual reports: http://webarchive.nationalarchives.gov.uk/20121205174605/http://www.decc.gov.uk/en/content/cms/funding/warm_front/warm_front.aspx Ofgem updates on CERT and CESP schemes: https://www.ofgem.gov.uk/environmental-programmes/energy-company-obligation-eco/previous-energy-efficiency-schemes
	<p>As this briefing was prepared to a very tight timescale, for time-saving reasons we did not include major measures installed under Wales and Scotland programmes as (while significant numbers for the devolved nations), they don't make much of a difference to the overall numbers. Having said that, they might well make a fair bit of difference to the numbers from 2015/16, but there has not yet been any indication of what programmes in Scotland and Wales have delivered in that year and might deliver from then. In addition it is worth noting that the Scottish programmes in particular have been designed to dovetail with, and attract, ECO funding. So not counting the measure installed under those programmes at least side-steps any risks of double-counting installations.</p>
	<p>From January 2013 to November 2015 (latest available on actual installations), the data are all drawn from DECC's Green Deal and ECO monthly stats: https://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics and https://www.gov.uk/government/collections/household-energy-efficiency-national-statistics</p>
	<p>For 2017/18 onwards (the successor to ECO), we've used the Spending Review and Autumn Statement 2015: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/479749/52229_Blue_Book_P_U1865_Web_Accessible.pdf; it tells us that the successor will be £640m per year, helping 200,000 households per year – We've simply scaled the major measures delivered in 2016/17 to be in line with £640m annual spend from 2017/18.</p>

Number of households helped	<p>From ECO onwards, DECC report the number of households helped under ECO, Green Deal Finance, Green Deal Cashback and Green Deal Home Improvement Fund: https://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics and https://www.gov.uk/government/collections/household-energy-efficiency-national-statistics. Across these schemes, the average number of major measures installed per household is 1.2 – we did not find household numbers for CERT and CESP, so we divided the number of major measures delivered under those schemes by 1.2 in 2010/11, 1.25 in 2011/12, and 1.3 in 2012/13. The reason this goes up is because CESP was very active in 2012/13, and was specifically intended to deliver multiple measures per household.</p>
	<p>For the time after November 2015 (when current stats end at the moment) until March 2017, we have scaled the number of households in accordance with the number of major measures being delivered, based on observations under ECO so far. Thereafter we stick to the Autumn Statement's announcement on number of households to be helped under ECO's successor.</p>
	<p>It is worth noting that CERT delivered heavily discounted loft insulation rolls for DIY customers. Hundreds of thousands of households took this offer up, but we have not included the number of lofts treated in the section on major measures installed, nor the number of homes that were DIY-insulated.</p>
	<p>Warm Front reports include information on number of households helped: http://webarchive.nationalarchives.gov.uk/20121205174605/http://www.decc.gov.uk/en/content/cms/funding/warm_front/warm_front.aspx</p>

Level of investment	<p>From January 2013 to September 2015 (latest available on ECO delivery costs), the data are all drawn from DECC's ECO quarterly stats: https://www.gov.uk/government/collections/green-deal-and-energy-company-obligation-eco-statistics and https://www.gov.uk/government/collections/household-energy-efficiency-national-statistics</p>
	<p>Thereafter, to March 2017, have scaled costs in accordance with the prediction for numbers of measures. Then, to March 2020, it's simply the Autumn Statement announcement of £640m per year.</p>
	<p>We have included spending in Scotland and Wales up to and including 2016/17. Spending is very likely to continue thereafter, but to our knowledge, no early announcements made yet, so we haven't included anything for those years. Up to March 2017 for Wales, we have used:</p> <ul style="list-style-type: none"> Nest Wales annual reports: http://www.nestwales.org.uk/publications; these cover 2011/12 (when the scheme started) to 2014/15. For 2015/16 and 2016/17, We have assumed £15m budget per year, which is slightly lower (and thus a cautious estimate) than Nest budgets to date. For 2010/11, Nest's predecessor, the Home Energy Efficiency Scheme (HEES) was in its last year. We have struggled to firmly establish its budget in that year, but have found a presentation given by the scheme manager at the time (Eaga), who have said the budget has been £18m per year (very similar to Nest in recent years: http://www.cieh-cymruwales.org/uploadedFiles/Core/The region/Regional activity/Presentation archive/6 Pack Training Event - HHSRS in Practice/Clevett home energy efficiency.pdf) Arbed in Wales has consisted of two phases. Phase 1 ran from 2009/10 to 2011/12 (three years), with total funding of £60m. So we've assumed £20m in each of the two years within scope here. Funding has come from WAG, DECC, energy suppliers and RSLs: http://orca.cf.ac.uk/41181/1/FINAL%20WW%20Arbed%20Report%2008%202012.pdf. According to the same source, Phase 2 has funding of £45m (from European Regional Development Fund and WAG) over the three subsequent years, so we've assumed £15m per year from 2012/13 to 2014/15.
	<p>Schemes in Scotland have changed over time:</p> <ul style="list-style-type: none"> In 2010/11, they included a boiler scrappage scheme, Universal Home Insulation Scheme, Home Insulation Scheme, and Energy Assistance Package. In 2013/14, these programmes were changed to become the Home Energy Efficiency Programmes Scotland. HEEPS consists of Area Based Schemes (ABS), Warmer Homes Scotland (WHS), HEEPS Cashback, and HEEPS Loans. Data from 2010/11 until 2015/16 are taken from http://www.scottish.parliament.uk/ResearchBriefingsAndFactsheets/S4/SB_15-13 Fuel Poverty in Scotland.pdf 2016/17 spend on HEEPS is from Scotland's draft budget: http://www.gov.scot/Resource/0049/00491140.pdf