Title of the measure: UK33_Supplier Obligations - Energy Company Obligation

General description

The Energy Company Obligation (ECO) started in January 2013. It is an energy efficiency obligation, a policy that has been in place in the UK since 1994 (see section on historic data below). The basic concept of ECO is that central government imposes an energy savings target on large energy suppliers (gas and electricity) that has to be achieved at the customer end (domestic sector only). The target relates to carbon emissions and bill savings. In the UK, the target is set by the Department for Business, Energy & Industrial Strategy (BEIS) (formerly DECC) for a defined period of time, using a bottom-up approach, assuming an illustrative mix of various energy saving measures that is likely to be used in order to deliver the obligation.

The energy regulator, the Office of Gas and Electricity Markets (OFGEM), is responsible for administering ECO and enforcing it. OFGEM defines individual savings targets for each energy supplier based on their share of the gas and electricity market. OFGEM checks whether the obligated companies achieve them. The energy suppliers chose different ways of delivering the savings, including subcontracting work to installers, managing agents, working with municipalities or carrying out the work themselves. Energy suppliers have legal obligations under the Energy Company Obligation (ECO) scheme if they have more than 250,000 domestic customers and provide more than 400 gigawatt hours of electricity or more than 2,000 gigawatt hours of gas.

Before the start of ECO, the Carbon Emissions Reduction Target (CERT) (see UK20) and the Community Energy Saving Programme (CESP) (see UK29) were in place - both energy efficiency obligations. In January 2013, the policies were succeeded by the Energy Company Obligation (ECO). The major government fuel poverty programme in England, Warm Front (see UK5_Warm Front and Fuel Poverty Programmes) also ended at about the same time. ECO has been designed to replace both carbon saving and fuel poverty programmes.

ECO places three obligations on energy companies:

- Carbon Emissions Reduction Obligation (CERO) where suppliers must promote primary measures (roof and wall insulation) and connections to district heating systems;
- Carbon Saving Communities Obligation (CSCO) which obligates 15% of a suppliers target to be delivered in low income areas and vulnerable households in rural or deprived areas; and
- Home Heating Cost Reduction Obligation (HHCRO), affordable warmth group, which requires a defined reduction in energy costs in low-income households.

While ECO is based on the same principles as CERT and CESP, it is fundamentally different in that most of the effort is targeted at higher cost measures; CERT was entirely focused on low-cost measures.

The first phase of the scheme, ECO1 ran from January 2013 to March 2015. The next obligation period known as ECO2 launched on 1 April 2015 and ended on 31 March 2017. This has now been extended until September 2018 (ECO Help to Heat), and the government has announced that a new domestic energy efficiency supplier obligation, will run until 2021-22 at least. The extension of the current ECO obligation saw a greater focus on tackling fuel poverty and supporting households on lower incomes. There was an increase in the size of the Affordable Warmth (AW) obligation that focuses on lower income and fuel poor households, the removal the Carbon Saving Communities Obligation (CSCO), a relative reduction in the size of the Carbon Emissions Reduction Obligation (CERO), and the addition of a rural sub-obligation to CERO.

The extension of the obligation also:

- extends the current solid wall minimum requirement (at a reduced level), with suppliers required to insulate the equivalent of around 32,000 additional solid walled homes (21,000 per year)
• caps the number of qualifying gas boiler replacements delivered at the equivalent of just over 37,000 (25,000 per year)
• reduces the administrative burden to suppliers and the supply chain, principally through simplified scoring, and the removal of the recommended measures reports under CERO.

Technologies covered

The eligible measures are different for each of ECO’s sub-targets and are listed in the following ECO2 Measures Table:


They include, solid wall insulation, cavity wall insulation, loft insulation, other insulation, boiler replacement and repair, electric storage heater replacement and repair, other heat measures (e.g. controls), district heating connections upgrades, they include a variety of insulation, heating and microgeneration

The Carbon Emissions Reduction Obligation (CERO) focuses on ‘primary measures’, which include wall and roof insulation measures and district heating systems. Other secondary measures, such as glazing, can be included only if they are delivered in a package that includes a primary measure. The list of primary measures includes: flat roof insulation, loft insulation, rafter insulation, room-in-roof insulation, wall insulation (including solid wall insulation, internal and external wall insulation, cavity wall insulation and party wall insulation), insulation of a mobile home and a relevant district heating connection.

The Carbon Saving Community Obligation (CSCO) measures must improve the insulating properties of the premises or provide for a connection to a district heating system. They must be installed at domestic premises in areas of low income, areas adjoining a low income area, rural areas (if promoted to people in receipt of certain benefits) and deprived rural areas, and postcodes are available to help identify these areas.

Under the Home Heating Cost Reduction Obligation (HHCRO), suppliers must deliver measures which reduce home heating costs for private domestic premises in the ‘affordable warmth group’ - low income and vulnerable people who receive specific benefits. Suppliers may choose to deliver to premises that are non-gas fuelled, and can receive an increased cost score for certain measures installed at these premises. A wider range of measures are eligible under this obligation, including heating measures (for example qualifying boiler replacements, repairs and heating controls) and microgeneration.

Businesses and industrial end-users are not covered by the scheme. They are targeted by other policy instruments such as the Climate Change Levy (see UK5_Climate Change Levy and UK16_Climate Change Levy), Climate Change Agreements (see UK16_Climate Change Agreements), and until 2017, the CRC Energy Efficiency Scheme (see UK12_CRC Energy Efficiency Scheme).

OFGEM publish monthly reports on energy supplier’s progress towards meeting the targets.


By the end of June 2017, 2,143,537 measures were installed under ECO in 1,702,003 households. The breakdown by measure type was:

• Cavity wall insulation 37.8%
• Solid wall insulation 10.8%
• Loft insulation 17.3%
• Boiler upgrades 20.3%
• Other heating 13.6%
Impact evaluation

Methods

DECC has modelled the expected CO\textsubscript{2} savings as part of the impact assessment in line with current best practice described in the Green Book policy appraisal guidelines available at https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government

Results

The estimated savings are published in the 2017 UK NEEAP:

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<th>1995</th>
<th>2010</th>
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<td>17.6</td>
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*Carbon savings calculated by using same PJ/kt CO\textsubscript{2}e ratio as implied in update on progress against the 2007 UK National Energy Efficiency Action Plan (July 2011)

**Energy reported as (2010) 0 TWh; (2016) 2.8 TWh and (2020) 4.9 TWh; (Multiplied by 3.6 to convert to PJ)

Source: UK NEEAP 2017

Measure Impact Level

| low | medium | high |

Definition of the qualitative impact levels:

- In general: definition of the impact in terms of final energy. All electricity savings should be linked only to electricity consumption, all other savings (except for those involving fuel substitution and CHP) to the overall final energy consumption.
- Fuel substitution and CHP savings: the savings should be linked to the primary energy, calculated with a fixed factor of 2.5.
- The categories (low, medium, high) should be linked to the aggregate electricity or energy consumption of the sector to which the measure is assigned (households, transport, industry or tertiary), and not to a particular targeted end-use, because statistical data are often missing at the level of end-uses.
- The following limits (in each case in % of the overall electricity or final energy consumption of the respective sector; in case of fuel substitution and CHP; of primary energy consumption) are defined for the three impact levels:
  - **low impact:** <0.1%
  - **medium impact:** 0.1-<0.5%
  - **high impact:** ≥0.5%

Interaction of measures

The Energy Company Obligation (ECO) was linked to the Green Deal (see UK11_Green Deal). The Green Deal focuses on the most cost effective measures and ECO is supposed to fund those measures that do not meet the Golden Rule, providing assistance to customers living in fuel poverty who are less likely to benefit from the Green Deal.

The two policy instruments did not operate separately but were linked via various mechanisms. Green Deal providers, i.e. businesses that offer Green Deal packages to occupants, may offer finance plans that combine funding from ECO and the Green Deal mechanism. Some of the measures that do not fulfil the Golden Rule can be funded by ECO and be packaged with Green Deal funded measures. A brokerage mechanism allows Green Deal providers to access ECO funding from the energy companies by offering carbon savings in competition with other providers via an online portal.
There is now more separation between the two measures and since April 2017, a Green Deal Assessment is no longer required for ECO.

**Historical data**

Experience with energy efficiency obligations in the energy market goes back a long way in the UK; the UK was the first country in Europe to impose such obligations on energy suppliers in 1994. Obligations started at a moderate level, but eventually became the flagship climate policy for the domestic sector delivering the largest proportion of the overall carbon savings. In 2007, the Energy White Paper showed that energy efficiency obligations had become the second most important measure after the EU Emissions Trading Scheme (in terms of carbon savings).

Although there has been a succession of different schemes, the basic logic remained the same. The first Energy efficiency obligation was called Energy Efficiency Standards of Performance (EESoP) and ran from 1994 to 1998. It applied to electricity suppliers only. EESoP was succeeded by EESoP 2. EESoP 3 extended the obligation to gas suppliers as well.

In 2002, the scheme’s name changed to Energy Efficiency Commitment (EEC). EEC 1 lasted from 2002 to 2005 and EEC 2 from 2005 to 2008. To bring the Obligations in line with the UK climate change targets, EEC was eventually rebranded in 2008 as the Carbon Emissions Reduction Target (CERT) that was in place until December 2012. In addition to CERT, the Community Energy Saving Programme (CESP) was introduced in 2009 and also concluded in December 2012.

CERT obliged gas and electricity suppliers who had more than 250,000 domestic customers to meet a carbon emissions reduction target of 293 million tonnes of CO₂ over the life of the measures implemented. Suppliers achieved these targets by mainly promoting energy efficiency measures such as loft and cavity wall insulation to households (e.g. through free or subsidised offers). At least 40% of the obligation had to be achieved in a priority group of low income, vulnerable and elderly (aged 70 or over) households. As a subset of the priority group, 15% of savings had to be promoted to households in the Super Priority Group considered to be at particularly high risk of fuel poverty, for example low income households in receipt of child tax credits with an income below £16,190. CERT was estimated to have stimulated about £5.7 billion over 4.75 years in investment by energy suppliers in promoting low carbon measures.

CESP covered energy suppliers and some generators. CESP had an area-based strategy focusing on more expensive measures intended to be delivered in a whole-house approach and, like CERT, came to an end in December 2012. Obligated parties were required to comply with an overall carbon emissions reduction target of 19.25 million tonnes of CO₂ (lifetime). The major difference when compared with CERT was CESP’s carbon scoring system, which acted as the primary mechanism to ensure delivery of expensive measures in a whole-house-approach, building on local partnerships. CESP had a strong fuel poverty focus, requiring projects to be carried out in defined areas within the lowest 10% of the Index of Multiple Deprivation.

**Results (historic)**

The figures below are based on ex-ante predictions of the likely savings delivered by ECO.

The estimated savings were published in the 2016 UK Annual Report for ‘Energy Company Obligation’:

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*Carbon savings calculated by using same PJ/kt CO\(_2\) ratio as implied in update on progress against the 2007 UK National Energy Efficiency Action Plan (July 2011)

**Energy reported as (2010) 0 TWh; (2016) 2.8 TWh and (2020) 5.3 TWh; (Multiplied by 3.6 to convert to PJ)

**Source:** 2016 UK Annual Report

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</table>

Source: 2014 NEEAP; carbon figures converted from energy by using same carbon/energy ratio as in progress report on UK NEEAP 2007 (published in July 2011) for Supplier Obligations

**References**

OFGEM Energy Company Obligation
https://www.ofgem.gov.uk/environmental-programmes/eco

OFGEM ECO2 Guidance

OFGEM ECO2 Measures list

Final Stage Impact Assessment for the Green Deal and Energy Company Obligation

Green Book policy appraisal guidelines

Annual energy savings estimate from:
2017 UK National Energy Efficiency Action Plan

Updated energy and emissions projections 2016

Historic annual savings from:

2014 UK National Energy Efficiency Action Plan
UK Report on Articles 4 and 14 of the EU End-use Efficiency and Energy Services Directive (ESD)
Update on progress against the 2007 UK National Energy Efficiency Action Plan (July 2011)

2007 BERR Energy White Paper (historic reference)