

Energy Company Obligation 2015-17 (ECO2) Guidance: Delivery

(For reference)

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The Energy Company Obligation (ECO), first introduced in 2013, is an energy efficiency scheme for Great Britain. ECO places legal obligations on larger energy suppliers to deliver energy efficiency measures to domestic premises.

Ofgem (on behalf of the Gas and Electricity Markets Authority) is the ECO administrator. This document provides guidance on how Ofgem will administer the ECO scheme in line with the requirements of the Electricity and Gas (Energy Company Obligation) Order 2014, for the new obligation period that runs from 1 April 2015 to 31 March 2017 (referred to as 'ECO2').

This guidance is aimed at suppliers and the broader supply chain and contains information on how to deliver measures that are eligible to contribute towards the ECO targets.

It is the responsibility of each supplier to understand the provisions of the ECO2 Order and how those provisions apply to it. This guidance may be used by suppliers and members of the supply chain but it is not intended to be a definitive guide to those legislative provisions. Suppliers are responsible for ensuring that they, and any member of the supply chain acting on their behalf, comply with the applicable requirements of the law.

Executive Summary

Energy efficiency is a key part of Government policies for reducing the UK's greenhouse gas emissions. These policies contribute to the Government's wider commitment to cut greenhouse gases by at least 34% by 2020 and at least 80% by 2050.¹

The Energy Company Obligation (ECO), first introduced in 2013, is an energy efficiency scheme for Great Britain. ECO places legal obligations on larger energy suppliers to deliver energy efficiency measures to domestic premises. It focuses on insulation and heating measures and supports vulnerable consumer groups. ECO is intended to assist in reducing carbon emissions, maintaining security of energy supply and reducing fuel poverty.²

Ofgem (on behalf of the Gas and Electricity Markets Authority) is the ECO administrator. This document provides guidance on how Ofgem ('we', 'our' and 'us' in this document) will administer the ECO scheme in line with the requirements of the Electricity and Gas (Energy Company Obligation) Order 2014 (referred to as 'the ECO2 Order'), for the new obligation period that runs from 1 April 2015 to 31 March 2017 (referred to as 'ECO2').

Energy suppliers must achieve carbon and cost savings for three distinct obligations: a total of 12.4MtCO₂ under the Carbon Emissions Reduction Obligation (CERO), 6MtCO₂ under the Carbon Saving Community Obligation (CSCO) (15% of which must be delivered in rural areas) and £3.7billion under the Home Heating Cost Reduction Obligation (HHCRO).

The targets are divided between suppliers according to each supplier's relative share of the domestic gas and electricity market. **These targets must be achieved by 31 March 2017.**

To help users of our guidance, we have split it into two parts:

1. **ECO2 Guidance: Administration** - is aimed mainly at suppliers, describing the processes that suppliers and Ofgem follow to meet the requirements of the ECO2 Order, and
2. **ECO2 Guidance: Delivery** - is aimed at suppliers and the broader supply chain, describing how to deliver measures that are eligible to contribute towards the ECO targets.

This document (ECO2 Guidance: Delivery) addresses the following:

- how a supplier achieves its obligations
- which measures are eligible under ECO and the criteria that must be met
- specific requirements relating to each obligation (CERO, CSCO and HHCRO)

¹ The Carbon Plan: Delivering our low carbon future, December 2011

<https://www.gov.uk/government/publications/the-carbon-plan-reducing-greenhouse-gas-emissions--2>.

² The Green Deal and Energy Company Obligation Consultation, Reference number 11D/886

http://www.decc.gov.uk/en/content/cms/consultations/green_deal/green_deal.aspx.

- how suppliers calculate the carbon savings or cost scores of ECO measures, as applicable
- how measures are notified and the information we require
- the technical and score monitoring requirements that suppliers must meet
- the auditing and fraud processes that suppliers will be subject to, and
- supporting information contained in appendices.

We have no role in administering the Green Deal or the ECO brokerage mechanism and this document does not address the requirements of either of these.

It is the responsibility of each supplier to understand the provisions of the ECO2 Order and how those provisions apply to it. This guidance may be used by suppliers and members of the supply chain but it is not intended to be a definitive guide to those legislative provisions. Suppliers are responsible for ensuring that they, and any member of the supply chain acting on their behalf, comply with the applicable requirements of the law.

Useful Links

ECO2 Order

The Electricity and Gas (Energy Company Obligation) Order 2014:
<http://www.legislation.gov.uk/ukxi/2014/3219/contents/made>.

ECO2 Guidance: Administration

<https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

ECO1 Guidance

For reference purposes, the most recent version of our Energy Companies Obligation (ECO): Guidance for Suppliers (version 1.2) can be found here:

<https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-guidance-suppliers>.

This guidance does not apply to any measures installed during the ECO2 obligation period.

Contents

| | |
|---|-----------|
| Executive Summary | 2 |
| Contents | 4 |
| 1. Introduction..... | 6 |
| The ECO guidance..... | 7 |
| Information gathering powers | 7 |
| ECO Brokerage | 7 |
| Queries and further information..... | 8 |
| 2. Achieving obligations | 9 |
| Promotion of a qualifying action..... | 9 |
| Domestic premises..... | 10 |
| Extensions and new builds | 11 |
| Recommended measures (CERO and CSCO only)..... | 11 |
| Standards relating to the installation of ECO measures | 13 |
| Installation by a person of appropriate skill and experience (HHCRO only) | 15 |
| Percentage of a measure that must be installed | 15 |
| 3. Information on specific ECO measures..... | 17 |
| Solid Wall Insulation..... | 17 |
| Insulation of a cavity wall | 18 |
| Loft insulation | 18 |
| Connections to district heating systems | 20 |
| Relevant district heating connections..... | 20 |
| 4. Carbon Emissions Reduction Obligation | 27 |
| Qualifying actions in CERO | 27 |
| Primary and secondary measures..... | 28 |
| The minimum condition | 29 |
| 5. Carbon Saving Community Obligation | 31 |
| Achieving CSCO | 31 |
| Qualifying actions in CSCO | 31 |
| Areas of low income | 32 |
| Adjoining installations | 32 |
| The rural sub-obligation..... | 36 |
| Areas with dual status | 36 |
| 6. Home Heating Cost Reduction Obligation..... | 38 |
| Qualifying actions in HHCRO..... | 38 |
| The premises requirement | 43 |
| The occupant requirements | 44 |
| Routes for evidencing eligibility..... | 46 |
| Measures installed at non-gas fuelled premises..... | 49 |
| 7. Information on calculating ECO savings..... | 52 |
| Methodologies for calculating savings | 53 |
| Bespoke ECO software for calculating savings..... | 56 |
| Calculating savings for multiple measures | 57 |
| Calculating savings for refurbishments, extensions and new builds..... | 58 |
| Lifetime of a measure..... | 58 |
| Attributing savings to qualifying actions and surplus actions | 61 |
| Demonstrating the accuracy of calculations | 61 |
| 7.a Calculating carbon savings | 62 |
| Weighted average factor | 62 |

| | |
|---|------------|
| In-use factors..... | 62 |
| Formula for calculating a carbon saving | 64 |
| Decimal places | 64 |
| 7.b Calculating cost scores | 65 |
| Methodologies for calculating cost scores | 65 |
| Relevant HHCRO multipliers (RHMs) | 65 |
| General cost score methodology | 67 |
| Qualifying boiler cost score methodology | 67 |
| Qualifying electric storage heater cost score methodology..... | 70 |
| Decimal places | 72 |
| 8. Notification of completed measures | 73 |
| When a supplier must notify us of completed measures | 73 |
| Notifying a completed measure..... | 74 |
| Applications for an extension to the notification deadline | 76 |
| Fair Processing | 78 |
| 9. Technical monitoring, score monitoring and audit | 80 |
| The monitoring requirement..... | 80 |
| The monitoring process | 81 |
| Monitoring timelines..... | 83 |
| Monitoring fails..... | 83 |
| Our response to poor performance | 86 |
| Audit | 87 |
| Fraud | 88 |
| Appendix 1 – Documents and data to be made available on request..... | 90 |
| Appendix 2 – Evidencing the HHCRO premises and occupant requirements | 100 |
| Appendix 3 - Boiler Information Pack | 113 |
| Appendix 4 - Electric Storage Heaters (ESHs) Information Pack..... | 124 |
| Appendix 5 – Abbreviations | 131 |

1. Introduction

- 1.1. The Energy Company Obligation (ECO), first introduced in 2013, is an energy efficiency scheme for Great Britain that places legal obligations on larger energy suppliers to deliver energy efficiency measures to domestic premises. The ECO1 scheme ran between 1 January 2013 and 31 March 2015. A new obligation period has been established under the Electricity and Gas (Energy Company Obligation) Order 2014 (the 'ECO2 Order'), and the scheme that runs during that period is called 'ECO2'.
- 1.2. The overall obligation period for ECO2 runs from 1 April 2015 to 31 March 2017 and is split into two phases. We are required to determine a supplier's obligations for each of these phases:
 - a. **phase 1:** 1 April 2015 to 31 March 2016, and
 - b. **phase 2:** 1 April 2016 to 31 March 2017.
- 1.3. ECO has three distinct obligations:
 - a. **Carbon Emissions Reduction Obligation (CERO):** the installation of carbon qualifying actions, which are wall and roof insulation measures, connections to district heating systems (DHS), and 'secondary' insulation measures
 - b. **Carbon Savings Community Obligation (CSCO):** the installation of carbon saving community qualifying actions, which are insulation measures and connections to DHS in areas of low income, deprived rural areas and (if promoted to people receiving certain benefits) rural areas, and
 - c. **Home Heating Cost Reduction Obligation (HHCRO):** the installation of heating qualifying actions, including insulation and the repair and replacement of boilers and electric storage heaters, to people receiving certain benefits and living in private domestic premises. This is also known as the 'Affordable Warmth'.
- 1.4. The ECO2 Order sets overall targets for each of the above obligations. These are 12.4MtCO₂ for CERO, 6MtCO₂ for CSCO (15% or 0.9MtCO₂ of which must be delivered in rural areas or deprived rural areas) and £3.7 billion for HHCRO.
- 1.5. For each phase of ECO2, suppliers will be allocated a proportion of the overall targets, depending on their relative share of the domestic gas and electricity market. Suppliers must achieve their individual obligations by **31 March 2017**.

- 1.6. A supplier achieves its obligations by promoting qualifying actions ('measures') at domestic premises.

The ECO guidance

- 1.7. This guidance details our administrative processes for ECO2 and sets out the requirements for all obligated suppliers in accordance with the ECO2 Order. Where a supplier fails to meet the requirements of the Order, we may take enforcement action.
- 1.8. This guidance does not address the requirements of the Green Deal or the operation of the ECO brokerage mechanism.

Information gathering powers

- 1.9. We use our information gathering powers³ under the ECO2 Order to require suppliers to provide us with information (for example, the submission of technical monitoring reports). We may require a supplier to:
 - a. provide specific information about its proposals for complying with any requirement under the ECO2 Order
 - b. produce specific evidence to demonstrate that it is complying with, or that it has complied with, any requirement under the ECO2 Order, and
 - c. provide information relating to the cost to the supplier of achieving its obligations.⁴
- 1.10. The information that suppliers must be able to provide at audit, based on the requirements set out in this guidance, is detailed in Appendix 1. This appendix provides full details of the specific data and documents that must be made available.

ECO Brokerage

- 1.11. The ECO Brokerage is an auction-based mechanism to enable suppliers to buy forward contracts delivering ECO measures by participating authorised sellers.
- 1.12. We have no role in administering the ECO Brokerage and this guidance does not address the Brokerage or its administrative requirements. However, we recognise that suppliers may seek credit for measures obtained through it. Any measures

³ Article 32(1) of the ECO2 Order.

⁴ Article 32(2) of the ECO2 Order.

obtained through the ECO Brokerage must still meet the requirements of the ECO2 Order and this guidance to be considered eligible under ECO.

Queries and further information

- 1.13. For further information on our administration of ECO please visit our website: www.ofgem.gov.uk/eco. Any queries about our guidance or the administration of the ECO scheme should be directed to eco@ofgem.gov.uk.
- 1.14. For further advice and referrals regarding energy efficiency, including ECO and the Green Deal, homes and businesses may also contact the Energy Saving Advice Service (ESAS) at 0300 123 1234.⁵ ESAS provides this service in England and Wales.⁶
- 1.15. For further information on the ECO Brokerage, please refer to: <https://www.gov.uk/energy-companies-obligation-brokerage>.
- 1.16. Please direct any queries about the ECO2 Order, future changes to the ECO scheme, the Green Deal and wider policy to Department of Energy and Climate Change (DECC) at: deccecoteam@decc.gsi.gov.uk.

⁵ www.energysavingtrust.org.uk.

⁶ The Home Energy Scotland (HES) will no longer operate a referrals service for Scotland after 31 March 2015. Should another referrals service be made available for customers living in Scotland, Ofgem will provide further guidance on the relevant requirements.

2. Achieving obligations

- 2.1. Each supplier must achieve three distinct obligations – CERO, CSCO, and HHCRO. This chapter provides information that relates, except where otherwise stated, to all of the obligations. Chapter 3 contains information about specific ECO measures and Chapters 4, 5 and 6 provide information about the specific requirements of CERO, CSCO and HHCRO respectively. This chapter covers:
- a. promotion of a qualifying action
 - b. definition of domestic premises
 - c. extensions and new builds
 - d. recommended measures (*CERO and CSCO only*)
 - e. standards relating to the installation of ECO measures
 - f. installation by a person of appropriate skill and experience (*HHCRO only*), and
 - g. the percentage of a measure that must be installed.

Promotion of a qualifying action

- 2.2. A supplier achieves its obligations by promoting qualifying actions ('measures') in Great Britain.
- 2.3. A qualifying action is the installation⁷ at domestic premises of a measure that meets the eligibility criteria specified in the ECO2 Order. The act of promotion is therefore linked to the act of installing a measure. A supplier promotes the installation of a measure if it is a cause of that measure being installed. Only one supplier may be credited with the savings arising from a specific measure.
- 2.4. The most obvious means of promotion is if a supplier contracts an installer to carry out the installation of a measure. However, the fact that a supplier has funded all or part of the installation of a measure is sufficient to establish that the supplier was a cause of that measure being installed.
- 2.5. Funding of the installation should be agreed before installation of the measure begins.

⁷ In the case of most boilers and electric storage heaters, installation refers to repair or replacement. In the case of district heating systems, installation refers to a connection.

- 2.6. A supplier may jointly fund a measure with a third party, for example local government or a devolved administration. In this case the supplier will still need to satisfy us that it was a cause of that measure being installed.

Domestic premises

- 2.7. A supplier achieves its obligations by promoting qualifying actions at domestic premises, including mobile homes.⁸

Domestic premises, other than a mobile home

- 2.8. For premises, other than a mobile home, to be considered a domestic premises they must:

a. be separate and self-contained premises,

AND

b. be used wholly or mainly for domestic purposes.

- 2.9. Premises will be considered to be *separate and self-contained* if, within the boundaries of the premises, they contain:

a. one or more bedrooms. A bedroom can also be a living area eg a bedsit,

AND

b. private kitchen facilities, including a kitchen sink and stove, for occupants to prepare food. Kitchen facilities are private when they are accessible only to the occupants of the bedroom or bedrooms within the part of the building that forms the premises.

- 2.10. The boundaries of the premises are the outermost walls of the total space that is for the exclusive use of the occupants of the premises. For example:

a. in a shared house, the total space includes all bedrooms and the common areas (kitchen, bathroom(s) and living area(s)), or

b. for a bedsit containing a kitchen, the boundaries of the premises are the walls of that bedsit.

- 2.11. Premises will be considered to be *used wholly or mainly for domestic purposes* if the premises is used by the occupant as a main residence.

⁸ Article 2 of the ECO2 Order.

Mobile homes

- 2.12. For a structure to be considered a mobile home, and therefore a domestic premises, it must:
- a. be a caravan
- AND
- b. be used as a dwelling.⁹
- 2.13. 'Used as a dwelling' means a structure being used by the occupant as a main residence.
- 2.14. This structure must be connected to land in respect of which the occupant has some right of possession.

Extensions and new builds

- 2.15. A supplier will not be seen as a cause of a measure being installed if that measure is part of the construction of an extension to an existing premises or is a new build and the measure meets, but does not exceed, the requirements of building regulations or any other legal requirements.
- 2.16. However, where a measure exceeds the requirements of building regulations or any other legal requirements, where applicable, a supplier may credit the additional savings towards its ECO obligations. See Chapter 7 for further information on calculating savings in relation to extensions and new builds.

Recommended measures (CERO and CSCO only)

- 2.17. For a measure (other than a connection to a district heating system) to be a qualifying action under CERO and CSCO, it must be a 'recommended measure'. HHCRO measures do not need to be recommended. There are two ways a measure can be recommended – either in a Green Deal report or a chartered surveyor's report.
- 2.18. It is important to note that:
- a. the report recommending installation of a measure must be completed before the measure is installed, and
 - b. it is insufficient for a measure to be recommended in an Energy Performance

⁹ Article 2 of the ECO2 Order.

Certificate (EPC) – it must either be recommended in a Green Deal report or chartered surveyor's report.

Green Deal report

- 2.19. A measure may be recommended through a Green Deal Advice Report (GDAR). A Green Deal Advisor¹⁰ produces this report following a qualifying assessment¹¹ which is based on an EPC and Occupancy Assessment.¹² Each GDAR is therefore specific to the domestic premises where the measure is to be installed. The report is lodged with the appropriate Green Deal body.
- 2.20. In some cases, the Green Deal Advisor who prepared a GDAR may recommend additional measures in a Green Deal Improvement Package (GDIP). We consider a measure listed in a GDIP to be a 'recommended measure'.

Recommended measure report by a chartered surveyor

- 2.21. A measure may be recommended in a report by a chartered surveyor where the report is based on an assessment of domestic premises to identify measures for improving the energy efficiency of those premises. The assessment must be a survey of the whole house.
- 2.22. The assessment of the premises may be carried out by someone other than the chartered surveyor responsible for the report, provided that they have the appropriate skills and qualifications. The chartered surveyor should be satisfied that the report is accurate.
- 2.23. The report by the chartered surveyor must:
- a. identify the premises that the report relates to
 - b. specify in detail the energy efficiency measure(s) recommended for the premises
 - c. contain all relevant information that the surveyor has used to inform their recommendation
 - d. contain a summary of the assessment of the premises

¹⁰ A Green Deal Advisor is either employed or contracted by an authorised Green Deal Assessor organisation or has become a certified and authorised Green Deal Assessor as a sole trader. For more information see: <http://gdorb.decc.gov.uk/assessors>.

¹¹ A 'qualifying assessment' is an energy efficiency assessment of a property conducted in accordance with Regulation 7 of the Green Deal Framework (Disclosure, Acknowledgement, Redress etc) Regulations 2012.

¹² An occupancy assessment gains an understanding of how the premises are used to provide a better indication of whether the recommended measures reflect the usage of that premises.

- e. contain the name, registration number, qualifications and contact details of the chartered surveyor
- f. if a person other than the chartered surveyor conducted the energy efficiency assessment, contain the name and qualifications of that person,

AND

- g. be signed by the chartered surveyor.

- 2.24. A single report by a chartered surveyor may be used for more than one premises as long as the report clearly states each premises that it relates to. For example, where there is a row or block of largely identical premises, it is not necessary to carry out a complete survey for each individual premises if there are reasonable grounds for judging that the measures being recommended are appropriate for each premises. However, it will usually be necessary to visit each premises in order to determine a few key factors for recommending energy efficiency measures, such as boiler efficiency and fuel type.
- 2.25. The person providing the report should be an appropriately qualified chartered surveyor. For example, a chartered building surveyor or a chartered surveyor who has qualified through the residential survey and valuation pathway.
- 2.26. If a report is completed by a chartered surveyor who we do not consider to be appropriately qualified to recommend the measure(s) referred to in the report, we may determine that the measure(s) is not a recommended measure. Suppliers should not rely on a report unless they are satisfied that the surveyor who completed it is appropriately qualified. Further information is available on the Royal Institution for Chartered Surveyors (RICS) website.¹³

Standards relating to the installation of ECO measures

- 2.27. Suppliers should ensure that the installation of a measure is carried out in accordance with the relevant standards. How this is demonstrated will vary depending on whether or not the measure is referred to in the Publicly Available Specification 2030:2014 Edition 1 ('PAS').¹⁴
- 2.28. If a measure is referred to in PAS, the installation of the measure must be carried out in accordance with the provisions of PAS, building regulations and any other regulations that relate to the installation of the measure.
- 2.29. If a measure is not referred to in PAS, the installation of that measure must be

¹³ www.rics.org.

¹⁴ This is available for purchase on the BIS website:
<http://shop.bsigroup.com/ProductDetail/?pid=00000000030297314>.

carried out in accordance with building regulations and any other regulations that relate to the installation of the measure.

Demonstrating compliance with PAS

- 2.30. Compliance with the provisions of PAS can be demonstrated where the installation is carried out by a PAS-certified installer. Installers can be certified by independent third parties according to the requirements of Publicly Available Specification 2031:2015.
- 2.31. Suppliers should contact us directly to discuss alternative methods for demonstrating compliance with PAS if the installation is not carried out by a certified installer. Should a supplier use an alternative method, we may also require additional monitoring.

Demonstrating compliance with building regulations and other regulations

- 2.32. We will accept any reasonable means of demonstrating compliance with building regulations.
- 2.33. We require suppliers to demonstrate that a product or system used in the installation of a measure complies with building regulations. Suppliers can demonstrate this in various ways, including:
- a. United Kingdom Accreditation Service (UKAS) accredited product approval
 - b. European Technical Approval with additional documentation to show compliance with building regulations
 - c. approval by a building control body, or
 - d. for some measures¹⁵, self-certification schemes.
- 2.34. Any certification or approval must be relevant to the conditions under which the product or system will be used, although the building control body is ultimately responsible for accepting that a measure complies with building regulations.
- 2.35. Suppliers will need to conduct technical monitoring of installation standards. Checking that a measure has been installed in accordance with PAS (where relevant), building regulations and other regulations will form part of technical monitoring. See Chapter 7 for more information.

¹⁵ The building regulations in England and Wales list the measure types this applies to and the requirements governing the person carrying out the work. Suppliers should refer to these building regulations for more information about self-certification schemes.

Installation by a person of appropriate skill and experience (HHCRO only)

- 2.36. HHCRO measures must be installed by a person of appropriate skill and experience. This is not an express requirement for CERO and CSCO measures.
- 2.37. To be considered a person of appropriate skill and experience:
- a. for measures referred to in PAS, measures must be installed by operatives who meet the operative competency requirements listed in the measure-specific annexes to PAS. Compliance with this requirement can be demonstrated if the installation is carried out by a PAS-certified installer, or
 - b. for measures not referred to in PAS, measures must be installed by operatives who meet industry competency standards to install that particular measure. For example, operatives installing microgeneration measures should be members of the microgeneration certification scheme (MCS).

Percentage of a measure that must be installed

- 2.38. Suppliers must install 100% of a measure at premises, unless there are reasonable grounds for not doing so.
- 2.39. For clarity, below are some examples of what constitutes 100% of a measure for different measure types:
- a. for loft insulation, 100% of the measure will be the insulation of the entire loft, including the hatch
 - b. for glazing or draught proofing of windows and doors, 100% of the measure will be the treatment of all windows and doors in the premises, rather than the treatment of a single window or door, or
 - c. for internal wall insulation, 100% of the measure will be the insulation of the internal face of all exterior-facing walls in the premises.
- 2.40. Some examples of what we consider reasonable grounds for installing less than 100% of a measure include planning restrictions, inability to gain access to necessary work areas, or lack of consent from the occupant or landlord of the premises.
- 2.41. Where a pre-existing measure (not delivered through ECO) has only been partially installed, we also consider this as reasonable grounds for installing less than 100%. For example, where pre-existing flat roof insulation is installed to 40% of the roof area, insulating the remaining 60% of the roof area (which can be considered

100% of the treatable area) will be an eligible ECO measure.

- 2.42. Reasons relating to the cost of installing the measure alone will not be accepted as reasonable grounds for suppliers not to install 100% of a measure.
- 2.43. A supplier should contact us if it is unclear as to whether the reason 100% of a measure cannot be installed constitutes reasonable grounds.
- 2.44. Suppliers must ensure that, if less than 100% of a measure is installed where there are reasonable grounds for not installing more, the savings attributed to the measure are reduced accordingly.¹⁶

¹⁶ See paragraph 7.18 for more information on calculating the percentage of a measure installed.

3. Information on specific ECO measures

- 3.1. To achieve its ECO obligations a supplier must install ECO measures. The ECO2 Measures Table ('the measures table') lists the energy efficiency measures that are eligible under ECO.¹⁷
- 3.2. The measures table identifies which obligation(s) the measure can be credited against (ie CERO, CSCO or HHCRO) and. It also lists whether it qualifies as a primary or secondary CERO measure, the relevant in-use factor, the relevant lifetime and other applicable information. This list is not exhaustive and is updated periodically. Suppliers wishing to install measures not listed in the measures table (for example new or innovative measures) should contact us.
- 3.3. This chapter provides information, further to that contained in the measures table, on the following measure types:
 - a. solid wall insulation
 - b. insulation of a cavity wall
 - c. loft insulation
 - d. connections to district heating systems, and
 - e. relevant district heating connections.

Solid Wall Insulation

- 3.4. Solid wall insulation (SWI) means internal or external insulation of a solid wall (ie internal wall insulation (IWI) or external wall insulation (EWI) respectively). SWI does not include insulation of a mobile home, which is a separate eligible ECO measure.¹⁸
- 3.5. A solid wall can be a solid brick wall or a solid non-brick wall. The types of non-brick wall covered by the definition of solid wall include metal or timber frame walls, and walls of pre-fabricated concrete construction.¹⁸
- 3.6. Where a solid wall is insulated with either EWI or IWI the savings for that measure will count towards a supplier's provisional solid wall minimum requirement

¹⁷ <https://www.ofgem.gov.uk/publications-and-updates/energy-company-obligation-eco2-measures-table>.

¹⁸ Article 2 of the ECO2 Order.

(PSWMR).¹⁹

Insulation of a cavity wall

- 3.7. Insulation of a cavity wall includes the insulation of exterior-facing cavity walls and party walls. Cavity walls can be treated with:
- a. cavity wall insulation (CWI) installed to the cavity of the cavity wall
 - b. EWI installed to the exterior face of the cavity wall, or
 - c. IWI installed to the interior face of the cavity wall.
- 3.8. Cavity walls insulated with a solid wall insulation solution (ie EWI or IWI) do not count towards a supplier's PSWMR.

Loft insulation

- 3.9. Loft insulation, which is insulation installed at joist level, can be considered either:
- a. top-up loft insulation, where insulation is installed over pre-existing insulation²⁰, or
 - b. virgin loft insulation, where there is no pre-existing insulation present.
- 3.10. In the case of top-up loft insulation, the savings claimed should only relate to the savings for the new insulation installed under ECO. Where pre-existing insulation was removed, for any reason, before the new insulation was installed, the savings calculation must take into account the pre-existing insulation.
- 3.11. For loft insulation to be claimed as virgin loft insulation, a supplier must be able to demonstrate that there was no insulation present in the loft or that no insulation was recently removed before the measure was installed. If any pre-existing insulation is removed, regardless of whether this is for health and safety reasons, a virgin loft insulation measure cannot be claimed.
- 3.12. Where part of a loft has already been insulated, the areas with no pre-existing insulation can be claimed as virgin loft insulation. If additional insulation is installed in the areas with pre-existing insulation, these areas must be claimed as top-up loft insulation. Each measure type should be notified separately.

¹⁹ See ECO2 Guidance: Administration Chapter 5 for more information on the provisional solid wall minimum requirement (PSMWR).

²⁰ In some instances, pre-existing insulation may be removed and new insulation installed. However, the pre-installation assessment accounts for the pre-existing insulation and so the measure should be notified as top-up loft insulation.

Virgin loft insulation

3.13. For loft insulation to be claimed as virgin loft insulation, the following requirements must be met:

a. the loft must be accessed during the assessment of the premises

- i. where the measure is being claimed under **CERO** or **CSCO** the recommendation report (either a Green Deal report or a report by a chartered surveyor), showing that the loft was accessed during the assessment of the premises and that no pre-existing insulation is present, must be made available for audit,

OR

- ii. where the measure is being claimed under **HHCRO** the pre-installation Energy Performance Certificate (EPC), showing that the loft was accessed during the assessment of the premises and that no pre-existing insulation is present, must be lodged and a copy of the lodged EPC made available on request;

AND

b. at the time of assessment, the assessor²¹ and the occupier or landlord (as applicable)²² must sign a virgin loft insulation declaration²³

- i. this declaration must confirm that no pre-existing loft insulation is present, in all or part of the loft area, or that no loft insulation was recently removed, before the ECO loft insulation is installed, and
- ii. a copy of the signed declaration must be left in the loft at the time of assessment. The declaration should be fixed in a secure position close to the loft hatch where it can be clearly viewed and is unlikely to be covered up or disturbed, for example on a nearby rafter. The declaration should be legible to somebody who is standing at the top of a ladder entering the loft;

A supplier may also choose to retain a copy (or photo) of the signed declaration, which can then form part of an initial review should we have concerns over these requirements being met.

²¹ The person recommending the measure or scoring the measure.

²² The declaration can be signed by someone acting on behalf of the occupier or landlord as long as they are not the installer, supplier or any other party in the supply chain.

²³ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

AND

- c. where score monitoring is carried out on the measure, the monitoring agent must confirm:**
- i. that a correctly signed virgin loft declaration is present in the loft where the measure was installed, and
 - ii. that no pre-existing insulation was identified during the score monitoring inspection.

Connections to district heating systems

3.14. Connections to district heating systems (DHS) are eligible measures where they meet the relevant requirements of the obligation they are being credited against. The following measures are deemed connections to a DHS:

- a. a new connection to domestic premises, including a connection to an existing DHS or to a new DHS
- b. an upgrade of an existing DHS where substantial replacement work is carried out to the plant and/or pipework, or
- c. the installation of a heat meter to an existing connection. Suppliers cannot notify the installation of a heat meter as a separate measure where it is installed as part of new connection or upgrade (ie a. or b. above).

3.15. Where an upgrade to a DHS connection includes two or more technologies with different lifetimes they should be notified as multi-fuel upgrades.²⁴

3.16. We recommend that suppliers contact us before undertaking a DHS connection.

Relevant district heating connections

3.17. For CERO and CSCO, connections to DHS (as defined above) are eligible measures only where the premises being connected meet one of two insulation pre-conditions. These pre-conditions do not apply to connections to DHS notified under HHCRO. Where the premises meet the relevant insulation pre-condition, we refer to the measure as 'a relevant district heating connection'.

3.18. The insulation pre-condition that the premises must meet depends on the type of building the premises are located in:

²⁴ See Chapter 7 for more information on calculating the lifetime for a multi-fuel upgrade to a DHS.

1. **Pre-condition 1:** This pre-condition applies to all premises, except those located in a multi-storey building that do not include the top floor of the multi-storey building.
 2. **Pre-condition 2:** This pre-condition applies to premises, located in a multi-storey building, that do not include the top floor of the multi-storey building.
- 3.19. The top floor of a multi-storey building is the highest floor in that building. Premises which are not on the top floor, but may have some roof area (eg in tiered buildings), are not considered the top floor. Pre-condition 2 applies to these premises.
- 3.20. In certain circumstances, it may be appropriate to connect the DHS before insulating the premises. In such instances, installation of the insulation must be complete by the time the connection to a DHS is notified to us.²⁵
- 3.21. Premises may be insulated with new or pre-existing insulation, or a combination of both, to meet the pre-conditions. Where pre-existing roof or wall insulation is used it must meet the minimum criteria set out in paragraphs 3.43 to 3.44.

Pre-condition 1

- 3.22. Pre-condition 1 applies to all premises, except premises located in a multi-storey building that do not include the top floor of the multi-storey building.
- 3.23. To meet pre-condition 1, premises must have either roof insulation²⁶ **or** wall insulation²⁷ in place. We will consider that the pre-condition is met if:
- a. the total roof area or exterior-facing wall area of the premises is insulated,
- OR
- b. if part of the total roof area or exterior-facing wall area (not exceeding 50%) *cannot be insulated* then the remaining part is insulated.
- 3.24. We use the term 'roof area' to mean:
- a. for loft insulation, the area of the floor of the loft
 - b. for rafter insulation, the area of the rafters (when measured from inside the

²⁵ See Chapter 8 for information on notifying measures.

²⁶ Roof insulation refers to flat roof insulation, loft insulation, rafter insulation or room-in-roof insulation.

²⁷ Wall insulation refers to insulation of a cavity wall and solid wall insulation.

roof)

- c. for flat roof insulation, the area of the roof, and
 - d. for room-in-roof insulation, the area of the room-in-roof including the common walls, gable walls and ceiling.
- 3.25. The 'total roof area' includes any areas not suitable for insulation. For premises with more than one roof type, the total roof area is the sum of any of the areas referred to in paragraph 3.24 a to d above.
- 3.26. The 'total exterior-facing wall area' refers to the total wall area of the premises that is exposed.²⁸
- 3.27. For premises with more than one roof type or wall type, the percentage of the total area insulated with each measure type should be added together. For example, where the premises have a flat roof and a pitched roof, the percentage insulated is the percentage of the total roof area insulated with flat roof insulation and rafter insulation.

Reasons for judging a roof area or an exterior-facing wall area cannot be insulated

- 3.28. We will judge that part or all of a roof area or an exterior-facing wall area *cannot be insulated* under the following circumstances:
- a. It is **not possible to access** an area of the roof or exterior-facing wall to install the insulation. For example:
 - i. in relation to roof insulation, there are separate areas within the roof and one of these areas does not have a loft hatch, or
 - ii. in relation to wall insulation, the space between the wall and another building is too small to allow access, or
 - b. It is **unlawful** to install the insulation. For example:
 - i. in relation to roof insulation, there is a protected species inhabiting the roof area, or
 - ii. in relation to wall insulation, planning permission to install external wall installation will not be granted, or

²⁸ The area of each wall is calculated by multiplying the wall length by its height. This may or may not include any areas not suitable for insulation, such as windows and doors.

- c. The occupier or landlord of the premises, as applicable, **refuses to consent** to the installation on reasonable grounds other than cost. For example:
 - i. in relation to roof insulation, the loft is used as a living space therefore the occupant refuses to have loft insulation installed, or
 - ii. in relation to wall insulation, the occupier refuses to consent to internal wall insulation because it would cause too much disruption and/or inconvenience.
- 3.29. At least one reason must apply to **each type** of insulation measure that could be used to treat that area for us to judge it cannot be insulated. For example:
- a. where a roof area consisting of a combination of flat roof and pitched roof construction cannot be insulated, a reason must be given for each type of insulation that could be installed to both the pitched roof and flat roof areas, or
 - b. where an exterior-facing solid wall cannot be insulated, a reason must be given for both EWI and IWI.
- 3.30. A supplier may identify other reasons which it believes prevents the roof or exterior-facing wall area from being insulated. In such instances the supplier should contact us and we will judge whether or not the area can be insulated.
- 3.31. The cost of the installation alone is not a sufficient reason for judging that a roof or exterior-facing wall area cannot be insulated.

Pre-condition 2

- 3.32. Pre-condition 2 applies to premises, located in a multi-storey building, that do not include the top floor of the multi-storey building.
- 3.33. To meet pre-condition 2, premises are not required to have roof insulation in place as this is not possible. We will judge that premises meet pre-condition 2 if all exterior-facing walls of the multi-storey building in which the premises are located are insulated, except for walls which have:
- i. one or more parts of solid wall construction, or
 - ii. a cavity which cannot be insulated.
- 3.34. To determine whether pre-condition 2 has been met for premises, the above test (paragraph 3.33) must be applied to *each* of the exterior-facing walls of the multi-storey building in which the premises are located.

Reasons for judging a cavity cannot be insulated

- 3.35. The exterior-facing walls of a multi-storey building must be insulated where they are of cavity wall construction, except for the walls which have a cavity which *cannot be insulated* (ie the cavity cannot be filled with cavity wall insulation).
- 3.36. Where a cavity wall cannot be insulated with cavity wall insulation (CWI), there is no requirement to treat that wall with solid wall insulation (IWI or EWI).
- 3.37. We will judge that the cavity of an exterior-facing wall cannot be insulated where any of the reasons relating to wall insulation, provided above in paragraph 3.28, can be demonstrated.

Additional technical reason

- 3.38. In addition to the reasons described in 3.28 above, we will judge that a cavity cannot be insulated where there are technical reasons to support this.
- 3.39. We require a report²⁹ by an appropriately qualified chartered surveyor³⁰ or structural engineer³¹ confirming that a cavity cannot be filled for technical reasons. The report must demonstrate that there is no cavity wall insulation system available for that construction type or that the particular conditions of the wall mean that the cavity cannot be insulated. It is not sufficient for the report to show that the cavity is hard-to-treat.
- 3.40. Each assessment must be undertaken on an individual wall basis and be specific to the structure and conditions of the building. The chartered surveyor or structural engineer must undertake a reasonable assessment of each wall before recommending that the cavity cannot be insulated.
- 3.41. A supplier may identify other reasons which it believes prevents the cavity of an exterior-facing wall from being insulated. In such instances the supplier should contact us and we will judge whether or not the area can be insulated.
- 3.42. The cost of the installation alone is not a sufficient reason for judging that a cavity cannot be insulated.

²⁹ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

³⁰ A chartered surveyor accredited with a Royal Institution of Chartered Surveyors (RICS) membership (MRICS) or a Fellow (FRICS) of the association who has qualified through the residential survey and valuation pathway.

³¹ A structural engineer accredited with Chartered membership of the Institution of Structural Engineers (MIStructE), or an Associate (AImStructE) or Fellow (FImStructE) of the institution.

Minimum standards for pre-existing roof insulation

3.43. Where premises have pre-existing roof insulation which is not being claimed as an ECO measure, and which a supplier intends to use to meet pre-condition 1, we will judge that the roof area is insulated if either of the following conditions are met:

- a. the premises were built during or after 1983 in England and Wales, or 1984 in Scotland, and there is roof insulation present,

OR

- b. where the premises were built before 1983 in England and Wales, or before 1984 in Scotland, or where the dates are unknown, the roof (with the insulation) achieves the required U-value³² for the relevant roof type. This is where:

- i. the premises have a flat roof and the roof with the existing flat roof insulation achieves a U-value of 0.40W/m²K or lower
- ii. the premises have a pitched roof and the roof with the existing rafter insulation achieves a U-value of 0.40W/m²K or lower
- iii. the premises have a room-in-roof and the roof with the existing room-in-roof insulation achieves a U-value of 0.50W/m²K or lower, or
- iv. the premises have a loft and the roof with the existing loft insulation achieves a U-value of 0.40W/m²K or lower (this will be considered achieved where the pre-existing insulation is installed to a depth of 100mm).

Minimum standards for pre-existing wall insulation

3.44. Where premises have pre-existing wall insulation which is not being claimed as an ECO measure, and which a supplier intends to use to meet pre-condition 1 or pre-condition 2, we will judge that the wall area is insulated if:

- a. the premises were built during or after 1983 in England and Wales, or 1984 in Scotland, and there is wall insulation present,

OR

- b. where the premises were built before 1983 in England and Wales, or before 1984 in Scotland, or where the dates are unknown:
 - i. the premises have cavity walls that are adequately filled with cavity

³² A U-value is a measure of the heat transmission through a material in W/m²K.

wall insulation

- ii. the premises have cavity walls that have existing EWI or IWI in place which achieve a U-value of $0.60 \text{ W/m}^2\text{K}$ or lower, or
- iii. the premises have solid walls that have existing EWI or IWI in place which achieve a U-value of $0.60 \text{ W/m}^2\text{K}$ or lower.

For reference

4. Carbon Emissions Reduction Obligation

- 4.1. The Carbon Emissions Reduction Obligation (CERO) focuses on the installation of wall and roof insulation measures and connections to district heating systems. For CERO, these measures are referred to as 'primary measures'. Other insulation measures such as glazing and draught proofing are also eligible as 'secondary measures' if they are promoted at the same premises as a primary measure.
- 4.2. This chapter outlines the following:
- what constitutes a 'carbon qualifying action'
 - what constitutes a primary and secondary measure, and
 - how primary measures can be used to support secondary measures.

Qualifying actions in CERO

- 4.3. A supplier must achieve its CERO by promoting carbon qualifying actions. Some of a supplier's overall CERO must be achieved by promoting solid wall insulation measures. This is known as a supplier's solid wall minimum requirement (SWMR) and is discussed in more detail in Chapter 5 of the ECO2 Guidance: Administration.
- 4.4. A carbon qualifying action is the installation, at domestic premises³³, of a measure that:
- is installed on or after 1 April 2015
 - is installed in accordance with the Publicly Available Specification 2030:2014 Edition 1 (PAS) where the installation is referred to in the Specification³⁴
 - where the measure is not specified in PAS, is installed in accordance with building regulations and any other regulations that relate to the installation of the measure, and
 - except in the case of a connection to a district heating system (DHS), is a recommended measure.
- 4.5. CERO measures are divided into two broad groups:
- '**primary measures**' - including wall and roof insulation measures and relevant district heating connections³⁵, and

³³ See Chapter 2 for information on domestic premises.

³⁴ See Chapter 2 for information on standards relating to the installation of a measure.

- b. **'secondary measures'** - including other insulation measures, such as glazing and draught proofing, installed at the same premises as a primary measure.

Primary and secondary measures

- 4.6. This section details which measures are considered to be primary measures, the eligibility requirements for primary and secondary measures, and the conditions which must be met for a primary measure to support a secondary measure.

Primary measures

- 4.7. A primary measure is³⁶:

- a. flat roof insulation
- b. loft insulation
- c. rafter insulation
- d. room-in-roof insulation
- e. wall insulation (insulation of a cavity wall or solid wall insulation)³⁷
- f. insulation of a mobile home, or
- g. a relevant district heating connection.

- 4.8. We use the term 'roof insulation' to refer to flat roof insulation, loft insulation, rafter insulation or room-in-roof insulation.

Secondary measures

- 4.9. A secondary measure is a measure, other than a primary measure, which is installed to improve the insulating properties of the premises.

- 4.10. In addition to the criteria set out in paragraph 4.4, a secondary measure will not be considered a carbon qualifying action unless:

- a. it is installed at the same premises where a primary measure(s) has been, or will be, installed

³⁵ See Chapter 3 for information on relevant district heating connections.

³⁶ See Chapter 3 for measure-specific information on certain primary measures.

³⁷ This includes internal wall insulation (IWI), external wall insulation (EWI), cavity wall insulation (CWI) or party wall insulation.

- b. it is installed by the same supplier that installed the primary measure(s), ('the supplier condition')³⁸
 - c. it is installed no more than six months before or after the date on which the primary measure(s) is installed, ('the installation condition'), and
 - d. the primary measure, except relevant district heating connections, is installed to a specified minimum insulation level ('the minimum condition').
- 4.11. We refer to the primary measure that *supports* a secondary measure as a 'related primary measure'. More than one secondary measure may be supported by the same related primary measure.
- 4.12. The installation condition does not apply to relevant district heating connections or any secondary measure that is supported by a relevant district heating connection as its related primary measure. A relevant district heating connection can be installed at any point during the obligation period.

The minimum condition

- 4.13. For a primary measure to support a secondary measure it must meet the minimum condition. To meet the minimum condition the primary measure must be installed to at least 50% of, as applicable:
- a. the total exterior-facing wall area³⁹ of the premises
 - b. the total roof area⁴⁰ of the premises, or
 - c. the ceiling, floor and wall area of a mobile home.
- 4.14. In the case of loft insulation, to meet the minimum condition the loft must also be:
- a. insulated to a depth of no greater than 150mm before installation, and
 - b. insulated to a depth of at least 250mm after installation.
- 4.15. Where a primary measure does not meet the minimum condition (ie it is installed to less than 50% of the area and, in the case of loft insulation, to the required depth) it may still be an eligible primary measure, provided it meets the requirements relating to the percentage of a measure that must be installed.⁴¹

³⁸ This does not mean that the measure needs to be installed by the same installer.

³⁹ See paragraph 3.26 for information on 'total exterior-facing wall area'.

⁴⁰ See paragraph 3.25 for information on 'total roof area'.

⁴¹ See Chapter 2 for information on the percentage of installation that must be completed.

However, this installation cannot support a secondary measure and will not be considered a related primary measure.

Using more than one primary measure to meet the minimum condition

- 4.16. Suppliers can use more than one primary measure to meet the minimum condition and in turn support a secondary measure.⁴² In such instances, both primary measures are considered related primary measures.
- 4.17. Where more than one type of wall insulation or roof insulation is used to treat the wall or roof area of a premises respectively, the percentage of the area that these measures are installed to can be added together to meet the minimum condition for that area. For example, where a premises has both solid and cavity walls, and more than one type of wall insulation is used to treat the exterior-facing wall area, the percentages of each can be added together to meet the minimum condition.
- 4.18. The secondary measure will only be eligible as a qualifying action after the minimum condition has been met. Therefore, where there is more than one related primary measure, the primary measure which results in the minimum condition being met should be notified as the 'associated measure' in the notification template.⁴³
- 4.19. In relation to the installation condition, the secondary measure must be installed no more than six months before or after the date of installation of the primary measure which results in the minimum condition being met.

⁴² Provided all other conditions specified in paragraph 4.4 and 4.10 are also met.

⁴³ <https://www.ofgem.gov.uk/publications-and-updates/eco-notification-template-v2.0>.

5. Carbon Saving Community Obligation

- 5.1. The Carbon Saving Community Obligation (CSCO) focusses on the installation of insulation measures and connections to district heating systems at domestic premises⁴⁴ in low income, adjoining or rural areas.
- 5.2. This chapter outlines the following:
- a. what constitutes a 'carbon saving community qualifying action'
 - b. where CSCO qualifying actions should be installed
 - c. what constitutes an adjoining installation, and the limit associated with the savings that can be delivered through adjoining installations, and
 - d. how to achieve the 'rural sub-obligation'.

Achieving CSCO

- 5.3. A supplier achieves its CSCO mainly by promoting the installation of carbon saving community qualifying actions in areas of low income. An area of low income is as listed in the *2014 low income and rural document*.⁴⁵
- 5.4. At least 15% of a supplier's total CSCO must be achieved by promoting carbon saving community qualifying actions either to members of the affordable warmth group (AWG)⁴⁶ living in a rural area, or to any domestic premises in a deprived rural area.⁴⁷ We refer to this requirement as a supplier's 'rural sub-obligation'.
- 5.5. The information below explains the requirements relating to qualifying actions promoted in areas of low income, adjoining areas and rural areas (including deprived rural areas).

Qualifying actions in CSCO

- 5.6. A carbon saving community qualifying action is the installation, at a domestic premises, of either:
- a. a measure installed to improve the insulating properties of the premises, or
 - b. a relevant district heating connection.⁴⁸

⁴⁴ See Chapter 2 for information on domestic premises.

⁴⁵ <https://www.gov.uk/government/publications/The-Future-of-the-Energy-Company-Obligation-Small-Area-Geographies-Eligible-for-ECO-CSCO-Support>.

⁴⁶ See Chapter 6 for information about membership of the affordable warmth group.

⁴⁷ Rural areas and deprived rural areas are defined in the *2014 low income and rural document*.

⁴⁸ See Chapter 3 for information on relevant district heating connections.

- 5.7. In each case, the measure must also be:
- a. installed on or after 1 April 2015
 - b. installed in accordance with the Publicly Available Specification 2030:2014 Edition 1 (PAS) where the installation is referred to in the Specification⁴⁹
 - c. where the measure is not specified in PAS, installed in accordance with building regulations and any other regulations that relate to the installation of the measure, and
 - d. except in the case of a relevant district heating connection, a recommended measure.⁵⁰

Areas of low income

- 5.8. In CSCO, the majority of measures must be installed at domestic premises in an area of low income. Suppliers should refer to the 2014 *low income and rural document*⁵¹, or use the CSCO tool⁵² (or an equivalent system) to ensure measures are installed in low income areas.
- 5.9. England and Wales are divided into areas described as lower layer super output areas (LSOAs). Scotland is divided into areas described as Datazones. All LSOAs and Datazones eligible for CSCO measures are listed in the *2014 low income and rural document*.
- 5.10. LSOAs and Datazones are defined in the following documents respectively:
- a. 'Mid-2010 Population Estimates for Lower Layer Super Output Areas in England and Wales by Broad Age and Sex' (release date 28 September 2011 – marked as 'superseded')⁵³, and
 - b. 'SIMD Datazone Lookup' (version 3 published on 6 March 2012).⁵⁴

Adjoining installations

⁴⁹ See Chapter 2 for information on standards relating to installation of a measure.

⁵⁰ See Chapter 2 for information on recommended measures.

⁵¹ <https://www.gov.uk/government/publications/The-Future-of-the-Energy-Company-Obligation-Small-Area-Geographies-Eligible-for-ECO-CSCO-Support>.

⁵² <https://cscolocationcentre.co.uk/>. This is a publically available version of the tool we use to assist in the verification of CSCO measures.

⁵³ This document can be found on the website for the Office of National Statistics by clicking on the words 'Lower Layer Super Output Area Mid-Year Population Estimates, Mid-2010 – (SUPERSEDED)' at the following address: <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-230902>.

⁵⁴ This version is no longer available at <http://www.gov.scot/>. For further information please contact the Department of Energy and Climate Change.

- 5.11. A supplier may achieve part of its CSCO by installing carbon saving community qualifying actions at domestic premises in a specified adjoining area.⁵⁵ This is an area that adjoins (ie shares a border with) an area of low income. Such a measure is referred to as an 'adjoining installation'. Only qualifying actions can be claimed as adjoining installations.
- 5.12. If a supplier notifies us of a measure installed in an adjoining area, it must notify us of the area of low income to which the adjoining area relates. Suppliers can use the CSCO tool⁵⁶, or an equivalent system, to identify adjoining areas.
- 5.13. An adjoining installation is not eligible if the adjoining area is in Scotland and the low income area is in England. The same is also true for the reverse situation.
- 5.14. A supplier is not permitted to achieve part of its rural sub-obligation by delivering measures in areas adjoining a rural area.

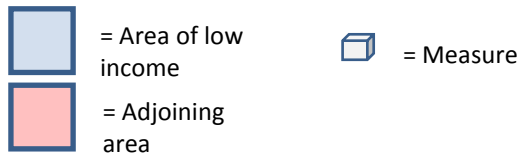
Limit of carbon savings attributable to adjoining installations

- 5.15. There is a limit to the carbon savings that a supplier may claim for adjoining installations. For example, if a supplier carries out a qualifying action in an area of low income (Area A), it may claim savings for adjoining installations carried out in any of the areas adjoining Area A (and which it notifies in relation to Area A). However, the total carbon savings of those adjoining installations must not exceed 25% of the total carbon savings of the qualifying actions carried out by that supplier in Area A.
- 5.16. We refer to the determination of whether or not the total carbon savings of the adjoining installations exceed 25% of the total carbon savings of the qualifying actions carried out in Area A as the '25% determination'. Only qualifying actions are included in the 25% determination.
- 5.17. Once all measures are approved we will carry out the 25% determination for all adjoining installations, before we determine whether a supplier has achieved its CSCO. Where the carbon savings for a supplier's adjoining installations exceed the 25% limit (in relation to the relevant area of low income) we will revoke our earlier approval of some of the adjoining installations with total savings equal to the amount by which the limit was exceeded. If we are required to revoke approval of measures, we will work with suppliers to select which measures this will apply to.
- 5.18. The three examples below illustrate the operation of the 25% determination for adjoining installations.
- 5.19. For the purpose of the examples below we have assumed all measures have an equal carbon saving of 10tCO₂.

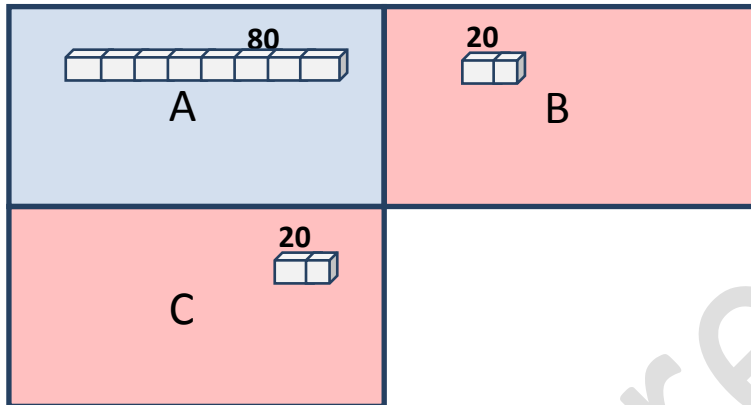
⁵⁵ Provided that the supplier has also installed measures in that area of low income.

⁵⁶ <https://cscolocationcentre.co.uk/>.

Key:

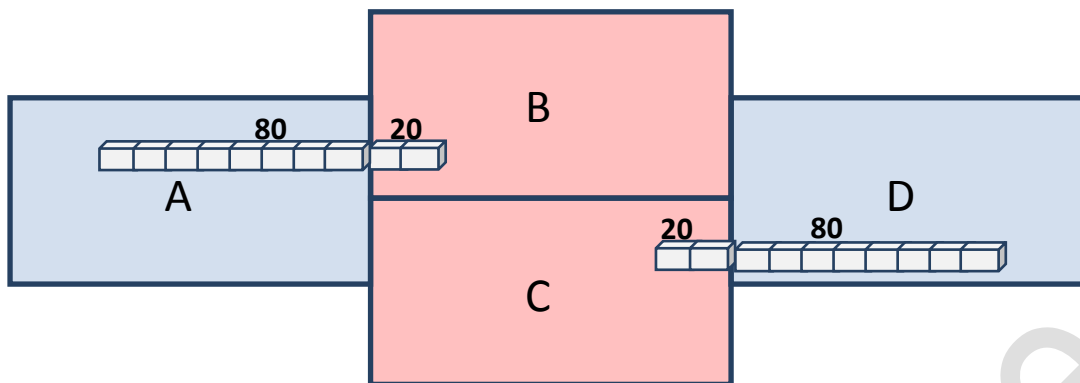


Example 1

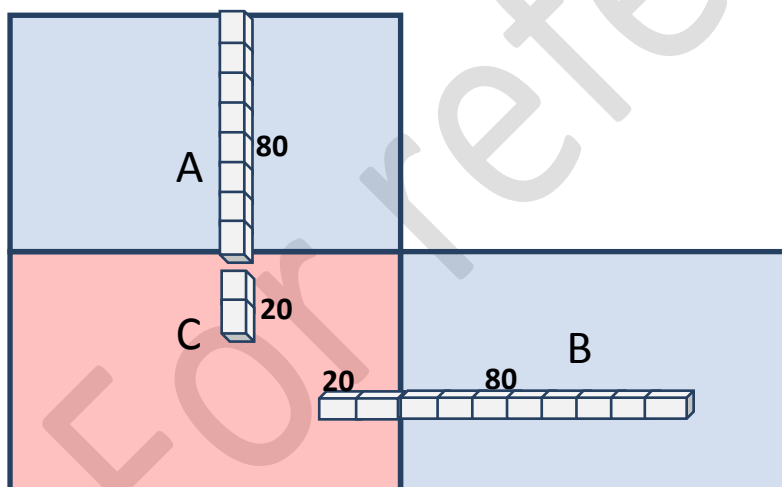


Areas B and C both adjoin Area A, which is an area of low income. They do not adjoin any other areas of low income. The savings from the adjoining installations in Areas B and C (40MtCO₂) exceed 25% of the savings from measures in the area of low income (80MtCO₂). Therefore, we will only award carbon savings to adjoining installations in Areas B and C that have total carbon savings not exceeding the 25% limit. For example, we could award carbon savings to all the adjoining installations in Area B **OR** Area C, or to one of the adjoining installations in both Areas B **AND** C.

FOR REFERENCE

Example 2

Areas B and C adjoin Areas A and D, which are both areas of low income. The savings from the adjoining installations in Area B (20MtCO₂) were identified by the supplier as relating to Area A. The savings from the adjoining installations in Area C (20MtCO₂) were identified by the supplier as relating to Area D. In both Area B and Area C, the savings from the adjoining installations equal 25% of the savings (80MtCO₂) from measures in the related area of low income (Areas A and D respectively). Therefore, based on the 25% determination, we will award carbon savings to all adjoining installations.

Example 3

Area C adjoins Areas A and B, which are both areas of low income. There are four adjoining installations in Area C with savings of 40MtCO₂; two were identified by the supplier as relating to Area A (20MtCO₂), and two were identified by the supplier as relating to Area B (20MtCO₂). In both cases, the savings from adjoining installations in Area C are equal to 25% of the savings from measures in the related areas of low income (Areas A and B). Therefore, based on the 25% determination, we will award carbon savings to all adjoining installations.

The rural sub-obligation

- 5.20. Suppliers must achieve at least 15% of their total CSCO by promoting qualifying actions either:
- a. to members of the affordable warmth group (AWG) living in a rural area, or
 - b. in a deprived rural area.
- 5.21. We refer to this as the rural sub-obligation. At notification, suppliers need to state whether they intend to claim a measure against their rural sub-obligation.
- 5.22. Suppliers should refer to the 2014 *low income and rural document*⁵⁷, or use the CSCO tool⁵⁸, or an equivalent system, to ensure measures are installed in eligible rural areas.

Areas with dual status

- 5.23. Some areas may have dual status. For example, Area A is both an area of low income and a deprived rural area.⁵⁹ Any measure installed in Area A can count towards a supplier's rural sub-obligation. If a supplier decides to use a measure installed in Area A to count towards their rural sub-obligation, it must state this at notification. The low income status of Area A can still be used to support adjoining installations in Area B, an area adjoining Area A. The adjoining installations in Area B, as with any adjoining installations, cannot count towards a supplier's rural sub-obligation.

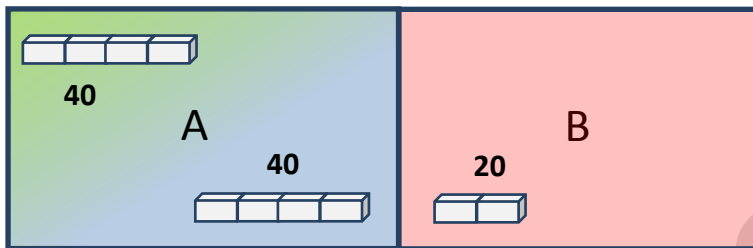
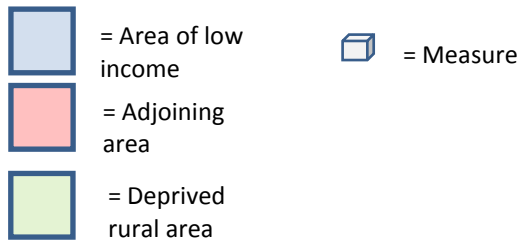
⁵⁷ <https://www.gov.uk/government/publications/The-Future-of-the-Energy-Company-Obligation-Small-Area-Geographies-Eligible-for-ECO-CSCO-Support>.

⁵⁸ <https://cscolocationcentre.co.uk/>.

⁵⁹ An area classified as a deprived rural area will not necessarily also be an area of low income.

Example 4

Key:



Area B adjoins Area A which is both an area of low income and a deprived rural area. Half of the savings in Area A (40MtCO₂) were notified by a supplier as measures to count towards its rural sub-obligation. The remaining savings in Area A (40MtCO₂) were notified by the supplier as counting towards its total CSCO target, ie installed in an area of low income. The supplier has also notified savings from adjoining installations in Area B (20MtCO₂). Based on the 25% determination, we will award carbon savings to all adjoining installations as these equal 25% of all the savings achieved in Area A.

6. Home Heating Cost Reduction Obligation

- 6.1. For the Home Heating Cost Reduction Obligation (HHCRO), suppliers must deliver measures in private domestic premises which reduce home heating costs for low income and vulnerable people who receive specific benefits (the 'affordable warmth group').
- 6.2. Suppliers may choose to deliver measures at private domestic premises which are non-gas fuelled, and can receive an increased cost score for certain measures installed at these premises. More information on calculating cost scores for measures installed at non-gas fuelled premises is provided in Chapter 7.b.
- 6.3. This chapter details the requirements suppliers must meet when delivering HHCRO measures, and in particular how a supplier can satisfy us that:
 - a. measures installed are eligible heating qualifying actions
 - b. measures are installed at private domestic premises (the 'premises requirement')
 - c. the premises are occupied by a member of the affordable warmth group (AWG) (the 'occupant requirements'), and
 - d. where applicable, measures are installed at non-gas fuelled premises.
- 6.4. It also provides information on how suppliers can demonstrate that the premises and occupant requirements are met.
- 6.5. Information on the specific documents which can be used to demonstrate that the premises and occupant requirements are met is provided in Appendix 2. Additional guidance on boilers and electric storage heaters (ESHs) is provided in Appendix 3 and Appendix 4 respectively.

Qualifying actions in HHCRO

- 6.6. A supplier achieves its HHCRO by promoting heating qualifying actions. A heating qualifying action is the installation (or in the case of boilers and electric storage heaters, the repair or replacement) of a measure where:
 - a. it is delivered at private domestic premises occupied by a member of the AWG, and

- b. it results in a reduction in the cost of heating those premises to 21 degrees Celsius in the main living areas and 18 degrees Celsius in all other areas.

6.7. Measures meeting the above conditions must also:

- a. be installed on or after 1 April 2015
- b. where the measure is specified in the Publicly Available Specification 2030:2014 Edition 1 (PAS), be installed in accordance with the relevant PAS specifications
- c. where the measure is not specified in PAS, be installed in accordance with building regulations and any other regulations that relate to the installation of the measure, and
- d. be installed by someone with the appropriate skill and experience.⁶⁰

6.8. In addition, the following measures must be accompanied by a warranty:

- a. a replacement boiler. This measure must be accompanied, at the time installation is complete, by a *qualifying warranty*⁶¹ of one year
- b. the repair of a qualifying boiler. This measure must be accompanied by a warranty of at least one year
- c. a replacement electric storage heater (ESH). This measure must be accompanied by a warranty of one year, and
- d. the repair of a qualifying electric storage heater (QESH). This measure must be accompanied by a warranty of at least one year.

6.9. Where both a heating measure⁶² and insulation are being installed in premises, the heating measure should be sized so that it is appropriate for the premises once the insulation has been installed.

Boilers

6.10. This section should be read in conjunction with Appendix 3, which provides an overview of the different boiler measures which are eligible in ECO. It also details when a boiler is considered to be a 'qualifying boiler', how to assess boilers and outlines the warranty requirements for the repair and replacement of boilers.

⁶⁰ See Chapter 2 for information on installation by a person of appropriate skill and experience.

⁶¹ See Appendix 3 for information on qualifying warranties.

⁶² For example, a boiler, micro generation or electric storage heaters.

6.11. Information on calculating the cost score for a boiler is provided in Chapter 7.b.

Replacement of a qualifying boiler

6.12. Where a boiler being replaced meets the definition of a 'qualifying boiler' and is being replaced either with another boiler or a different heating measure, the cost score for the measure should be calculated using the qualifying boiler cost score methodology.

6.13. In the case of a boiler being replaced, a qualifying boiler is one that we are satisfied is not functioning efficiently or has broken down and:

- a. has a seasonal energy efficiency value of $< 86\%$, or
- b. has a seasonal energy efficiency value of $\geq 86\%$ and cannot be economically repaired.

6.14. Where a mains-gas fuelled qualifying boiler is being replaced by another mains-gas fuelled boiler, the cost score for that measure is reduced by 20%.

Boiler installations

6.15. Where a boiler is installed and it is not replacing a qualifying boiler, it may still be an eligible HHCRO measure. The cost score for the measure should be calculated using the general cost score methodology.⁶³ We refer to such measures as 'non-qualifying boiler installations'.

6.16. Where a replacement boiler replaces a previous heating source, it must be connected to a working heating system. If the heating system is not working then savings will not be achieved and the boiler will not be a heating qualifying action.

6.17. The methodology that should be used to calculate the cost score for the replacement or installation of a boiler depends on the type of heating source⁶⁴ already present at the premises and/or the measure being installed.

Repair of a qualifying boiler

6.18. The repair of a boiler is only an eligible measure where the boiler being repaired is a qualifying boiler. The cost score for these measures should be calculated using the qualifying boiler cost score methodology.⁶⁵

⁶³ See Chapter 7.b for information on calculating cost scores.

⁶⁴ For example, a qualifying boiler, a non-qualifying boiler, fixed room heaters or electric storage heaters.

⁶⁵ See Chapter 7.b for information on qualifying boiler cost score methodology.

- 6.19. In the case of a boiler being repaired, a qualifying boiler is one that we are satisfied:
- a. is not functioning efficiently or has broken down, and
 - b. has a seasonal energy efficiency⁶⁶ value of 86% or more when assessed against the Standard Assessment Procedure (SAP).⁶⁷
- 6.20. No more than 5% of a supplier's total HHCR0 can be achieved by the repair of qualifying boilers.⁶⁸
- 6.21. Once all measures are approved we will determine the percentage of a supplier's HHCR0 delivered through the repair of qualifying boilers. Where the savings for a supplier's qualifying boiler repairs exceed the 5% limit we will revoke our earlier approval of some of these measures with total savings equal to the amount by which the limit was exceeded. If we are required to revoke approval of measures, we will work with suppliers to select which measures this will apply to.

Electric storage heaters

- 6.22. This section should be read in conjunction with Appendix 4, which provides an overview of the different electric storage heater (ESH) measures which are eligible in ECO. It also details when an ESH is considered to be a 'qualifying ESH', how to assess ESHs, and outlines the warranty requirements for the repair and replacement of ESHs.
- 6.23. Information on calculating the cost score for an ESH is provided in Chapter 7.b

Replacement of a qualifying electric storage heater

- 6.24. Where an ESH being replaced meets the definition of a 'qualifying electric storage heater' (QESH) and is being replaced by an ESH, the cost score for the measure should be calculated using the QESH cost score methodology.⁶⁹
- 6.25. In the case of an ESH being replaced, a QESH is one that we are satisfied:
- a. has broken down and cannot be economically repaired,

OR

⁶⁶ When assessing the efficiency of the boiler, the operative should use the annual efficiency from the PCDB. See: <http://www.ncm-pcdb.org.uk/sap/searchpod.jsp?id=17>. If the boiler is not included in the PCDB, then the assessor should use winter efficiency from table 4b of SAP 2012. See: http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf.

⁶⁷ See Chapter 7 for information on the Standard Assessment Procedure (SAP).

⁶⁸ Article 16(6) of the ECO2 Order.

⁶⁹ See Chapter 7.b for information on calculating cost scores.

- b. has a responsiveness when assessed against SAP equal to or less than 0.2 *and* is located at the same premises as an ESH which has broken down, and
 - i. has a responsiveness when assessed against SAP of more than 0.2,
- OR
- ii. cannot be economically repaired.

6.26. Where a QESH is being replaced with a heating measure other than an ESH, the cost score for the measure must be calculated using the general cost score methodology.⁷⁰

Electric storage heater installations

6.27. Where an ESH is installed and it is not replacing a QESH, it may still be an eligible HHCRO measure. The cost score for that measure should be calculated using the general cost score methodology.⁶³

Repair of a qualifying electric storage heater

6.28. The repair of an ESH is only an eligible measure where the ESH being repaired is a QESH. The cost score for these measures should be calculated using the QESH cost score methodology.

6.29. In the case of an ESH being repaired, a QESH is one that we are satisfied:

- a. is broken down, and
- b. has a responsiveness of more than 0.2 when assessed against SAP.⁷¹

6.30. No more than 5% of a supplier's total HHCRO can be achieved by the repair of QESHs.⁷²

6.31. Once all measures are approved we will determine the percentage of a supplier's HHCRO delivered through the repair of QESHs. Where the savings for a supplier's QESH repairs exceed the 5% limit we will revoke our earlier approval of some of these measures with total savings equal to the amount by which the limit was exceeded. If we are required to revoke approval of measures, we will work with suppliers to select which measures this will apply to.

⁷⁰ See Chapter 7.b for information on calculating cost scores.

⁷¹ Table 4a in the Government's Standard Assessment Procedure for Energy Rating of Dwellings (2012). See: http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf.

⁷² Article 16(7) of the ECO2 Order.

The premises requirement

- 6.32. HHCRO measures must be delivered at private domestic premises (the premises requirement).
- 6.33. Suppliers must be able to demonstrate that the premises requirement is met.⁷³ Appendix 2 details the specific documents a supplier can use to demonstrate this.
- 6.34. Private domestic premises are domestic premises⁷⁴ that are, in general, not owned or let by a social landlord.⁷⁵
- 6.35. The evidence required to demonstrate that premises are private domestic premises depends on:
- whether or not a 'relevant interest' in the premises is registered⁷⁶
 - who the premises belong to, or are let by, and
 - where applicable, the financial rate at which the premises are let (ie rent).
- 6.36. The 'relevant interest' is the legal interest granting the current right to occupy those premises. In England and Wales, the relevant interest may belong to a freeholder, leaseholder or sub-leaseholder. In Scotland, the relevant interest may belong to the person holding the owner's interest or right, or the person holding the lessee's interest, or the sub-leaseholder.
- 6.37. Where premises are subject to a shared ownership arrangement between a private individual and a social landlord, we consider the premises to be private domestic premises as the private individual is one of the owners of the premises.

Registered relevant interest

- 6.38. In England and Wales, premises are not considered to be private domestic premises if the relevant interest registered on the Land Registry belongs to a social landlord, unless the supplier can evidence that the premises are let at or above market rate.⁷⁷

⁷³ Schedule 4 to the ECO2 Order.

⁷⁴ See Chapter 2 for information on domestic premises.

⁷⁵ See Appendix 2 for information on the definition of 'social landlord'.

⁷⁶ A registered premises is one with a relevant interest registered on the Land Registry in England and Wales or, in Scotland, the Land Register of Scotland or recorded in the Register of Sasines. For more information on the evidencing routes for registered and unregistered premises refer to Appendix 2.

⁷⁷ See Appendix 2 for information on calculating the market rate.

- 6.39. In Scotland, premises are not considered to be private domestic premises if the relevant interest registered on the Land Register of Scotland or recorded in the Register of Sasines belongs to a social landlord, unless the supplier can evidence that the premises are let at or above market rate.
- 6.40. Generally, where the relevant interest is registered as belonging to an individual person, we will be satisfied that they are private domestic premises. If the search results prove inconclusive, ie the registered relevant interest belongs to a corporation and not an individual, the supplier must use other means to ensure the entity is not a social landlord.

Unregistered relevant interest

- 6.41. Premises for which a relevant interest is not registered will be considered private domestic premises if:
- a. the premises are not owned or let by a social landlord
 - b. the premises are let under a lease granted under the 'Right to Buy' or 'Right to Acquire' schemes in England or Wales
 - c. the premises are let under a lease granted under the 'Right to Purchase' scheme in Scotland, or
 - d. the premises are let by a social landlord at or above market rate.

The occupant requirements

- 6.42. For HHCRO measures, the private domestic premises must be occupied by a member of the AWG (the occupant requirements).
- 6.43. Suppliers must be able to demonstrate that the occupant requirements are met. These are⁷⁸:
- a. a person's membership of the AWG, and
 - b. that the person is an occupant of those premises.
- 6.44. Appendix 2 details the specific documents which can be used to demonstrate this requirement.
- 6.45. The AWG definition⁷⁹ applies across England, Wales and Scotland. It is primarily concerned with whether a person receives a benefit from the Government and the

⁷⁸ Schedule 4 to the Order.

nature of that benefit. In some cases it is also concerned with the person's annual income, and whether they are responsible for a child or young person.

Membership of the AWG

6.46. This section provides an overview of the criteria that must be used to determine whether a person is a member of the AWG.⁸⁰

6.47. A person living at private domestic premises is an eligible member of the AWG if the person receives at least one of the following benefits and satisfies the qualifying components where applicable:

a. child tax credit (CTC) and has a relevant income of £16,010 or less

b. income-related employment and support allowance (ESA) and:

(i) receives a work-related activity or support component

OR

(ii) is responsible for a qualifying child

OR

(iii) receives a qualifying component.

c. income-based jobseeker's allowance (JSA) and:

(i) is responsible for a qualifying child

OR

(ii) receives a qualifying component.

d. income support and:

(i) is responsible for a qualifying child

OR

(ii) receives a qualifying component.

e. state pension credit

⁷⁹ Schedule 1 to the ECO2 Order.

⁸⁰ Schedule 1 to the ECO2 Order should be referred to for supplementary information on each of the AWG benefits.

f. working tax credit (WTC) and has a relevant income of £16,010 or less and:

- (i) is responsible for a qualifying child
OR
- (ii) receives a disability element or severe disability element
OR
- (iii) is aged 60 years or over.

g. universal credit and received a monthly earned income of £1,250 or less in any assessment period in the previous 12 months, and

- (i) is responsible for a child or a qualifying young person
OR
- (ii) has limited capability for work, or limited capability for work and work-related activity
OR
- (iii) receives a disability living allowance (DLA)
OR
- (iv) receives a personal independence payment (PIP).

6.48. 'Qualifying component' in paragraph 6.47 under (b) income-related employment and support allowance, (c) income-based job seeker's allowance and (d) income support means:

- a. child tax credit which includes a disability or severe disability element
- b. a disabled child premium
- c. a disability premium, enhanced disability premium or severe disability premium, or
- d. a pensioner premium, higher pensioner premium or enhanced pensioner premium.

Routes for evidencing eligibility

6.49. This section details the routes a supplier can use to demonstrate that the premises and occupant requirements are met.

Audit Regimes – relevant for the premises and occupant requirements

- 6.50. Suppliers can demonstrate to us that the premises and occupant requirements⁸¹ are met by ensuring that a copy of the relevant documents is available at audit.⁸²
- 6.51. The initial audit sample will be a maximum of 5% or a statistically significant amount, whichever is the lowest.
- 6.52. Appendix 2 details which documents should be produced at audit to demonstrate that the premises and occupant requirements were met at some point during the course of promotion of the measure. Suppliers can evidence this by providing documents dated within 18 months prior to the date of completion of the measure. Suppliers wishing to use documents which are not detailed in Appendix 2 should contact us.
- 6.53. Most eligible documents must be dated within 18 months prior to the date of completion of the measure. If documents are older, updated evidence must be made available on request.
- 6.54. If a supplier is unable to demonstrate to us that the premises and occupant requirements are met, we may be unable to attribute savings to that measure.

Matched Warm Home Discount (WHD) Core Group Notice– relevant for the occupant requirements

- 6.55. A supplier can produce a matched WHD Core Group Notice⁸³ at audit to satisfy us that a person is receiving state pension credit and is therefore a member of the AWG.
- 6.56. This must be dated within 18 months prior to the date of completion of the measure.

ESAS/HES reference number– relevant for the occupant requirements

- 6.57. The Energy Saving Trust (EST) operates a referrals service to direct people to energy efficiency opportunities, including ECO. For England and Wales this service is the Energy Saving Advice Service (ESAS).
- 6.58. A person who contacts ESAS is allocated a unique seven digit reference number. ESAS then check the benefit status of the person with the Department for Work and Pensions (DWP) to confirm whether the person receives an AWG benefit.⁸⁴

⁸¹ See the AWG Guidance Note for more information on the occupant requirements: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

⁸² See Chapter 9 for information on audits.

⁸³ See Regulation 6(1) of the Warm Home Discount Regulations 2011 for further details.

- 6.59. ESAS refer the following categories of people to suppliers:
- a. **matched** - a person who is confirmed by DWP as receiving an AWG benefit
 - b. **unverified** - a person who may be receiving an AWG benefit but DWP is unable to confirm, or
 - c. **no consent** - the customer did not consent to the DWP check.
- 6.60. Home Energy Scotland (HES) operated a similar service for Scotland up until 31 March 2015⁸⁵ and allocated eight digit reference numbers. HES referrals will still be valid after this date if they were issued within 18 months prior to the date of completion of a measure.
- 6.61. If ESAS/HES referred a person to a supplier as matched (ie confirming that the person receives an AWG benefit), it may rely on this referral as a way of demonstrating that a person is a member of the AWG. The supplier must include the ESAS/HES reference number when notifying the measure.⁸⁶
- 6.62. Where a matched seven-digit ESAS or eight-digit HES number provided, suppliers can rely on this at audit and no documentation will be needed to demonstrate that a person is a member of the AWG. We may contact ESAS/HES to check that the notified number relates to a person receiving an AWG benefit and that they reside at the address where a measure was notified.
- 6.63. As with HES referrals, suppliers may only rely on an ESAS referral issued within 18 months prior to the date of completion of a measure.
- 6.64. An unverified or no consent ESAS/HES referral will not be enough to satisfy us that a person is a member of the AWG. In this case, the supplier should not include the ESAS/HES reference number when notifying the measure. The supplier should satisfy us that the relevant person is a member of the AWG through one of the other routes detailed in this section and should ensure that any additional evidence that demonstrates the person is a member of the AWG is made available on request.

Matched 'DWP reference number' – relevant for the occupant requirements

- 6.65. Suppliers may arrange a contract with a data-matching service provider, that has a contract with DWP, to confirm that a person is a member of the AWG.

⁸⁴ As listed in 'Membership of the AWG'.

⁸⁵ Should another referrals service be made available for customers living in Scotland, Ofgem will provide further guidance on the relevant requirements.

⁸⁶ See Chapter 8 for information on notification of completed measures.

- 6.66. If DWP confirms (via a data-matching service provider) that a person receives an AWG benefit, the supplier may rely on this as a way of demonstrating that a person is a member of the AWG. If a supplier wishes to rely on a DWP confirmation, it must include the reference number provided by the data-matching service provider when notifying the measure. This is the 'DWP reference number' in the notification template.
- 6.67. Where a DWP reference number is provided at notification, suppliers can rely on this at audit and no documentation will be needed to demonstrate that a person is a member of the AWG. We may verify these reference numbers against the records of the data-matching service provider to check that the notified number relates to a person receiving an AWG benefit residing at the address where a measure was notified.
- 6.68. Suppliers may only rely on a DWP confirmation issued within 18 months prior to the date of completion of a measure.

Measures installed at non-gas fuelled premises

- 6.69. Where HHCRO measures are installed at non-gas fuelled premises that remain non-gas fuelled, the cost score may (depending on the type of measure) be subject to an increase. We outline below how suppliers can identify and evidence a non-gas fuelled premises.

Identifying non-gas fuelled premises

- 6.70. Non-gas fuelled premises are premises where the main space heating system(s) is not fuelled by mains gas or a district heating system. There may be more than one main space heating system in the premises. If any of the premises main space heating systems are:

- a. fuelled by mains gas, or
- b. a district heating system

those premises will **not** be considered non-gas fuelled.

- 6.71. Space heating systems are:

- a. district heating systems
- b. central heating systems which have a boiler or warm air unit and system to distribute heat to more than one room
- c. electric storage heaters

- d. electric underfloor or ceiling heating systems that distribute heat to more than one room
- e. fixed room heaters which provide heat to individual rooms, either supplementing another heating system or providing the heating requirement for the particular room, and
- f. portable room heaters.

Identifying the main space heating system

- 6.72. District heating systems, central heating systems, electric storage heaters and electric underfloor or ceiling heating systems are always considered main space heating systems.
- 6.73. Where fixed room heaters are present at the same premises as a district heating system, a central heating system, an electric storage heater and/or an electric underfloor or ceiling heating system, we will not consider the fixed room heaters to be the main space heating system.
- 6.74. However, where premises are only heated by fixed room heaters these will be considered to be the main space heating system. If the room heaters use different fuels we will consider each type of room heater (based on fuel type) to be a main space heating system in itself. For example, if there are gas room heaters and electric room heaters then those premises have a gas fuelled main space heating system and an electric fuelled main space heating system.
- 6.75. Portable room heaters are never considered to be the main space heating system as they are moveable and may not remain in the premises.

Evidencing non-gas fuelled premises

- 6.76. Below we list some of the ways suppliers can demonstrate the fuel type of the premises main space heating system at audit:
 - a. for measures which improve the insulating properties of the premises, the pre- or post-installation SAP or RdSAP assessment can be used to demonstrate the fuel type(s) of the main space heating system(s), provided the assessment has been conducted by an accredited SAP or RdSAP assessor.⁸⁷ This assessment should take the form of a lodged EPC, or

⁸⁷ A SAP or RdSAP assessor is either an On Construction Domestic Energy Assessor or a Domestic Energy Assessor (OCDEA/DEA). In Scotland, the assessment is conducted by EPC assessors who are members of approved organisations. Approved organisations are those that have entered into protocols with Scottish Government to deliver Energy Performance Certificates. See: <http://www.gov.scot/Topics/Built-Environment/Building/Building-standards/enerperfor/epcorgprg>.

- b. for qualifying boiler repairs and replacements:
 - i. the boiler assessment checklist can be used to demonstrate the fuel type(s) of the main space heating system(s) where the operative has recorded the fuel type(s) before and after the measure has been completed,

OR

 - ii. a pre- and post-installation SAP or RdSAP assessment can be used to demonstrate the fuel type(s) of the main space heating system(s) provided the assessment has been conducted by an accredited SAP or RdSAP assessor. Both of these assessments should be lodged EPCs.

For reference

7. Information on calculating ECO savings

- 7.1. For each measure that a supplier notifies, it must provide the associated carbon saving or cost score. Different methodologies exist for calculating carbon savings and cost scores. The measure type and the obligation the measure is being credited against will determine which methodology should be used.
- 7.2. This chapter provides information which is relevant to calculating both carbon savings and cost scores, including:
- a. methodologies for calculating savings
 - b. bespoke ECO software for calculating savings
 - c. calculating savings for multiple measures
 - d. calculating savings for refurbishments, extensions and new builds
 - e. the lifetime of a measure
 - f. our determination in attributing savings
 - g. demonstrating the accuracy of savings
 - h. calculating carbon savings (Chapter 7.a), and
 - i. calculating cost scores (Chapter 7.b).
- 7.3. A 'carbon saving' is the tonnes of carbon dioxide (tCO₂) saved at domestic premises over the expected lifetime of a measure.
- 7.4. A 'cost score' is the total contribution that a measure makes towards a supplier's total HHCRO in pounds sterling (£). The cost score is calculated using:
- a. the 'cost saving' which is the money saved over the expected lifetime of a measure in heating the premises and, where applicable, heating water at those premises, and
 - b. the relevant HHCRO multiplier, where applicable.
- 7.5. Where we provide information relevant to both carbon savings and cost scores, we use the collective term 'savings'.

- 7.6. When notifying us of completed measures suppliers must include the carbon saving or cost score for the measure, relevant to the obligation the measure is intended to be credited towards.
- 7.7. At a later date a supplier may wish, where a measure qualifies, to:
- a. re-elect the obligation that measure is credited against,⁸⁸ or
 - b. transfer that measure to another supplier to be credited towards an obligation with a different saving.⁸⁹
- 7.8. In such cases, if the measure is being re-elected or transferred from CERO or CSCO to HHCRO, we will require the cost score to be calculated using the fuel prices⁹⁰ which were relevant at the time of initial assessment or installation.
- 7.9. We therefore recommend that suppliers calculate both the carbon saving and cost score for each measure, and provide both at notification.
- 7.10. Specific information related to carbon savings and cost scores, and the formulae suppliers should use to calculate savings, is provided in Chapters 7.a and 7.b respectively.

Methodologies for calculating savings

- 7.11. A supplier must calculate the savings for each measure using one of the following methodologies:
- a. Standard Assessment Procedure (SAP) 2012 (version 9.92⁹¹) (or in Scotland, SAP 2009 (version 9.90⁹²))
 - b. Reduced data Standard Assessment Procedure (RdSAP) 2012 (version 9.92⁹³)
 - c. in the case of the repair or replacement of a qualifying boiler, using the qualifying boiler cost score methodology in Chapter 7.b.
 - d. in the case of the repair or replacement of a qualifying electric storage

⁸⁸ See Chapter 8 in the ECO2 Guidance: Administration for further information on re-elections.

⁸⁹ See Chapter 8 in the ECO2 Guidance: Administration for further information on transfers.

⁹⁰ For SAP and RdSAP, these are the fuel prices contained within the product characteristics database (PCDB) that was valid at either the time of assessment or installation. See: <http://www.ncm-pcdb.org.uk/sap/searchpod.jsp?id=17>.

⁹¹ 2012 edition. See: http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf.

⁹² 2009 edition, as amended in October 2010. SAP 2012 is not yet available for use in Scotland. Therefore, if calculating savings for measures installed in Scotland using SAP, suppliers can only use SAP 2009.

⁹³ 2012 edition. See Appendix S in http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf.

heater (QESH), using the QESH cost score methodology in Chapter 7.b, or

- e. an appropriate methodology approved by us, where SAP or RdSAP do not contain a methodology for a particular measure.

7.12. Unless specified, references to SAP and RdSAP in this document refer to the versions listed above.

SAP and RdSAP

7.13. SAP is a methodology developed by the Building Research Establishment (BRE), on behalf of the Government, to calculate the energy and environmental performance of dwellings. RdSAP is a simplified version of SAP that requires fewer data inputs. Both of these methodologies can be used to calculate the savings for a particular measure.

7.14. When calculating savings for measures using SAP or RdSAP, software must be approved by the Department of Communities and Local Government (in England and Wales) or the Building Standards Division (in Scotland). A list of approved software is available on the BRE website.⁹⁴

7.15. To calculate savings for a measure, a supplier must first assess the performance of the premises *without* the measure ('before'), and then assess the performance of the premises *with* the measure ('after'). The savings are the difference between the before and after cases.

7.16. Where SAP or RdSAP contain a methodology for calculating savings for a particular measure, it must be used to calculate the savings associated with that measure. Suppliers can only use an appropriate methodology if neither SAP nor RdSAP contain a methodology for a particular measure.⁹⁵

7.17. SAP is periodically updated to include new technologies. Between these updates, 'SAP Appendix Q database' is amended to include any newly approved measures.⁹⁶ Where a measure is included in SAP Appendix Q, we consider that SAP contains a methodology for calculating the savings for that measure and therefore an appropriate methodology will not be approved.

7.18. When using SAP or RdSAP to calculate savings, suppliers must follow the guidelines for the use of those methodologies, unless our guidance specifically states otherwise. When using SAP and RdSAP, suppliers must ensure they take the following into account:

⁹⁴ For SAP/RdSAP 2012: <http://www.bre.co.uk/sap2012/page.jsp?id=2759>.

For SAP/RdSAP 2009: <http://www.bre.co.uk/sap2009/page.jsp?id=1642>.

⁹⁵ Article 24 (3) of the ECO2 Order. See paragraphs 7.23 to 7.27 below for more information on appropriate methodologies.

⁹⁶ See Appendix Q database in www.ncm-pcdb.org.uk/sap/ for further information on SAP.

- a. **Location** – savings must be calculated using the appropriate weather region, where the methodology allows
- b. **Occupancy assessment** – suppliers should not calculate savings for measures in the 'occupancy assessment' mode
- c. **Product Characteristics Database (PCDB)**⁹⁷ – this is updated every month and contains information such as up-to-date boiler efficiencies and fuel prices for use in conjunction with SAP or RdSAP. Fuel prices in the PCDB change every six months and savings must be calculated using the PCDB which was valid at the time of either initial assessment or installation. When 'before' and 'after' cases are used to calculate savings, they must both use the same PCDB, and
- d. **Percentage of the measure installed** – calculations for partial installations can be carried out using any method that forms part of SAP/RdSAP standard practices.

Energy Performance Certificates and Green Deal reports

- 7.19. Suppliers may choose to use the inputs used to produce an Energy Performance Certificate (EPC), Green Deal Advice Report (GDAR) and/or Green Deal Improvement Package (GDIP) as the basis of the savings calculation for an ECO measure.
- 7.20. However, suppliers will not be able to use the estimated savings identified on an EPC, GDAR or GDIP. This is because the savings do not meet one or more of our requirements, which are:
 - a. to calculate savings to a specified number of decimal places
 - b. to provide measure-by-measure savings, and
 - c. to calculate savings for measures in the order they are installed.
- 7.21. If score monitoring or an audit of a premises shows that information derived from an EPC, GDAR or GDIP and entered into a SAP or RdSAP calculation was inaccurate (with respect to the actual characteristics of the premises), we will treat this as a score monitoring or audit fail.
- 7.22. We are aware that there are existing guidelines for England and Wales for using a sample of EPC assessments to create EPCs for dwellings of a similar type and construction ('sampling' or 'cloning'). When deciding whether or not to use sampling, suppliers should note that, as above, if score monitoring or an audit of

⁹⁷ See: <http://www.ncm-pcdb.org.uk/sap/searchpod.jsp?id=17>.

premises shows that information derived from sampling and entered into a SAP or RdSAP calculation was inaccurate, we will treat this as a score monitoring or audit fail, even if industry guidelines for sampling⁹⁸ were followed.

Appropriate methodologies

- 7.23. If SAP or RdSAP do not contain a methodology for calculating the savings for a particular measure, a supplier may apply to us for approval of an appropriate methodology to calculate the savings.
- 7.24. Suppliers should apply for approval in writing, and include the information we need to decide whether to approve or reject the application. The appropriate methodology must include a lifetime for the measure, and, where the methodology is used to calculate a carbon saving, must consider the likely performance of the measure once it is installed in the premises.
- 7.25. A supplier may install measures that require an appropriate methodology from the day after it submits the application. However, the supplier will be carrying out this activity at its own risk until the date that we approve the appropriate methodology.
- 7.26. The following reasons are insufficient for us to approve an appropriate methodology:
- a. the appropriate methodology produces higher savings for a measure than SAP or RdSAP, or
 - b. aspects of the SAP or RdSAP methodology are inaccurate for the measure.
- 7.27. We will notify the supplier whether the appropriate methodology has been approved or rejected. If we approve an appropriate methodology for a particular supplier we will publish that methodology on our website and another supplier may then apply to us to use that methodology. Suppliers should apply in writing to use an approved appropriate methodology.

Bespoke ECO software for calculating savings

- 7.28. Bespoke ECO software is based on approved SAP or RdSAP software but may also carry out additional calculations based on ECO-specific information (such as lifetimes and in-use factors).

⁹⁸ For instance: 'Improving the energy efficiency of our buildings: A guide to Energy Performance Certificates for the construction, sale and let of dwellings (DCLG, 2014)': <https://www.gov.uk/government/publications/energy-performance-certificates-for-the-construction-sale-and-let-of-dwellings>.

- 7.29. Suppliers may use bespoke ECO software to calculate savings for measures. Irrespective of whether calculations are done using SAP or RdSAP or bespoke ECO software, savings calculations must be carried out in accordance with the information in this chapter.
- 7.30. To help with the development of bespoke ECO software, we have published a technical summary of the information provided in this chapter on our website.⁹⁹
- 7.31. It is a supplier's responsibility to ensure that the software it uses meets the requirements of the legislation and our guidance and we expect suppliers to carry out their own checks.
- 7.32. We will require evidence that such bespoke ECO software is robust and meets our requirements.
- 7.33. Some bespoke software may perform functions in addition to calculating ECO savings; however, any additional functionality is not considered in this guidance.

Calculating savings for multiple measures

- 7.34. If a supplier installs multiple measures in the same domestic premises, each measure, and its associated savings, must be notified separately.
- 7.35. The order in which the savings for the measures are calculated must be the same as the order of installation. Suppliers must ensure that savings are not calculated using software that automatically uses the default order of installation within SAP/RdSAP because, where this is different to the actual order of installation, the individual measure savings will be inaccurate.
- 7.36. Where two or more measures are installed in the same premises, the calculation for the second measure installed must take into account that the first measure has already been installed, and so forth. However, where heating controls are installed at a premises by the same supplier in the same calendar month as a qualifying boiler replacement or repair is conducted, the following sequence of installation must be assumed:
1. qualifying boiler repair or replacement, followed by
 2. installation of compatible heating controls.
- 7.37. Where the installation of two or more measures is completed at the same premises on the same day, the supplier may choose the sequence of installation for the purpose of calculating savings.

⁹⁹ <https://www.ofgem.gov.uk/publications-and-updates/bespoke-eco-scoring-software-features-software-development>.

Calculating savings for refurbishments, extensions and new builds

- 7.38. When calculating savings for a measure installed as part of a refurbishment, only the savings resulting from the installation of the measure, and not resulting from other changes to the premises, may be claimed under ECO. For example, where a heating system has been removed as part of a refurbishment and insulation is being installed, the savings for the insulation measure should be calculated taking into account the heating system that was in place before the refurbishment began.
- 7.39. In the case of a measure installed as part of the construction of an extension to existing premises, or the construction of a new build, we will only award savings for the part of the measure that exceeds the requirements of building regulations or any other legal requirements.
- 7.40. For instance, where solid wall insulation is installed during the construction of an extension to premises, a supplier can be awarded savings only where the U-value achieved is better than that specified by building regulations or any other legal requirements. In this case, the savings awarded will reflect the difference between the U-value required by building regulations and the actual U-value of the insulated wall.

Lifetime of a measure

- 7.41. The carbon saving or cost score for a measure relates to the expected savings that measure will make over its lifetime.
- 7.42. The measures table¹⁰⁰ provides the lifetime for each ECO measure. We deem the lifetimes in this table as 'standard' and they should be used by suppliers when calculating the carbon saving or cost score for a measure.
- 7.43. Suppliers can apply, in writing, to use a 'non-standard lifetime' in two cases:
- a. where a supplier wishes to install a measure that is not listed in the measures table, or
 - b. where a supplier wishes to install a product that falls within a category of measure listed in the measures table but believes that the standard lifetime set for that category of measure is not accurate for the product.

¹⁰⁰ <https://www.ofgem.gov.uk/publications-and-updates/energy-company-obligation-eco2-measures-table>.

- 7.44. A supplier must apply to us in writing for approval of a non-standard lifetime before installing any measures to which the lifetime relates. The application should include the information we need to decide whether to approve or reject the application.
- 7.45. We will notify the supplier of our decision on its non-standard lifetime application. If we approve an application for a non-standard lifetime, we will publish that lifetime on our website. Another supplier may then use that lifetime when installing the same measure or product.

Guarantee-dependent lifetimes for wall insulation

- 7.46. A wall insulation measure (solid wall insulation or insulation of a cavity wall, including party cavity wall insulation) receives the relevant standard lifetime if the installation is accompanied by an appropriate guarantee.
- 7.47. An appropriate guarantee¹⁰¹ is one which meets the following criteria:
- a. **Financial assurance:** there must be a mechanism that gives assurance that funds will be available to honour the guarantee
 - b. **Duration:** lasts for 25 years or longer
 - c. **Coverage:** results in the failed measure being replaced and covers costs of remedial and replacement works plus materials, and
 - d. **Quality Assurance Framework:** there must be an assurance framework for the quality of the installation and the product used in the installation. We will assess the suitability of this framework and we may require verification through independent assessment by an independent UKAS-accredited organisation or other appropriate body.
- 7.48. Appropriate guarantees, which we have reviewed and consider meet the above criteria, are listed on our website.¹⁰² If a supplier chooses to use a guarantee not included in our list, which it considers meets these criteria, we will judge whether it's an appropriate guarantee when assessing the savings notified by the supplier. Where appropriate we will add these guarantees to our list on the website. If the guarantee does not meet the criteria for an appropriate guarantee, we will be unable to attribute the savings notified by the supplier.

¹⁰¹ This is referred to as an 'appropriate warranty' in the ECO2 Order.

¹⁰² <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-appropriate-guarantees>.

- 7.49. Where the installation of SWI is accompanied by an appropriate guarantee, the standard lifetime of the measure will be deemed to be 36 years.¹⁰³
- 7.50. Where the installation of mobile home insulation is accompanied by an appropriate guarantee, the standard lifetime of that measure will be deemed to be 30 years.
- 7.51. Where the installation of CWI and party wall insulation is accompanied by an appropriate guarantee the standard lifetime of these measures will be deemed to be 42 years.

Calculating the lifetime for a multi-fuel upgrade to a district heating system connection

- 7.52. Where a multi-fuel upgrade of a district heating system (DHS) connection consists of heat generating technologies with different lifetimes, the formula below should be used to calculate the lifetime of the upgrade.
- 7.53. The formula takes into account the proportion of heat supplied by each heat generator to calculate a weighted lifetime.

$$(A * X) + (B * Y)$$

Where:

'A' is the upgrade lifetime for heat generator A

'X' is the proportion of heat supplied by heat generator A

'B' is the upgrade lifetime for heat generator B

'Y' is the proportion of heat supplied by heat generator B

- 7.54. An alternative approach that weights the lifetime according to the proportion of carbon savings each heat generator is responsible for is also available.¹⁰⁴ Where a supplier would prefer to use this approach it should contact us for more information.

¹⁰³ Articles 18(3) and 19(3) of the ECO2 Order.

¹⁰⁴ See our consultation response for more information: <https://www.ofgem.gov.uk/publications-and-updates/response-our-eco2.2-consultation>.

Attributing savings to qualifying actions and surplus actions

- 7.55. Suppliers are required to notify the carbon saving or cost score for a completed qualifying action,¹⁰⁵ and it is our duty to attribute savings to eligible notified actions. We also attribute savings to eligible surplus actions.¹⁰⁶
- 7.56. To attribute savings we must be satisfied that the carbon saving or cost score notified is accurate. If we are not satisfied that a saving is accurate we will ask the supplier to provide the information we need to determine the correct savings. After receiving this information we will attribute what we consider to be the correct savings. Until we receive this information, we are unable to attribute savings to a qualifying action.
- 7.57. We will take into account various matters when judging whether savings have been calculated accurately, including:
- a. the accuracy of the data entered into the calculation, and
 - b. the accuracy of the methodology¹⁰⁷ used to perform the calculation.

Demonstrating the accuracy of calculations

- 7.58. Score monitoring agents will check the accuracy of calculation inputs when assessing measures. We will also assess the accuracy of savings when they are notified, and we may audit a sample of savings calculations to assess their accuracy.
- 7.59. Where inputs to a lodged EPC have been used for an RdSAP calculation, this will provide additional assurance that the savings have been calculated using accurate input data. Where the EPC has not been lodged or where a calculation is not done by an accredited SAP/RdSAP assessor, we may increase the size of the sample monitored. Therefore we encourage suppliers to use accredited SAP/RdSAP assessors to do calculations and to lodge EPCs where the inputs are used to calculate savings.
- 7.60. More information on audit and score monitoring is provided in Chapter 9.

¹⁰⁵ See Chapter 8 for information on notifying measures.

¹⁰⁶ See Chapter 7 in the ECO2 Guidance: Administration for further information on surplus actions.

¹⁰⁷ Including SAP, RdSAP or an appropriate methodology.

7.a Calculating carbon savings

- 7.61. When notifying CERO and CSCO measures, suppliers must provide the carbon saving for each measure. The carbon saving is the tonnes of carbon dioxide (tCO₂) saved at domestic premises over the expected lifetime of a measure. To calculate the carbon saving, a supplier must first calculate the annual carbon saving and then apply the weighted average factor, the lifetime and the in-use factor for that measure.
- 7.62. This chapter provides guidance on calculating the carbon saving for ECO measures and contains information on:
- the weighted average factor
 - in-use factors
 - the formula suppliers should use to calculate the carbon saving, and
 - decimal place requirements.

Weighted average factor

- 7.63. ECO2 carbon reduction targets are measured in CO₂; however, SAP and RdSAP 2012 now provide emissions in terms of carbon dioxide equivalent (CO₂e). It is therefore necessary to convert CO₂e to CO₂ when calculating savings using SAP or RdSAP.
- 7.64. This conversion is done by applying a weighted average factor of 0.925¹⁰⁸ to the annual carbon saving calculated; it is not applied to cost savings.
- 7.65. At notification, suppliers should only provide the carbon saving in CO₂. We do not require suppliers to notify the CO₂e saving to us.

In-use factors

- 7.66. An in-use factor (IUF) is the percentage by which savings calculated using SAP or RdSAP should be reduced to reflect the likely in-situ performance (as opposed to theoretical performance) of an energy efficiency measure. For ECO, IUFs are only applied when calculating carbon savings.
- 7.67. The IUFs for most measures are shown in Table 1 below.¹⁰⁹ Any measure not listed in this table has an in-use factor of 15%.

¹⁰⁸ See DECC's response to the discussion paper on converting SAP/RdSAP 2012 CO₂e to SAP/RdSAP 2009 CO₂: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/359744/Government_Response_on_ECO_Conversion_Factor.pdf.

¹⁰⁹ Schedule 2 to the ECO2 Order.

7.68. The IUF for solid wall insulation depends on the age of the building and construction type. To apply the correct IUF when calculating the carbon saving for the measure, suppliers must ensure they note the age and construction type of the building.

Table 1 Relevant IUFs¹¹⁰

| Measure | IUF (percentage) |
|--|-----------------------------|
| Connection to a district heating system | 10% |
| Draught proofing | 15% |
| Flat roof insulation | 15% |
| High performance external doors and passageway walkthrough doors | 15% |
| Insulation of a cavity wall (including party cavity wall insulation) | 35% |
| Insulation of a mobile home | 25% |
| Insulation of a solid brick wall built before: a) 1967, if situated in England or Wales; b) 1965, if situated in Scotland | 33% |
| Insulation of: a) a solid wall which is not built of brick; b) a solid brick wall built in (i) 1967 or later, if situated in England or Wales; (ii) 1965 or later, if situated in Scotland | 25% |
| Loft or rafter insulation (including loft hatch insulation) | 35% |
| Pipework insulation | 15% |
| Room-in-roof insulation | 25% |
| Secondary or replacement glazing | 15% |
| Under-floor insulation | 15% |

¹¹⁰ Article 2 of the ECO2 Order.

Formula for calculating a carbon saving

To calculate a carbon saving using SAP/RdSAP 2012 (for England and Wales), suppliers should use the following formula:

$$(A - (A \times B)) \times 0.925 = \text{carbon saving (tCO}_2\text{)}$$

Where:

'**A**' is the lifetime CO₂e saving (ie the annual saving multiplied by the lifetime (in years) of the measure);

'**B**' is the in-use factor of the measure (by percentage)

AND

0.925 is the weighted average factor*

*As SAP 2012 is not yet available for use in Scotland, if calculating savings for measures in Scotland using SAP, suppliers should not apply the weighted average factor. In such instances the formula is:

$$(A - (A \times B)) = \text{carbon saving (tCO}_2\text{)}$$

Decimal places

- 7.69. Annual and lifetime carbon savings should be expressed in tCO₂ to **three** decimal places when notified.
- 7.70. If annual savings are calculated by comparing 'before' and 'after' data, rounding (to three decimal places) should occur after the comparison is carried out, not before. This rounding should occur before multiplying by the lifetime and IUF. The final figure, for the lifetime carbon saving, should then be rounded again to three decimal places before notifying.

7.b Calculating cost scores

- 7.71. When notifying HHCRO measures, suppliers must provide the cost score for each measure. The cost score is the total contribution that a measure makes towards a supplier's HHCRO. To calculate the cost score, a supplier must first calculate the annual cost saving and then apply the lifetime and the relevant HHCRO multiplier, where applicable, for that measure.
- 7.72. This chapter provides guidance on calculating cost scores for ECO measures and contains information on:
- a. the methodologies for calculating cost scores
 - b. relevant HHCRO multipliers
 - c. the general cost score methodology
 - d. the qualifying boiler cost score methodology
 - e. the qualifying electric storage heater cost score methodology, and
 - f. decimal place requirements.

Methodologies for calculating cost scores

- 7.73. There are three methodologies used to calculate HHCRO cost scores. The type of measure installed will determine which of these methodologies should be used. They are:
1. the general cost score methodology (for measures other than qualifying boilers and qualifying electric storage heaters)¹¹¹
 2. the qualifying boiler cost score methodology¹¹², and
 3. the qualifying electric storage heater (QESH) cost score methodology.¹¹³

Relevant HHCRO multipliers (RHMs)

- 7.74. When using the methodologies listed above in 7.73, for certain HHCRO measures a relevant HHCRO multiplier (RHM) may also be applied as part of the cost score calculation. Depending on the type of measure and/or the type of premises, the RHM may result in an increased or reduced cost score. There are two types of RHMs:

¹¹¹ Article 19 of the ECO2 Order.

¹¹² Article 20 of the ECO2 Order.

¹¹³ Article 22 of the ECO2 Order.

- a. **the non-gas uplift:** relates to qualifying boilers and insulation measures installed at non-gas fuelled premises and results in an increased cost score, and
- b. **the qualifying boiler deflator:** relates to mains gas fuelled qualifying boilers replaced by mains gas fuelled boilers and results in a reduced cost score.

The non-gas uplift

- 7.75. Where a measure is installed at non-gas fuelled premises, the measure may receive an increased cost score.¹¹⁴ This increase is referred to as an 'uplift'.
- 7.76. Measures which are eligible for an uplift, when installed at a non-gas fuelled premises, and the uplifts/RHMs that relate to each type, are outlined in Table 2 below.

Table 2 Uplifts and relevant HHCRO multipliers (RHMs)

| Measure installed at a non-gas fuelled premises | Uplift | RHM |
|---|--------|------|
| Insulation measures | 35% | 1.35 |
| Repairs of qualifying boilers | 45% | 1.45 |
| Replacements of qualifying boilers by heating measures other than ESHs | 45% | 1.45 |

- 7.77. Cost scores for these measures should be calculated:
- a. for insulation measures, using **Formula 1.2** relating to the general cost score methodology, and
 - b. for qualifying boilers (repair or replacement), using **Formula 2.2** relating to the qualifying boiler cost scoring methodology.
- 7.78. Further information on identifying and evidencing non-gas fuelled premises is provided in Chapter 6.

Qualifying boiler deflator

- 7.79. Where a mains gas fuelled qualifying boiler is being replaced by another mains gas fuelled boiler, the cost score for that measure is reduced by 20%.¹¹⁵ The RHM for such a measure is 0.80.
- 7.80. Cost scores for these measures should be calculated using **Formula 2.3** below relating to the qualifying boiler cost scoring methodology.

¹¹⁴ Article 23 of the ECO2 Order.

¹¹⁵ Article 21 of the ECO2 Order.

General cost score methodology

- 7.81. This methodology must be used to calculate the cost score for all HHCRO measures¹¹⁶ except qualifying boilers and qualifying electric storage heaters.
- 7.82. The formulae suppliers must use to calculate the cost scores for such measures are provided below.

Methodology 1: General cost score methodology

Use Formula 1.1 **OR** Formula 1.2, as appropriate.

Formula 1.1:¹¹⁷

The following formula should be used to calculate the cost score for a measure:

$$S \times L = \text{cost score (£)}$$

Where:

'S' is the annual cost saving calculated in accordance with SAP or RdSAP

AND

'L' is the lifetime of the measure.

Formula 1.2:¹¹⁸

Where an insulation measure is installed in a non-gas fuelled premises, the following formula should be used to calculate the cost score:

$$(S \times L) \times 1.35 = \text{cost score (£)}$$

Qualifying boiler cost score methodology

- 7.83. Where a boiler being replaced or repaired meets the definition of a 'qualifying boiler'¹¹⁹, this methodology should be used to calculate the cost score.
- 7.84. The score for the repair or replacement of a qualifying boiler should be calculated from the starting position of 'no heating system present'. The RdSAP conventions

¹¹⁶ Unless SAP/RdSAP do not contain a methodology for calculating the score.

¹¹⁷ Article 19 of the ECO2 Order.

¹¹⁸ Article 23 of the ECO2 Order.

¹¹⁹ See Chapter 6, paragraphs 6.10 to 6.21 for information on qualifying boilers.

for this situation are as follows¹²⁰:

- a. space heating system: direct-acting portable electric heaters throughout (ignore any secondary heating system which may be present)
- b. space heating controls: none
- c. hot water:
 - (i) if actually from the broken boiler or from the (ignored) secondary heating system: enter as 'no water heating system', ie electric immersion heater (dual or single depending on the actual system installed or the type of electricity meter), or
 - (ii) if from any other source (eg 'multipoint gas instantaneous', 'electric instantaneous') etc, enter as is.

7.85. For the avoidance of doubt:

- a. if the dwelling has two main heating systems (as opposed to a main and a secondary), the broken main system should be entered as paragraph 7.84 and the working one entered as it is
- b. section A3.2 of SAP 2009 and 2012 regarding partially heated dwellings should be disregarded for the purposes of scoring qualifying boilers, and
- c. sections A3.4 and S10.1 of SAP 2009 and 2012, which suggest that a non-working boiler should be entered as if it were working, do not apply to calculating the ECO cost score for qualifying boilers.

7.86. However, for calculating savings for other measures installed at the same premises as the qualifying boiler, the normal SAP/RdSAP conventions should be applied (including an assumption that the existing heating system is working).

7.87. The formulae that suppliers must use to calculate the cost scores for the replacement or repair of qualifying boilers are provided below.

¹²⁰ SAP 2009/2012, Sections S10.1, S10.5, S10.6, Table 4a, Table 4e, Table S17 and Table S18.

Methodology 2: Qualifying boiler cost score methodology

Use Formula 2.1 **OR** Formula 2.2 **OR** Formula 2.3, as appropriate.

Formula 2.1:¹²¹

The following formula should be used to calculate the cost score for the repair or replacement of a qualifying boiler:

$$(A - B) \times N = \text{cost score (£)}$$

Where:

'A' is the cost of heating the premises and, where applicable, heating water at those premises, where the premises do not have a working heating system as calculated using SAP, RdSAP or an appropriate methodology. To determine 'A', suppliers should assume direct-acting portable electric heaters are present.

'B' is the cost of heating the premises and, where applicable, heating the water at those premises, with the repaired or replaced boiler.

AND

'N' is the lifetime of the boiler:

a. where the boiler has been *repaired*, the lifetime is:

- i. one, where a warranty of at least one year, but less than two years has been provided, or
- ii. two, where a warranty of two years or more has been provided.

b. where the boiler has been *replaced*, the lifetime is 12.

Formula 2.2:¹²²

In a non-gas fuelled premises, where a qualifying boiler is repaired or is replaced by a heating measure other than an ESH, the following formula should be used to calculate the cost score:

$$(A - B) \times N \times 1.45 = \text{cost score (£)}$$

¹²¹ Article 20 of the ECO2 Order.

¹²² Article 23 of the ECO2 Order.

Formula 2.3:¹²³

Where a mains-gas fuelled qualifying boiler is replaced by another mains-gas fuelled boiler, the following formula should be used to calculate the cost score:

$$(A - B) \times N \times 0.8 = \text{cost score (£)}$$

Qualifying electric storage heater cost score methodology

- 7.88. Where an ESH being repaired or replaced meets the definition of a 'qualifying electric storage heater' (QESH)¹²⁴ and, in the case of the replacement, is being replaced by an ESH, this methodology should be used to calculate the cost score.
- 7.89. The score for the repair or replacement of QESHs should be calculated from the starting position of 'no heating system present' for the part of the premises that is heated by the QESH to be repaired or replaced. The RdSAP convention¹²⁵ for this situation is as follows:
- a. space heating system: direct-acting portable electric heaters throughout; ignore any secondary heating system which may be present.
- 7.90. For the avoidance of doubt:
- a. if the dwelling has two main heating systems (as opposed to a main and a secondary), the broken main system should be entered as in paragraph 7.89, and the working one entered as it is
 - b. section A3.2 of SAP 2009 and 2012 regarding partially heated dwellings should be disregarded for the purposes of scoring QESHs, and
 - c. sections A3.4 and S10.1 (yellow box) of SAP 2009 and 2012, which suggest that a non-working main space heating system should be entered as if it were working, do not apply to ECO scoring of QESHs.
- 7.91. However, for calculating savings for other measures installed at the same premises as a QESH, the normal SAP/RdSAP conventions should be applied (including an assumption that the existing heating system is working).
- 7.92. The formula that suppliers should use to calculate cost scores for the replacement or repair of QESHs is provided below.

¹²³ Article 21 of the ECO2 Order.

¹²⁴ See Chapter 6, paragraphs 6.22 to 6.31 for information on qualifying electric storage heaters.

¹²⁵ SAP 2009/2012, Sections S10.1, S10.5, S10.6, Table 4a, Table 4e, Table S17 and Table S18.

7.93. **Note:** Where more than one QESH is being repaired or replaced at the same premises, only one measure should be notified. The cost score for this measure should represent the cost savings related to all of the QESHs at the premises.

Methodology 3: QESH cost score methodology

Formula 3.1:¹²⁶

The following formula should be used to calculate the cost score for the repair or replacement of all QESHs at the premises:

$$(A - B) \times N = \text{cost score (£)}$$

Where:

$$\text{'A'} = tA \times (tQESH / tESH)$$

$$\text{'B'} = tB \times (tQESH / tESH)$$

AND

'N' is the lifetime of the ESH:

- a. where the ESH has been *repaired*, the lifetime is:
 - i. one, where a warranty of at least one year, but less than two years has been provided, or
 - ii. two, where a warranty of two years or more has been provided.
- b. where the ESH has been *replaced*, the lifetime is 20.

'tESH' is the total number of ESHs in the premises at the 'before' stage.

'tQESH' is the total number of QESHs in the premises at the 'before' stage.

'tA' is the cost of heating the premises where there is no working heating system present in the part of the premises heated by tESHs, as calculated using SAP, RdSAP or an appropriate methodology. To determine 'tA', suppliers should assume direct-acting portable electric heaters are present.

'tB' is the cost of heating the premises following the repair or replacement of tQESH using SAP, RdSAP or an appropriate methodology.

¹²⁶ Article 22 of the ECO2 Order.

Decimal places

- 7.94. Annual cost savings, used to calculate cost scores, should be expressed in pounds and pence to two decimal places. Cost scores should be expressed in pounds sterling to **zero** decimal places when notified.
- 7.95. If annual savings are calculated by comparing 'before' and 'after' data, rounding (to two decimal places) should occur after the comparison is carried out, not before. This rounding should occur before multiplying by the lifetime and, where applicable, the RHM. The final figure, the cost score, should then be rounded again to zero decimal places before notifying.

For reference

8. Notification of completed measures

- 8.1. For a supplier to achieve its obligations, once a measure is installed it must be notified to us by that supplier. We use the information provided at notification to determine whether or not we will approve a measure. This chapter explains the following:
- a. when measures must be notified to us
 - b. how measures should be notified
 - c. what information must be notified for each measure
 - d. what happens when a successful notification contains errors
 - e. our approach to extension requests, and
 - f. information processing.
- 8.2. A version of this chapter is also included in our ECO2 Guidance: Administration. Below we present the elements of that chapter that we believe are most relevant for the supply chain.
- 8.3. A simple overview of the pathway an ECO measure follows, from installation to approval, can be found on our website.¹²⁷

When a supplier must notify us of completed measures

- 8.4. Suppliers must notify us of completed measures by the end of the month following the month in which installation of a measure was completed. For example, if a measure is completed in August 2015, its notification deadline will be 30 September 2015.

When is installation of a measure complete?

- 8.5. The installation of a measure is deemed to be complete on the date it can deliver savings at a level expected for that measure. This will normally be the date on which the installer finishes work on the measure.
- 8.6. However, for the purpose of monthly notification we will generally consider the measure to be complete on the date on which it is effectively handed over to the

¹²⁷ <https://www.ofgem.gov.uk//publications-and-updates/energy-companies-obligation-eco-toolkit>.

occupant of the premises or, if unoccupied at the time of handover, to the landlord.

- 8.7. For measures installed in accordance with PAS 2030:2014 Edition 1, the meaning of handover is defined within that specification.¹²⁸ The date of handover must be specified in the Declaration of Conformity.¹²⁹
- 8.8. For measures that do not need to be installed in accordance with PAS 2030:2014 Edition 1, or if no Declaration of Conformity is produced, the date of handover will be the date on which:
- a. work on the installation of the measure is finished, and
 - b. any relevant information or documents relating to operating and maintaining the measure have been provided to the consumer.
- 8.9. In this case, a declaration of completed installation should be obtained instead.¹³⁰ We expect handover to take place within four calendar weeks of the installer finishing work on each measure. The only exception to this requirement is where a particular type of measure is installed in multiple premises, where those premises are owned by the same landlord. For example, a block of flats, a row of houses, or where flats and/or houses are on the same estate.
- 8.10. In these circumstances the installer may handover to the landlord or its agent (rather than to the tenants of the premises) and may do a single handover for all measures installed of that type. Therefore, all the measures of that type can be notified in the same monthly notification because all the measures will have the same handover date. We expect handover to take place within four weeks of the installer finishing work on the last measure.
- 8.11. Suppliers must be able to evidence the date on which a measure was completed. The documentation a supplier must be able to make available on request to do this is explained in Appendix 1.

Notifying a completed measure

- 8.12. Suppliers must use the notification template, in accordance with the formatting prescribed in the data dictionary, when notifying us of a completed measure. Installers can familiarise themselves with the format and type of data required in the notification template to ensure they understand what we require of suppliers

¹²⁸ Paragraph 4.12, PAS 2030:2014.

¹²⁹ Chapter 7, PAS 2030:2014.

¹³⁰ The declaration must be signed by the occupant, or if unoccupied, the landlord, to confirm the date on which the installer finished work on the installation of the measure as well as the date the measure was handed over.

for notifications to be successful. The data dictionary is a reference tool for completing the notification template.¹³¹

- 8.13. Suppliers must include all the information as listed in the notification template. Suppliers provide this information to us securely through the ECO Register, which is used to notify measures.
- 8.14. If the information in the notification template is incomplete, the measure can still be notified. However, we are unable to process that measure until the information is complete and, in some cases, we may refuse or revoke approval of a measure if the supplier is not able to provide the required information.
- 8.15. We will review each measure that is successfully notified to us and will inform suppliers of our decision to approve or refuse the savings for that measure.¹³² We may require a supplier to clarify the information notified, or provide further information for a notification, before we can make a decision regarding the notified measure.
- 8.16. We intend to process notified measures in a reasonable timeframe (usually one month). Suppliers can use the ECO Register to check the status of a measure, including which measures are being processed, which are on hold and which have been approved or refused. Our ability to process measures will depend on the quality and completeness of the information provided at notification.
- 8.17. Once we are satisfied that the information notified is correct, all relevant fields of the notification template are complete and the eligibility criteria are met, we will approve the measure in the ECO Register.
- 8.18. Where a measure does not meet the relevant eligibility criteria we will refuse to approve or revoke approval of that measure.
- 8.19. It is the responsibility of each supplier to ensure that the information contained in all notifications is true and to manage any third parties involved in the delivery of ECO measures.
- 8.20. Errors in the notification of a completed measure may lead us to refuse or revoke approval of a measure and may lead to enforcement action.
- 8.21. Where the results of any of our checks show that completed measures are not eligible ECO measures we may refuse or revoke approval of those measures. To demonstrate the eligibility of these measures suppliers may need to collect more data from the supply chain. Suppliers should ensure that they can readily access

¹³¹ See <https://www.ofgem.gov.uk/environmental-programmes/energy-companies-obligation-eco/information-suppliers> for the notification template and data dictionary.

¹³² <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-notifying-supplier-decision-refuse-or-revoke-approval-measure>.

the relevant data and documents and provide them within a reasonable timeframe. Once suitable evidence of sufficient quality is provided we will process these measures within a reasonable timeframe. Where such evidence is not provided we may refuse or revoke approval of those measures.

- 8.22. Where we revoke or refuse approval of a measure, we will inform the supplier in writing. Our decision notice will provide details, including the measure reference numbers and reason, for our decision.

Applications for an extension to the notification deadline

- 8.23. Suppliers can apply to us for an extension to the notification deadline for a completed measure. The application must be in writing and must explain why the extension is being requested. The reason should be supported by evidence.
- 8.24. Once a supplier becomes aware that it has, or will, fail to notify a measure by the notification deadline it should take all reasonable steps to ensure that the measure is notified as soon as possible. We cannot guarantee that an extension request will be approved.
- 8.25. Suppliers seeking an extension should submit a request using the 'Application for Extension' template.¹³³ Any relevant supporting evidence, such as emails, screenshots or other correspondence should be sent to us at the same time as the extension request. We will process extension requests within a reasonable timeframe, where sufficient evidence is provided.
- 8.26. We are not obliged to grant an extension to suppliers and we will consider each application on an individual basis. We will grant an extension to the notification deadline if a supplier satisfies us that there is a reasonable excuse for missing the notification deadline. Further information about what is a 'reasonable excuse' is provided below.

Reasonable excuse for failing to notify a measure by the notification deadline

- 8.27. A reasonable excuse is an unexpected or unusual event that:
- a. is either unforeseeable or beyond the supplier's control, and
 - b. prevents the supplier from notifying a measure by the notification deadline.

¹³³ Suppliers can obtain this template on request. Please contact the ECO Team: eco@ofgem.gov.uk.

- 8.28. We will judge the actions of a supplier from the perspective of a prudent supplier exercising reasonable foresight and due diligence, and having proper regard for its responsibility under the ECO2 Order.
- 8.29. If a supplier relies on a third party to provide the information needed to notify a completed measure, the supplier is responsible for ensuring that party carries out its task correctly. We expect the supplier to take reasonable care to explain to the third party what it requires them to do and to set deadlines for the task. We expect the supplier to have processes in place for eliminating or mitigating any risk of the third party failing to carry out its task correctly or within the agreed deadlines.
- 8.30. It is not possible to give a comprehensive list of what might be a reasonable excuse and each case will be considered on an individual basis.

Administrative oversight on the part of the supplier

- 8.31. We are unable to grant an extension to the notification deadline where the reason relates to administrative oversight on the part of the supplier.
- 8.32. Administrative oversight includes instances where the supplier fails to carry out an administrative task for reasons within its control and if the cause of that failure was reasonably foreseeable. Examples of administrative oversight on the part of the supplier include:
- a. sending the notification to the wrong email address
 - b. forgetfulness
 - c. if the person(s) with the relevant knowledge or login details is sick or absent (if it is reasonable to expect the supplier to have a secondary person with the necessary authority and knowledge to submit the notification)
 - d. routine maintenance of IT systems, or
 - e. misplacing of password and/or login details.
- 8.33. The above list is not exhaustive and all extension requests will be assessed on a case-by-case basis. We will take into account the degree of control exercised by the supplier over the administrative oversight when deciding whether it is the responsibility of the supplier. For example, we will generally consider the administrative oversight to be the responsibility of the supplier if one of its employees is responsible for the administrative oversight.

Determining the period of extension

- 8.34. If we are satisfied that an event occurred that gives a supplier reasonable excuse for failing to notify a measure by the notification deadline, we will expect the supplier to take all reasonable steps to submit the notification at the earliest possible time. We will grant an extension to this point in time.

Fair Processing

- 8.35. When fulfilling their ECO2 obligations, suppliers may obtain information about the occupant or landlord of the premises. Some of this information will need to be provided to us either as part of the monthly notification or in the course of our audits. In addition, in the course of the transfer of a qualifying action, one supplier will disclose this information to another supplier.
- 8.36. Suppliers should ensure that their processing of this information complies with all applicable data protection laws. A supplier should also ensure that any member of the supply chain acting on its behalf complies with the data protection laws.
- 8.37. In particular, it is the responsibility of suppliers to ensure the person who lives at the premises (or if it is vacant, the landlord) where the ECO measure is delivered knows how and why their information will be processed, including who the information will be disclosed to. This includes telling them that their data will be shared with us.
- 8.38. In general, the Data Protection Act 1998 requires anyone collecting personal data to give the data subject (ie in the case of ECO the occupant or the landlord) a Notice of Fair Processing, also known as a Privacy Notice.
- 8.39. So that we are able to process the data suppliers provide, we require the following wording to be included in every Privacy Notice that suppliers provide to the occupant or landlord under ECO2:

'Some of the information you have provided to [**name of supplier/energy company who funded the measure**] ('your personal information') may be disclosed to Ofgem as Administrator of ECO. Ofgem is the Office of Gas and Electricity Markets. Further information about Ofgem can be found at <http://www.ofgem.gov.uk>.

Ofgem may use your personal information to determine whether a supplier is achieving its obligations under the scheme and to comply with its own statutory duties. Ofgem is required to disclose your personal information to the Secretary of State. Ofgem may seek to verify your personal information by contacting you directly or by checking it against existing Government records.

If you would like to know more about what information Ofgem holds about you, or the way it uses your information, full details of Ofgem's ECO Privacy Policy can be found at: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-privacy-and-information-use>. You can also contact Ofgem directly at eco@ofgem.gov.uk or 9 Millbank, London, SW1P 3GE.'

- 8.40. This wording is intended to discharge some of our obligations under the Data Protection Act 1998. It is not intended, and should not be relied on, to discharge suppliers' obligations for that legislation or other data protection laws. Further guidance on what information Fair Processing Notices should contain can be found on the Information Commissioner's Office website at: <http://ico.org.uk/>.

9. Technical monitoring, score monitoring and audit

- 9.1. We carry out various checks to ensure that the relevant eligibility requirements have been met and that the savings reported by suppliers are accurate. These include monitoring the quality of installation and the accuracy of scores (technical and score monitoring respectively). We also conduct audits of the measures notified to us by suppliers and have a fraud team that works to detect, prevent and deter fraudulent activity.
- 9.2. Technical monitoring verifies whether a measure has been installed to the relevant installation standards by a person of appropriate qualification and expertise, and whether it complies with the relevant eligibility criteria.
- 9.3. Score monitoring verifies whether certain inputs used to calculate the carbon saving or cost score, relating to the characteristics of the premises or measure, are accurate. Where we refer to *scoring* and *re-scoring* in this chapter it covers both the carbon saving and cost score, as applicable, for a measure.
- 9.4. Auditing verifies whether the processes and requirements we outline in our guidance documents have been followed. This includes, for example, documentation to prove that a person is a member of the affordable warmth group (AWG).
- 9.5. This chapter outlines the following:
 - a. the monitoring requirement
 - b. the monitoring process
 - c. the monitoring timelines
 - d. how to deal with monitoring fails
 - e. our response to poor performance
 - f. audit requirements, and
 - g. our approach to fraud.

The monitoring requirement

- 9.6. By the end of the first month following a quarter, a supplier must report the results of monitoring conducted on at least 5% of each measure type for both technical and score monitoring. 5% is determined using the number of measures that have been notified by the supplier during the quarter. Monitoring must be conducted on

those measures. Where a measure fails monitoring, and as a result the supplier chooses not to notify that measure, that inspection must be included in the supplier's monitoring report and will still contribute to its monitoring requirement.

- 9.7. A supplier's overall monitoring sample (ie all measures monitored in relation to a quarter) must also be representative of the installers that installed the measures notified by that supplier in a quarter. Generally we will deem the overall monitoring sample representative if it includes at least 3% of the measures installed by each installer, and notified by the relevant supplier, in that quarter.
- 9.8. Where the number of measures of a particular type or installed by a particular installer is less than 100, monitoring should be conducted on at least one measure of each type installed by each installer.
- 9.9. Technical monitoring and score monitoring can, but do not have to, be conducted on the same measure. Both must be conducted through site audits and can be carried out during the same visit by the same agent, provided the agent has appropriate qualifications.
- 9.10. Where several suppliers are members of the same group of companies ('energy group') we will be satisfied that each supplier within the group has met the monitoring requirement if the group as a whole has achieved 5% monitoring for that quarter.
- 9.11. The monitoring requirement applies irrespective of how a supplier acquires the measure (eg through a bilateral contract, brokerage or an in-house installer).
- 9.12. The monitoring requirement does not apply to measure types that do not have monitoring questions.¹³⁴

The monitoring process

Who conducts monitoring?

- 9.13. Monitoring inspections must be conducted by a suitably qualified monitoring agent who is independent from:
 - a. the supplier
 - b. the installer
 - c. any party involved in the installation of the measure
 - d. any party involved in the assessment of the measure, and

¹³⁴ See <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-technical-monitoring-questions> for information on technical monitoring questions.

- e. any party that has control or ownership of the premises.
- 9.14. We will be satisfied that a monitoring agent is independent if he or she is not an employee of any of the parties listed above.¹³⁵
- 9.15. For technical monitoring, the monitoring agent must be suitably qualified. We may audit the due diligence processes a supplier has in place to ensure that its monitoring agents are suitably qualified.
- 9.16. For score monitoring, the agent must either be:
- a. in England and Wales, a qualified Domestic Energy Assessor (DEA) or a Green Deal Advisor (GDA), or
 - b. in Scotland, members of Approved Organisations.¹³⁶
- 9.17. Where a supplier would like to use an agent with a different/equivalent qualification it should contact us.

How is monitoring conducted?

- 9.18. We provide a list of monitoring questions which must be used by the monitoring agent. These questions can be found on our website.¹³⁷
- 9.19. The required technical monitoring rate is split between mid- and post-installation inspections, depending on the type of measure being monitored. Details of this split can be found with the monitoring questions. Score monitoring is only carried out post installation.
- 9.20. Monitoring agents must select a random sample of measures for monitoring by measure type and installer. They must not choose measures that have been recommended to them by the installer or supplier.
- 9.21. Monitoring agents should submit inspection results, including answers to all relevant monitoring questions, directly and unaltered to the supplier.

¹³⁵ This may be subject to audit.

¹³⁶ Approved Organisations are those that have entered into protocols with Scottish Government to deliver Energy Performance Certificates. See <http://www.gov.scot/Topics/Built-Environment/Building/Building-standards/enerperfor/epcorgprq> for a list of approved organisations.

¹³⁷ <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-technical-monitoring-questions>.

The monitoring reports

- 9.22. Suppliers should collate the inspection results submitted by monitoring agents in the technical and score monitoring templates we provide. We will email these templates to suppliers at the end of every quarter.
- 9.23. Once completed, the templates, known as 'monitoring reports', will contain the required information on the monitoring carried out on the measures notified in the previous quarter. This information should include details of any fails from that quarter that have been overturned, remediated or re-scored (discussed in *Monitoring fails* below).
- 9.24. Monitoring reports must be submitted to us by the end of the first month following the end of the quarter in which the measures monitored were notified (the 'submission deadline').

Monitoring timelines

- 9.25. This section illustrates the timelines suppliers should keep to when conducting technical and score monitoring.
- 9.26. The first quarter for monitoring ECO2 measures will relate to measures with a notification deadline¹³⁸ at the end of April, May or June 2015, ie measures that were installed in March, April or May 2015 (although we realise that in practice no ECO2 measures will be installed in March). The next quarter will relate to measures with a notification deadline at the end of July, August or September 2015, and so forth until the end of the obligation period.

EXAMPLE

- 9.27. A measure is installed on 24 April 2015. This measure must be notified to us by the end of May 2015. Post-installation monitoring of this measure can take place at any time between the installation date and the report submission deadline, ie 31 July 2015.

Monitoring fails

- 9.28. If a measure fails monitoring, this suggests that the measure has not been installed in accordance with the relevant eligibility requirements for that measure (technical monitoring fail) or that the inputs used to calculate the carbon saving or cost score are incorrect (score monitoring fail). This will mean that we are unable to attribute savings unless the supplier is able to demonstrate that the measure is

¹³⁸ The notification deadline is the date by which the supplier must notify the completed measure, ie the end of the calendar month after the month in which installation of the measure was completed.

eligible and/or that it has been scored correctly.

- 9.29. We expect measures to be remediated or re-scored within three months of the last day of the month in which the failure was identified by the monitoring agent.
- 9.30. If a measure is not remediated or re-scored, and in the case of technical monitoring re-inspected, within six months of the last day of the month in which the failure was identified by a monitoring agent, , we will revoke an earlier decision to attribute savings to the measure or refuse to attribute savings to the measure.

Remediating technical monitoring fails

- 9.31. To avoid losing the savings for a measure, a supplier must ensure that remedial works are carried out to address the areas where that measure failed technical monitoring. A supplier should re-inspect the installation after remedial work is completed and confirm to us that the remedial work is complete and that the measure now meets the relevant standards of installation.
- 9.32. Re-inspections must be carried out by suitably qualified monitoring agents.¹³⁹ The re-inspection should establish that the fail that caused the measure to fail technical monitoring has been remediated and that the measure has now passed technical monitoring.
- 9.33. Monitoring agents should submit the results of re-inspection, detailing that remediation work has successfully addressed the fail, directly and unaltered to the supplier.
- 9.34. If a measure fails re-inspection, a supplier may continue to attempt remedial works until the measure is successfully remediated as long as this is within the timelines outlined in paragraph 9.30.
- 9.35. Re-inspections are in addition to the normal technical monitoring process and do not contribute to a supplier's monitoring requirement.
- 9.36. We expect a supplier to make reasonable efforts to contact the occupant in order to conduct remedial work or re-inspection. If this is not completed within six months then we will revoke or refuse savings for a measure (see paragraph 9.30). In some instances a supplier may be unable to access premises ('non-access').
- 9.37. If non-access (supported by sufficient evidence) prevents a supplier from remediating a fail and the measure:

- a. fails to meet a standard of installation that affects the ability of the

¹³⁹ Re-inspections can be carried out by the same monitoring agent that conducted the original monitoring inspection.

measure to generate savings, or

- b. does not meet the relevant eligibility criteria

it will not be eligible and we will refuse or revoke approval for that measure.

- 9.38. Where non-access (supported by sufficient evidence) prevents a supplier from re-inspecting a measure, that measure will be awarded the carbon savings or cost score as notified to Ofgem, assuming the measure is eligible in all other respects.
- 9.39. More details of how a supplier can evidence instances of non-access and our response to these instances can be found in our supplementary guidance note 'ECO Technical Monitoring False Fail and Non-Access Guidance'.¹⁴⁰

Re-scoring score monitoring fails

- 9.40. Where a potential error in the inputs used to calculate the score of a measure is identified through score monitoring, a supplier must correct and/or verify the score to avoid losing savings for that measure. A supplier may do this by:
- a. using evidence provided by the score monitoring agent
 - b. using additional documentary evidence provided by the original assessor, and/or
 - c. conducting an additional inspection of the premises to establish the correct inputs (using a score monitoring agent).
- 9.41. A supplier may re-score the measure in-house or have another third party re-score the measure.¹⁴¹ The supplier must be satisfied that the score it re-submits is correct.
- 9.42. If an incorrect score is based on a lodged Energy Performance Certificate (EPC), the supplier may inform the accreditation body of the DEA who originally scored the measure of the error. Once a score has been re-calculated for ECO, we do not require another EPC to be lodged. It is the responsibility of the accreditation body to ensure that lodged EPCs are correct.

Challenging a monitoring fail

- 9.43. A supplier may challenge the outcome of a monitoring inspection with the monitoring agent. If the monitoring agent accepts that a measure should not have failed, this will be deemed an 'overturn'. A supplier should retain written evidence

¹⁴⁰ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

¹⁴¹ See Chapter 7 for more details on scoring.

from the monitoring agent detailing why the result of an inspection has been overturned. We may require such evidence at audit.

- 9.44. Overturned monitoring fails will no longer be considered a fail and, therefore, do not require remediation or re-scoring.
- 9.45. At the end of each quarter we will issue suppliers with a 'failed measures report' that lists all failed measures that have not yet been successfully remediated or re-scored. Suppliers should use the failed measures report to update us on the progress they have made remediating, re-inspecting and re-scoring failed measures, or indicate where a fail has been overturned.
- 9.46. Suppliers should return the updated failed measures report to us when they submit their monitoring reports for the subsequent quarter.

Our response to poor performance

- 9.47. The following paragraphs outline our response to poor performance. All of the following requirements apply on a supplier basis. Each installer will be considered separately in respect of each supplier.

Where a supplier fails to achieve the monitoring requirement

- 9.48. Where a supplier fails to meet the monitoring requirement for a particular quarter, we will not have sufficient confidence in the quality or accuracy of all the measures installed by the supplier in that quarter. This may lead us to refuse or revoke approval of these measures. In addition, the supplier will have breached the monitoring requirement and we may consider taking enforcement action.

Where the technical monitoring failure rate is high

- 9.49. If, for any one quarter, the technical monitoring failure rate for a particular installer or a measure type installed by a particular installer is higher than 10%, we will consider one or more of the following actions on that subset of measures notified in that quarter:
 - a. require the supplier to conduct additional monitoring
 - b. require the supplier to conduct a document review
 - c. initiate an audit, and/or
 - d. suspend approval of all measures of that subset.
- 9.50. If, as a result of any of the actions listed in paragraph 9.49 above, we remain concerned that the measures under consideration are not eligible ECO measures,

we will continue to take one or more of the actions listed above until we have sufficient confidence in the quality of these measures.

- 9.51. If, for any two consecutive quarters, the failure rate for a particular installer or a measure type installed by a particular installer is higher than 10%, we will also review, and may increase, that installer's monitoring rate for subsequent quarters. **This technical monitoring is in addition to the monitoring requirement.**
- 9.52. Where a particular installer, or a measure type installed by a particular installer, is subject to additional monitoring, the monitoring rate will only return to the baseline rate of 5% once the failure rate for that subset of measures falls below 10% for any one quarter.
- 9.53. If, for any three consecutive quarters, the failure rate for a particular installer, or a measure type installed by a particular installer is higher than 20%, we will consider suspending assessment of that subset of measures both for the previous three quarters and any notified in the future. Such a suspension would last until the relevant actions required by us, listed in paragraph 9.49, have been completed and we have sufficient confidence in the quality of that subset of measures.
- 9.54. Where we have concerns about the quality of a particular subset of measures, including across suppliers, we may consider one or more of the actions listed in paragraph 9.49. This could apply, for example, where an installer has a high failure rate for mid-installation external wall insulation (EWI) inspections, but their overall failure rate for EWI inspections is less than 10%.

Where the score monitoring failure rate is high

- 9.55. If, for any one quarter, a supplier's score monitoring failure rate causes us to have concerns that the measures installed in that quarter have not been accurately scored, we will consider one or more of the actions listed in paragraph 9.49 until we have sufficient confidence in the accuracy of these measures.
- 9.56. Where we have concerns about the accuracy of a particular subset of measures we may consider one or more of the actions listed in paragraph 9.49.

Audit

- 9.57. We may audit a qualifying action promoted by a supplier, and that audit may relate to any of the requirements in our guidance, including our ECO2 Guidance: Administration. The documents and data that a supplier must make available to us are detailed in Appendix 1 and Appendix 2.¹⁴²

¹⁴² In certain circumstances, for example where we suspect fraud or misreporting, we may require a supplier to provide other information not listed in Appendix 1 or 2, as per Article 32 (1).

- 9.58. We do not require suppliers to hold or retain these documents and data. A supplier may choose to enter into an arrangement with a third party (such as an installer), under which the third party agrees to hold these documents and data and make them available to the supplier on request. It is for each supplier to choose how it will ensure that it is in a position to make the documents and data available, within the required timeframes, to an auditor.

Fraud

- 9.59. Ofgem takes a zero tolerance approach to fraud. A dedicated Counter Fraud Team undertakes activities to detect, prevent and deter fraudulent activity across ECO. All suppliers are expected to work closely with the Counter Fraud Team to ensure a collaborative and targeted approach. In the context of ECO, fraudulent activity is any dishonesty or misrepresentation in relation to the ECO2 Order or our guidance, that undermines the Government's policy intent or our administration.
- 9.60. Suppliers are expected to mitigate the risk of fraud within their ECO activity. This should include, but is not exclusive to:
- a. identifying and mitigating fraud risks
 - b. controls to ensure savings calculations using SAP/RdSAP/appropriate methodologies are correct
 - c. sufficient requirements within third party contracts to ensure that work is completed in accordance with the ECO2 Order and our guidance. This must include the activity of the whole supply chain, including all sub-contractors
 - d. robust processes for getting regular, reflective activity reports from in-house installers and third parties
 - e. the continued scrutiny of in-house and third party activity to ensure compliance with the ECO2 Order and our guidance
 - f. suitable, senior manager oversight of activity and reporting
 - g. processes to ensure accurate and reflective reporting to us, and
 - h. processes for handling, investigating and reporting suspected fraud cases.
- 9.61. Suppliers are required to submit their fraud prevention strategies to us for review every March.
- 9.62. We will work closely with suppliers to ensure that their fraud prevention strategies are appropriate, effective and robust. A supplier should be able to

demonstrate the steps it has taken, and is taking, to eliminate fraud and should provide sufficient evidence to us to demonstrate those steps.

- 9.63. All suppliers are invited to attend the ECO Industry Fraud Prevention and Compliance Committee¹⁴³, a forum for discussing common fraud risks and issues across the industry and to drive best practice.
- 9.64. Suppliers should, in all instances, promptly report any instances of suspected fraud to the Ofgem E-Serve Counter Fraud team at: counterfraud@ofgem.gov.uk.
- 9.65. A supplier must ensure its own investigations into suspected fraud cases are thorough and completed in a timely manner. A supplier should contact us if they have any questions regarding their investigation plan, approach or results.
- 9.66. During the investigation of suspected fraud cases we may suspend approval of the subset of measures to which the fraud relates while we establish if it is an isolated incident or if further ECO measures are involved. Depending on the nature of the investigation, we may also suspend similar measures installed by that installer or third party. Where evidence of fraud is found we will refuse or revoke approval of the fraudulent ECO measures.
- 9.67. In addition, where evidence of fraud is found this should be reported to Action Fraud¹⁴⁴ or the Police¹⁴⁵. We will also refuse or revoke approval of fraudulent ECO measures.

¹⁴³ The ECO Industry Fraud Prevention & Compliance Committee (EIFPCC) provides a forum for the ECO suppliers, together with Ofgem and other representatives agreed by the group, to discuss fraud and compliance risks relating to instances of fraud within the ECO programme and to agree mitigating actions encompassing prevention, detection and response.

¹⁴⁴ Action Fraud provide a central point of contact for reporting fraud in the UK. See: <http://www.actionfraud.police.uk/> for more information.

¹⁴⁵ If the fraud is ongoing it should be reported directly to the Police.

Appendix 1 – Documents and data to be made available on request

In this appendix we set out the documents and data which a supplier must be able to make available for the purpose of an audit or other compliance check, at any time before 30 September 2017.

The information in this appendix is presented in Table 3, which is laid out as follows:

- a. the first column refers to the relevant ECO requirement
- b. the second column refers to the documents (if any) that a supplier will need to make available to demonstrate compliance with that requirement, and
- c. the third column refers to the data (if any) that a supplier will need to make available to demonstrate compliance with that requirement.

FOR reference

Table 3 Documents and data to be made available on request

| ECO requirement | Documents to be made available on request | Data to be made available on request |
|---|--|---|
| Promotion of the measure | <p>Documentation sufficient to establish 'promotion'.</p> <p>For example, in the case where a supplier contracts a person to install a measure at premises, a supplier should produce:</p> <ul style="list-style-type: none"> • the contract(s) or other document(s) which establish the relationship between the supplier and the installer, under which the installation was performed (this includes documents which demonstrate that the installation was completed under an oral contract) <p>AND</p> <ul style="list-style-type: none"> • where appropriate, evidence of the supplier's payment of, or contribution towards, the fees and other costs of the installation. For example, an invoice and a payment slip. | - |
| Specification of the measure | Documentation which includes the relevant measure data. | <p>To include:</p> <ul style="list-style-type: none"> • measure type • manufacturer name • product name • product serial number (where available) |
| Installation in accordance with PAS and for HHCRO only, installation by a person with appropriate skill and experience | The contractual agreement or equivalent (containing the requirement to cooperate with an Ofgem auditor). | <ul style="list-style-type: none"> • PAS certification number and/or certificate where relevant |

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| <p>Installation in accordance with building regulations</p> | <p>Documentation that demonstrates that a product or system used in installation is compliant with building regulations including:</p> <ul style="list-style-type: none"> • United Kingdom Accreditation Service (UKAS) accredited product approval • European Technical Approval with additional documentation to show compliance with building regulations • approval by a building control body, or • self-certification schemes. | <p>-</p> |
| <p>Address where the measure is installed</p> | <p>Documentation which includes the relevant address data.</p> | <p>To include:</p> <ul style="list-style-type: none"> • house/flat number • street • town/city • country • postcode • unique property reference number |

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| <p>Date of completion</p> | <p>Either:</p> <ul style="list-style-type: none"> • a copy of the <i>declaration of conformity</i> described at clause 7.2 of PAS 2030:2014, where such declaration has been produced and signed by the installer <p>OR</p> <ul style="list-style-type: none"> • a declaration including the details listed below. <p>Either declaration must be signed by the occupant, or if unoccupied, the landlord, to confirm the date on which the installer finished work on the installation of the measure as well as the date the measure was handed over. This can be in an electronic form (we understand that some suppliers will capture this information electronically).</p> <p>We recommend the following wording is included in the declaration for the purpose of obtaining confirmation from the occupant or landlord, as applicable:</p> <p><i>For completion by the occupant, or if unoccupied, the landlord:</i></p> <ul style="list-style-type: none"> • <i>Confirmation that information provided by the installer is accurate</i> • <i>Date the installer finished work on the measure</i> • <i>Date of handover of all information relating to the measure</i> • <i>Occupant/landlord (print)</i> • <i>Occupant/landlord signature</i> • <i>Date</i> <p>The declaration can be signed by someone acting on behalf of the occupant or landlord as long as they are not the installer, supplier or any other party in the supply chain.</p> | <ul style="list-style-type: none"> • date of completion |
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| <p>A recommended measure (CERO and CSCO only)</p> | <p>Either:</p> <ul style="list-style-type: none"> the Green Deal report (Green Deal Advice Report or Green Deal Improvement Package) produced following a qualifying assessment <p>OR</p> <ul style="list-style-type: none"> the recommended measure report by a chartered surveyor.¹⁴⁶ | <ul style="list-style-type: none"> the EPC reference number (for all cases where an EPC has been conducted) Green Deal Advice Report reference number (for all cases where a Green Deal Advice Report has been carried out) Green Deal Improvement Package reference number (for all cases where a Green Deal Improvement Package has been prepared) |
| <p>Percentage of installation that must be completed</p> | <p>Where less than 100% of a measure has been installed, documentation which supports the reasons for judging that 100% cannot be installed.</p> <p>For example, if lack of consent from the occupant or landlord of the premises is the reason why 100% of a measure is not installed, a signed declaration from the occupier or landlord (as applicable) stating this.</p> | <ul style="list-style-type: none"> percentage of measure installed if less than 100% of the measure was installed, the reasons why |
| <p>Insulation of a solid wall</p> | <p>-</p> | <ul style="list-style-type: none"> age of the building the type of walls treated (ie brick or non-brick) |

¹⁴⁶ <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-chartered-surveyor-recommended-measure-report>.

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| <p>Virgin loft insulation</p> | <p>Documentation that demonstrates that the loft was accessed during the assessment of the premises and that no pre-existing insulation was present at that time.</p> <ul style="list-style-type: none"> For CERO and CSCO measures, a copy of the recommendation report (either a Green Deal report or a report by a chartered surveyor), <p>OR</p> <ul style="list-style-type: none"> For HHCRO measures, a copy of the lodged pre-installation Energy Performance Certificate (EPC). | <p>-</p> |
| <p>Connection to a district heating system (all obligations)</p> | <p>Documentation which includes the relevant DHS data.</p> | <p>To include:</p> <ul style="list-style-type: none"> specification of the existing heating system – fuel type, supply, controls, efficiency specification of the replacement system – fuel type, supply, controls, efficiency, and heat load before and after installation. |
| <p>Relevant district heating connection (CERO and CSCO only) – insulation pre-conditions</p> | <p><u>For pre-condition 1:</u></p> <p>Where less than 100% of the wall or roof area of premises has been insulated, documentation which supports the reasons for judging the uninsulated area 'cannot be insulated'.</p> | <ul style="list-style-type: none"> percentage of the total exterior-facing walls or total roof area of the premises that is insulated reason(s) the wall or roof area of the premises cannot be insulated (if applicable). |

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| | <p><u>For pre-condition 2:</u></p> <p>Where a wall of a multi-storey building has not been insulated, documentation which supports the reasons for judging the wall area 'cannot be insulated'.</p> <p>Where there is a technical reason for not insulating a cavity wall, a report from a suitably qualified chartered surveyor or structural engineer confirming that the cavity cannot be filled for technical reasons.</p> | <ul style="list-style-type: none"> • reason(s) the wall of the building cannot be insulated (if applicable). |
| <p>Relevant district heating connection (CERO and CSCO only) – pre-existing insulation</p> | <p>Documentation that shows that any pre-existing insulation in place meets the required standards to meet the relevant insulation pre-condition.</p> <p>Suppliers may demonstrate the age of the premises using:</p> <ul style="list-style-type: none"> • an EPC, or • a SAP assessment report. <p>Suppliers may demonstrate the relevant U-values using:</p> <ul style="list-style-type: none"> • relevant building control approval, which both correctly defines the construction in question and states the calculated U-value, or • a U-value calculation produced or verified by a suitably qualified person.¹⁴⁷ | <p>-</p> |

¹⁴⁷ See page 130 of SAP for more information on suitable qualifications: http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf.

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| Secondary measures (CERO only) | Documentation which includes the relevant measure data. | To include: <ul style="list-style-type: none"> • date of completion of secondary measure • date of completion of related primary measure(s) • percentage of roof or wall area, as applicable, insulated by the related primary measure(s), and in the case of loft insulation, the depth of insulation. |
| Repair and replacement of qualifying boilers (HHCRO) | The accurate, complete and signed Boiler Assessment Checklist. In the case of the replacement of a qualifying boiler with another boiler, a copy of the qualifying warranty and the occupier declaration. In the case of the repair of a qualifying boiler, a copy of the warranty. | <ul style="list-style-type: none"> • information relating to operative competency (see Appendix 3) |
| Boiler installations (HHCRO) | A copy of the qualifying warranty and the occupier declaration. | <ul style="list-style-type: none"> • information relating to operative competency (see Appendix 3) |
| Repair and replacement of qualifying electric storage heaters (HHCRO) | The accurate, complete and signed Electric Storage Heater Assessment Checklist. A copy of the warranty. | <ul style="list-style-type: none"> • information relating to operative competency (see Appendix 4) |
| Electric storage heater installations (HHCRO) | A copy of the warranty. | <ul style="list-style-type: none"> • information relating to operative competency (see Appendix 4) |
| Affordable warmth group (AWG) (HHCRO and CSCO, for measures delivered in rural areas) | See Appendix 2 - <i>Evidencing the HHCRO premises and occupant requirements.</i> | The category of AWG eligibility: <ul style="list-style-type: none"> • Low Income • Disabled • Elderly |

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| <p>Private domestic premises (HHCRO)</p> | <p>See Appendix 2 - <i>Evidencing the HHCRO premises and occupant requirements.</i></p> | <p>-</p> |
| <p>Insulation measures receiving a non-gas uplift (HHCRO)</p> | <p>Documentation that shows that the premises where the insulation measure is installed are 'non-gas fuelled':</p> <ul style="list-style-type: none"> • the pre or post installation SAP or RdSAP assessment used to demonstrate the fuel type(s) of the main space heating system(s), provided the assessment was conducted by an accredited SAP or RdSAP assessor. This assessment should take the form of a lodged EPC. | <ul style="list-style-type: none"> • pre-installation fuel type, <p>OR</p> <ul style="list-style-type: none"> • post installation fuel type. |
| <p>Qualifying boiler measures receiving a non-gas uplift (HHCRO)</p> | <p>Documentation showing that premises where qualifying boiler repairs and replacements are installed are 'non-gas fuelled' before and after installation:</p> <ul style="list-style-type: none"> • the Boiler Assessment Checklist demonstrating the fuel type(s) of the main space heating system(s) where the operative has recorded the fuel type(s) before and after the measure has been completed <p>OR</p> <ul style="list-style-type: none"> • the pre and post installation SAP or RdSAP assessment demonstrating the fuel type(s) of the main space heating system(s), provided the assessment was conducted by an accredited SAP or RdSAP assessor. Both of these assessments should be lodged EPCs. | <ul style="list-style-type: none"> • pre-installation fuel type, <p>AND</p> <ul style="list-style-type: none"> • post installation fuel type. |

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| <p>The carbon saving or cost score of a measure</p> | <p>1) SAP/RdSAP (including bespoke systems that use a SAP/RdSAP engine)</p> <p>Report(s) or screen shots showing:</p> <ul style="list-style-type: none"> • Input data • Output data (including 'before' and 'after' cases where relevant) • Cost score and/or carbon saving • Software information (name of the software organisation, software name, version) • Name of assessor, assessor number (where applicable) and company • Documentation of additional calculations (lifetime, in-use factor) <p>2) Appropriate methodology</p> <ul style="list-style-type: none"> • Input data • Output data • Cost score and/or carbon saving • Appropriate methodology ID • Documentation of additional calculations (lifetime, in use factor) • Independent report on the methodology • Ofgem approval for appropriate methodology | <p>-</p> |
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For reference

Appendix 2 – Evidencing the HHCRO premises and occupant requirements

Introduction

This appendix supports Chapter 6, outlining the documents and data that a supplier must be able to make available to us to demonstrate that the premises and occupant requirements have been met for all HHCRO measures.

1. The premises requirement:

This section of this appendix provides an overview of the evidence which can be used to demonstrate that the premises are private domestic premises. It provides information on:

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|-----|--------------------------------|----------|
| 1.1 | Registered relevant interest | page 101 |
| 1.2 | Unregistered relevant interest | page 102 |
| 1.3 | Identifying social landlords | page 104 |
| 1.4 | Determining market rate | page 106 |
| 1.5 | Evidence for mobile homes | page 106 |

2. The occupant requirements

This section of this appendix provides an overview of the evidence which can be used to demonstrate a person is a member of the AWG, and that that person is an occupant of the premises. It provides information on:

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|-----|---|----------|
| 2.1 | Evidencing each of the eligible AWG benefit types | page 107 |
| 2.2 | Other official documents which can evidence occupancy | page 111 |
| 2.3 | Documents relating to a change of name | page 112 |

1. Premises requirement

Private domestic premises are domestic premises that, in general, do not belong to, or are not let by, a social landlord. The evidence required to demonstrate that premises are private domestic premises depends on:

- a. whether or not a 'relevant interest' in the premises is registered
- b. who the premises belong to, or are let by, and
- c. where applicable, the financial rate at which the premises are let (ie rent).

The 'relevant interest' is the legal interest granting the current right to occupy those premises. In England and Wales, the relevant interest may belong to a freeholder, leaseholder or sub-leaseholder. In Scotland, the relevant interest may belong to the person holding the owner's interest or right, the person holding the lessee's interest, or the sub-leaseholder.

Where premises are subject to a shared ownership arrangement between a private individual and a social landlord, we consider the premises to be private domestic premises as the private individual is one of the owners of the premises.

Evidence demonstrating who premises belong to, or are let by, must relate to the person to whom the relevant interest belongs.

1.1. Registered relevant interest

A supplier can provide evidence that the relevant interest does not belong to a social landlord by providing the search results from one of the following:

- a. the Land Register maintained by Her Majesty's Land Registry for England and Wales, or
- b. the Land Register of Scotland or the Register of Sasines for Scotland.

Where the registry states that the premises have been leased or sub-leased, further evidence will be required to demonstrate that the premises is not let by a social landlord.

The search must be dated no more than 18 months prior to the date of completion of the measure.

The search may be dated after the measure was completed where the search shows that the date on which the relevant interest was acquired was prior to the completion of the measure. We will assume that the person to whom the relevant interest belongs has not changed in the interim.

Generally, where the relevant interest is registered as belonging to an individual person, we will be satisfied the premises are private domestic premises. If the search results prove inconclusive, ie the registered relevant interest belongs to a corporation and not an individual, the supplier must use other means to ensure that that entity is not a social landlord.

Where the relevant interest registered on the Land Registry belongs to a social landlord, the premises may still be eligible as private domestic premises if they are rented at market rate or above. See below for more information on determining market rate.

1.2. Unregistered relevant interest

Where the relevant interest is not registered, the supplier must prove that the relevant interest does not belong to a social landlord, or that the premises are leased under the 'Right to Buy', 'Right to Purchase' or 'Right to Acquire' schemes.¹⁴⁸

Where the relevant interest is not registered, the supplier must provide different evidence depending on whether:

- a. the person who owns the relevant interest occupies the premises ('the owner occupier'), or
- b. the person who owns the relevant interest lets the premises to a tenant ('the owner landlord').

Owner occupiers

For owner occupiers, the supplier must provide evidence of the relevant interest in the premises and, where applicable, proof of residence to demonstrate that the owner occupier has the current right to occupy the premises (ie the premises have not been leased to another person). The supplier will need to provide a copy of one of the following:

1. title deeds

(We will accept other deeds and legal declarations that explicitly state that the person owns the premises.)¹⁴⁹

OR

2. a mortgage statement for the premises which is addressed to the owner occupier

(The mortgage statement must be dated within 18 months prior to the date of completion of the measure. Where the mortgage statement is older or is not

¹⁴⁸ The leases for these premises, which show they are under either 'Right to Buy', 'Right to Purchase' or 'Right to Acquire' schemes, can be used as evidence that the premises are private domestic premises.

¹⁴⁹ Examples of documents that can prove ownership include title deeds, deeds of conveyance, or deeds of gift, where they contain the relevant information. Where suppliers are not certain whether a document is eligible they should contact us before installing a measure.

addressed to the owner occupier, it must be accompanied by proof of residence dated within 18 months prior to the completion of the measure)

OR

3. a completed Ofgem template and evidence proving that the owner occupier resides at the premises which:

- a. provides a declaration from a professional third party confirming they hold the title deeds for the premises and those deeds name the occupier as the freeholder/ the person holding the owner's interest or right

OR

- b. provides a declaration from a professional third party confirming that, following an investigation, the title deeds have been lost or destroyed and he/she is satisfied that the occupier is the freeholder/ the person holding the owner's interest or right.

Owner landlords

In the case of owner landlords, the supplier must provide information on the tenancy in order to demonstrate that the tenant has the current right to occupy the premises.

Evidence proving the tenant resides in that premises is required to show that the tenancy agreement is still valid. The supplier will need to provide a copy of one of the following:

1. a written tenancy agreement between the owner landlord and the tenant demonstrating that the named tenant resides there

Where an extract from a written tenancy agreement is provided, the extract must show the:

- a. address of the premises
- b. term of the tenancy, and
- c. names and signatures of the tenant and landlord.

OR

2. a completed Ofgem template and evidence proving that the named tenant resides there.

These templates¹⁵⁰ are:

- a. in the case where the written tenancy agreement has expired, signed by both landlord and tenant confirming the occupancy agreement

OR

- b. in the case where no written tenancy agreement exists, signed by both landlord and tenant confirming the occupancy agreement.

OR

- c. in the case where there is no tenancy agreement, an occupancy agreement signed by the executor/administrator of the estate and the occupier.

Supporting information for premises where no relevant interest is registered

If the documentation listed proves inconclusive, ie the relevant interest belongs to a corporation, the supplier must ensure the entity is not a social landlord (see Section 1.3).

If the owner occupier or the tenant is the AWG member, benefit letters addressed to the premises will be sufficient to demonstrate that the AWG member resides at the premises.

If the owner occupier or the tenant is not the AWG member, a supplier will need to produce evidence to demonstrate that the AWG member resides at the relevant domestic premise (see Section 2.2).

1.3. Identifying social landlords

A social landlord means, in respect of premises in **England and Wales**:

- a. a local housing authority, within the meaning of section 1 of the Housing Act 1985
- b. a housing association, within the meaning of section 5 of the Housing Act 1985
- c. a housing trust, within the meaning of section 6 of the Housing Act 1985
- d. a charity, within the meaning of section 1 of the Charities Act 2011
- e. a person listed in section 80(1) of the Housing Act 1985 (*Wales only*), or

¹⁵⁰See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

- f. a body registered as a social landlord under Chapter 1 of Part 1 of the Housing Act 1996 (*Wales only*).

A social landlord means, in respect of premises in **Scotland**, a person so described in section 165 of the Housing (Scotland) Act 2010.

A supplier may use one of the registers below to establish whether a corporate body falls under one of the above definitions of a social landlord. These registers do not contain an exhaustive list of social landlords and suppliers should be aware that these registers may not be completely up to date.

England:

- The Homes and Communities Agency provide a list of registered providers of social housing. This can be accessed at:
<https://www.gov.uk/government/publications/current-registered-providers-of-social-housing>.
- The Charity Commission holds a register of organisations that have been recognised as charitable in law. Not all charities must register. The register can be accessed at:
<http://www.charitycommission.gov.uk/showcharity/registerofcharities/registerhomepage.aspx?&=&>.

Wales:

- The Welsh Ministers maintain a public register of social landlords. The register can be accessed at:
<http://wales.gov.uk/topics/housing-and-regeneration/publications/registered-social-landlords-in-wales/?lang=en>.

Scotland:

- The Scottish Housing Regulator maintains a register of social landlords. The register can be accessed at:
http://www.esystems.scottishhousingregulator.gov.uk/register/reg_pub_dsp.home

Where it is established that the relevant interest belongs to a social landlord, but a supplier wishes to establish HHCRO eligibility, the supplier must demonstrate that the premises were let at or above market rate. In order to do this it must produce:

- a. a tenancy agreement, and
- b. statistics showing the premises were rented at or above market rate. See below for more information on demonstrating rent above market rate.

1.4. Determining market rate

In instances where the relevant interest belongs to a social landlord, the supplier must provide evidence that the rent paid is not below the market rate.

England:

We consider market rate to be any monthly rent that is equal to or greater than the 'lower quartile value' for premises with the same number of bedrooms in the most recent table of VOA Private Rental Market Statistics for the administrative area that the premises are located in: <https://www.gov.uk/government/statistics/private-rental-market-statistics>.

Scotland and Wales

We consider market rate to be any monthly rent that is equal to or lower than the 30th percentile market rent for premises with the same number of bedrooms in the Broad Rental Market area the premises are located in. The 30th percentile for an area can be found on the following pages¹⁵¹:

- **Scotland:** The 30th percentile of market rents can be found in column 3 of the Local Housing Allowance methodology table found at the bottom of the following page: <http://www.gov.scot/Topics/Built-Environment/Housing/privaterent/tenants/Local-Housing-Allowance/figures>.
- **Wales:** The 30th percentile of market rents can be found in column 2 of the LHA table available at: <http://gov.wales/topics/housing-and-regeneration/welfare-reform/rentofficers/publications/?lang=en>.

In instances where the rent paid is below these figures and a supplier believes that this rent is market rate, a supplier may provide us with alternative statistics in writing for consideration. Suppliers should get alternative statistics approved by us before delivering a measure to that tenant.

1.5. Evidence for mobile homes

It is our understanding that, generally speaking, mobile homes are not provided by social landlords as social housing. As a result, we do not require proof of ownership to determine whether or not the premises are private domestic premises. Therefore, for mobile homes, only evidence demonstrating that an AWG member resides at the premises is required. See below for more information on how to evidence this.

¹⁵¹ The 30th percentile is a mathematical value which represents the level of rent where around 3 in 10 properties are let at or below LHA. The list of rents is a representative sample of private sector rents paid across the BRMA, including those from the lower end through to the upper ends of each rental market.

Where the supplier is aware that the mobile home is provided as social housing, these measures should not be notified to Ofgem.

2. Occupant requirements

2.1. Evidence to demonstrate each of the eligible AWG benefit types

Documents must establish that an occupant of the premises was an AWG member at some point during the course of the promotion of the measure.

Suppliers can prove this by providing benefit letters showing that the person received the benefit (and any additional components) within 18 months prior to the date of completion of the measure. Suppliers can use either the date the letter was sent or the start or end date of the benefit, if stated on the letter.

If the benefit letter confirms the end of entitlement, it can only evidence AWG eligibility when either the date of the letter or the end date of the benefit is within 18 months prior to the date of completion of the measure.

For AWG benefits, only official HMRC, DWP/Jobcentre Plus, Pensions Service and HM Government documents are deemed acceptable. However, we also accept bank statements to prove receipt of Child Benefit or official identification to prove that someone is 60 years or older.¹⁵² Use of any other documents must be agreed in writing with us before installing a measure.

The following information must be clearly visible on all benefit letters proving AWG eligibility:

- a. official letter headed paper
- b. name and address matching where the measure was installed. Where the address is different, official documents proving they resided at the premises where the measure was installed
- c. relevant date (either of the letter, start or end of the benefit)
- d. confirmation that a customer receives a qualifying benefit
- e. confirmation of relevant income (where applicable), and
- f. confirmation of an additional component (where applicable).

¹⁵² See <https://www.gov.uk/child-benefit-number> for further guidance on how to evidence child benefit.

The AWG benefit types for the purposes of ECO¹⁵³ are:

- a. child tax credit (CTC)
- b. income-related employment and support allowance (ESA)
- c. income-based jobseeker's allowance (JSA)
- d. income support
- e. state pension credit
- f. working tax credit (WTC), and
- g. universal credit.

The eligibility criteria for each of these are detailed below:

1. Child tax credit (CTC)

The following documents should be made available on request:

- A Her Majesty's Revenue and Customs (HMRC) award notice¹⁵⁴ or a DWP/Jobcentre Plus 'proof of benefit' letter confirming receipt of child tax credit (CTC) and that the relevant income is equal to or less than £16,010 or receipt of the maximum amount of tax credits.

It is possible that the documents dated within 18 months do not show the relevant income. In such cases this award notice must be accompanied by the most recent award notice or 'proof of benefit' letter that confirms the relevant income.

NB: The presence of a means tested benefit (ie income support) on a CTC award notice does not automatically provide evidence that the relevant income is equal to or less than £16,010. However, if this is one of the other eligible AWG benefits, then it is likely that the customer would be eligible through another route (eg AWG benefit showing responsibility for a qualifying child).

2. Income-related employment and support allowance (ESA)

3. Income-based jobseeker's allowance (JSA)

¹⁵³ Provided that all applicable criteria laid out in Schedule 1 to the ECO2 Order are met.

¹⁵⁴ An HMRC award notice can also include annual review award notices, amended award notices and provisional award notices. See our AWG Guidance Note for further information at: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

4. Income support

The following documents should be made available on request:

- A HMRC award notice or a DWP/Jobcentre Plus 'proof of benefit' letter confirming receipt of one of the benefits above.

The above document(s) must be accompanied by proof of one of the following criteria:

- a. the benefit recipient is responsible for a qualifying child who is under the age of 16 and ordinarily lives with that person
- b. the benefit recipient is responsible for a young person who is 16 or over but under the age of 20, ordinarily lives with that person and the young person is in full-time education¹⁵⁵ or approved training¹⁵⁶
- c. the benefit recipient receives child tax credit with a disability or severe disability element
- d. the benefit recipient receives a disabled child premium
- e. the benefit recipient receives a disability premium, enhanced disability premium or severe disability premium
- f. the benefit recipient receives a pensioner premium, higher pensioner premium or enhanced pensioner premium,

OR

- g. the benefit recipient receives a work-related activity or support component – ONLY with income-related ESA.

CTC, WTC or tax credit award notices can be used to show receipt of income-related ESA, income-based JSA, or income support.

5. State pension credit

One of the following documents should be made available on request:

- a. pension credit award notice or 'proof of benefit' letter from DWP/Jobcentre Plus or The Pension Service confirming receipt of state pension credit

¹⁵⁵ Other than higher education within the meaning of section 579(1) of the Education Act 1996.

¹⁵⁶ As defined in regulation 2 of the Child Tax Credit Regulations 2002.

OR

- b. Warm Home Discount (WHD) core group 'matched' or 'deceased matched' notice from HM Government. The reference number on this notice should start with 'M' or 'DM'.

6. Working tax credit (WTC)

The following documents should be made available on request:

- a HMRC award notice, or a DWP/Jobcentre Plus 'proof of benefit' letter confirming receipt of WTC stating that the relevant income is under £16,010 or that they receive the maximum amount of tax credits.

The above document(s) must be accompanied by proof of one of the following:

- a. the benefit recipient is responsible for a qualifying child who is under the age of 16 and ordinarily lives with that person
- b. the benefit recipient is responsible for a qualifying young person who is 16 or over but under the age of 20, ordinarily lives with that person and is in full-time education¹⁵⁷ or approved training¹⁵⁸
- c. the benefit recipient receives a disability or severe disability element,

OR

- d. the benefit recipient is aged 60 years or over.

7. Universal Credit

The following documents should be made available on request:

Evidence of the following criteria from a Universal Credit award notification:

- the benefit recipient received a monthly earned income of £1,250 or less in any assessment period in the previous 12 months.

The above document(s) must be accompanied by proof of one of the following:

¹⁵⁷ Other than higher education within the meaning of section 579(1) of the Education Act 1996.

¹⁵⁸ As defined in regulation 2 of the Child Tax Credit Regulations 2002.

- a. the benefit recipient is responsible for a qualifying child who is under the age of 16 and ordinarily lives with that person
 - b. the benefit recipient is responsible for a qualifying young person who is 16 or over but under the age of 20 and ordinarily lives with that person and the young person is in full-time education¹⁵⁹ or approved training¹⁶⁰
 - c. the benefit recipient receives a limited capability for work element, or limited capability for work and work-related activity element
 - d. the benefit recipient receives Disability Living Allowance (DLA),
- OR
- e. the benefit recipient receives Personal Independence Payment (PIP)

For DLA and PIP, it does not matter which care or mobility component or the rate the customer receives, as long as they can show they receive the benefit.

The document(s) that should be made available to us on request should contain a minimum amount of information to demonstrate AWG eligibility. For more information on our requirements see the AWG Guidance Note.¹⁶¹

2.2. Other official documents which can evidence occupancy

Where the above benefit documentation is not addressed to the private domestic premises, further evidence showing that the AWG member resides there will be required.

Any of the following official documents can be used to evidence occupancy:

- a. an extract from the electoral register
- b. a utility bill or phone bill
- c. a Council Tax letter or letter from the council
- d. a mortgage statement or bank statement, or
- e. other official documentation as agreed with Ofgem.

¹⁵⁹ Other than higher education within the meaning of section 579(1) of the Education Act 1996.

¹⁶⁰ As defined in regulation 2 of the Child Tax Credit Regulations 2002.

¹⁶¹ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

The documents must be dated within 18 months prior to the date of completion of the measure.

2.3. Documents relating to a change of name

There are cases where a person changes their name, with the result that:

- a. the person's old name appears on the title deeds or the mortgage statement if the person is a freeholder/leaseholder/owner or the tenancy agreement if the person is a tenant,

AND

- b. the person's new name appears on AWG benefit documents or other official correspondence (described above).

In such cases, a supplier will need to produce a signed declaration from the person that their name has changed. The declaration should be prepared using the template provided on our website.¹⁶²

¹⁶² See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

Appendix 3 - Boiler Information Pack

Introduction

This information pack provides an overview of the different eligible boiler measures in ECO. It also details when a boiler is considered to be 'qualifying boiler', how to assess boilers and outlines the warranty requirements for the repair and replacement of boilers. This appendix should be read in conjunction with Chapter 6.

This appendix provides information on the following:

1. Defining boilers and heating systems page 113
2. Replacement boilers page 115
3. Eligible boiler measures in ECO page 115
4. Determining whether a boiler is a qualifying boiler for repair or replacement page 116
5. Carrying out boiler assessments page 119
6. Warranty requirements for boiler measures page 121

1. Defining boilers and heating systems

Boilers

A boiler is defined as a gas, liquid, solid fuelled or electric appliance designed to provide hot water for space heating through a heat distribution system. It may (but does not need to) be designed to provide domestic hot water as well. A boiler may comprise some or all of the following components:

- a. heat exchanger
- b. the fuel supply system
- c. boiler and burner control system
- d. air supply and exhaust fans
- e. flue connections within the boiler case
- f. expansion vessel and/or fill and expansion header tanks
- g. programmer/timer (one that is integral to the boiler)

- h. circulation pump
- i. condensate drain system
- j. burner assembly
- k. ancillary equipment and any connections within the case necessary to supply central heating and/or instantaneous hot water.

Heating systems

A heating system is a central heating system, which will normally comprise some or all of the following components:

- a. radiator circuit
- b. heating circuit
- c. heat emitters (radiators as well as underfloor)
- d. flue
- e. room thermostats and thermostatic radiator valves (TRVs)
- f. mains water supply to the system and/or boiler
- g. cold water tank
- h. expansion tank
- i. hot water storage tank
- j. control valves
- k. heating system pump.

2. Replacement boilers

A replacement boiler is a boiler, connected to a working heating system, that has been installed and which replaces a previous heating source.¹⁶³

Where there is no heating system present prior to installation we consider that the replacement boiler replaces direct-acting portable electric heaters, as this is the assumed main space heating system.

Replacement boilers must be installed in accordance with the Publicly Available Specification 2030:2014 Edition 1 (PAS) and as per the boiler manufacturer's instructions.

3. Eligible boiler measures in ECO

The cost scores achieved through replacing, and in some cases repairing, boilers can be credited against a supplier's HHCRO.¹⁶⁴

There are three eligible boiler measures in HHCRO. The way in which a boiler measure is categorised depends on the heating source present in the premises before the measure is installed.

The three eligible boiler measures are:

- a. Non-qualifying boiler installations
- b. Qualifying boiler replacements, and
- c. Qualifying boiler repairs.

The scoring methodology that should be used to calculate the cost score for the installation, replacement or repair of a boiler depends on the type of heating source already present at the premises and/or the measure being installed. See Chapter 7.b for more information on calculating cost scores and the different cost score methodologies.

Non-qualifying boiler installations

Where a boiler is installed and it is not replacing a qualifying boiler, it may still be an eligible HHCRO measure where it makes a saving in the cost of heating the premises and, where applicable, heating the hot water.

¹⁶³ Such as a qualifying boiler, a non-qualifying boiler, fixed room heaters or an electric storage heater.

¹⁶⁴ See Chapter 6 for more information on HHCRO.

Replacement of a qualifying boiler

The 'replacement of a qualifying boiler' is where a boiler being replaced meets the definition of a 'qualifying boiler', and it is being replaced either with a boiler or a different heating measure.

In the case of a boiler being replaced, a qualifying boiler is one that we are satisfied is not functioning efficiently or has broken down and:

- a. has a seasonal energy efficiency value of < 86%, or
- b. has a seasonal energy efficiency value of \geq 86% and cannot be economically repaired.

Repair of a qualifying boiler

The repair of a boiler is only an eligible measure where the boiler being repaired is a qualifying boiler.

In the case of a boiler being repaired, a qualifying boiler is one that we are satisfied:

- a. is not functioning efficiently or has broken down, and
- b. has a seasonal energy efficiency¹⁶⁵ value of 86% or more when assessed against the Standard Assessment Procedure (SAP).¹⁶⁶

4. Determining whether a boiler is a qualifying boiler for replacement or repair

This section provides information on:

- a. the criteria a boiler must meet to be judged as a qualifying boiler, and
- b. how to determine whether a boiler should be repaired or replaced.

The criteria a boiler must meet to be judged as a qualifying boiler

A boiler must meet certain criteria to be considered a qualifying boiler for repair or replacement.

¹⁶⁵ When assessing the efficiency of the boiler, the operative should use the annual efficiency from PCDB 2009. If the boiler is not included in the PCDB, then the assessor should use winter efficiency from table 4b of SAP 2012.

¹⁶⁶ See Chapter 7 for more information on the Standard Assessment Procedure (SAP).

The first step in assessing whether a boiler is a qualifying boiler, for both repairs and replacements, is to determine whether the boiler is 'broken down' or 'not functioning efficiently'. The boiler must be assessed by a person of appropriate skill and experience ('the operative').

Once the operative has determined that the boiler is either 'broken down' or 'not functioning efficiently', they must then assess whether the boiler should be repaired or replaced.

Boilers which have been determined to be either 'broken down' or 'not functioning efficiently' and which have a seasonal energy efficiency value of less than 86% when assessed against Standard Assessment Procedure (SAP) are not required to be repaired and therefore, can be **replaced**. In these cases, no assessment of whether the boiler can be economically repaired is required.

Boilers which have been determined to be either 'broken down' or 'not functioning efficiently' and which have a seasonal energy efficiency value of 86% or more when assessed against SAP must be assessed to determine whether or not they can be 'economically repaired'. Where such a boiler can be economically repaired it must be **repaired**. Where a boiler cannot be economically repaired it can be **replaced**.

This section provides the definitions of when a boiler is broken down, how to determine whether or not it is functioning efficiently, and whether or not it can be economically repaired.

Broken down

A boiler is 'broken down' if, when connected to electric and fuel supplies, it does not respond appropriately to any demand for heat as required by the central heating or domestic hot water system.

The operative must list the symptoms observed and state the steps taken to reach his/her conclusion in the *Energy Company Obligation (ECO): Boiler Assessment Checklist* ('the boiler checklist')¹⁶⁷. See Section 5 below for more information on the boiler checklist.

Not functioning efficiently

A boiler is 'not functioning efficiently' if its condition is such that its performance in the delivery of water for central heating or the provision of domestic hot water is significantly worse than when the product was new.

The boiler checklist sets out a list of faults which can be used to determine whether or not the boiler is functioning efficiently. All faults with the boiler should be recorded

¹⁶⁷ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

during the assessment. In all cases, the operative must state the steps taken to reach his/her conclusion in the boiler checklist. This may include documenting the test results, symptoms observed or any other method used to identify the faults.

The operative must use their expertise to assess whether the faults identified have resulted in a 'significant' deterioration in boiler performance.

Cannot be economically repaired

Boilers which have a seasonal energy efficiency value of less than 86% (when assessed against the Product Characteristics Database (PCDB/SAP)¹⁶⁸ 'cannot be economically repaired'. This means that, subject to being broken down or not functioning efficiently, all such boilers can be replaced as qualifying boilers. No assessment of the cost of repair versus replacement is required for these boilers.

Boilers which have a seasonal energy efficiency value of 86% or more can only be replaced as qualifying boilers where, through an assessment of the cost of repair versus replacement, it is determined that they 'cannot be economically repaired' (in addition to being broken down or not functioning efficiently). The cost of repair of these boilers will usually be much lower than the cost of replacement. Such boilers will only be eligible for replacement as qualifying boilers where:

- a. the required replacement parts for the boiler are not available (ie unavailable for purchase at a reasonable cost or within a reasonable timeframe. What is considered a reasonable timeframe and cost will depend on all the circumstances including the nature of the repair required)

OR

- b. the actual cost of repair is greater than the cost of replacing the boiler

OR

- c. the actual cost of repair is greater than the relevant threshold on the Boiler Economic Repair Cost Comparison Tables.

Boiler Economic Repair Cost Comparison Tables

As described above in option c, a boiler with a seasonal energy efficiency value of 86% or more cannot be economically repaired where the actual cost of repair is greater than the relevant threshold on the Boiler Economic Repair Cost Comparison Tables.

These tables can be found in the boiler checklist. There is also a guide to using the tables at the end of the checklist.

¹⁶⁸ When assessed against PCDB/SAP 2012. If the PCDB does not provide a seasonal energy efficiency operatives may use table 4b of SAP 2012.

The tables display the maximum cost of repair for boilers of varying ages and conditions for it to be considered economic for the boiler to be repaired rather than replaced. If the actual cost of repair, as calculated by the operative, is higher than the maximum cost of repair outlined in the table, the boiler cannot be economically repaired and can therefore be replaced. The maximum cost of repair depends on the boiler type, age and condition. See 'Assessing boiler condition' below for more information.

When assessing the condition of the boiler, the operative should make this assessment based on what they would reasonably expect the condition of a boiler of that age and type to be.

The maximum cost of repair for each boiler type is based on the estimated replacement cost of a boiler and depreciation over time. The estimated replacement cost includes, but is not limited to, the cost of the boiler, extras (eg flue), fittings, water treatment inhibitor, central heating controls, sub-contract electrician, quotation, re-connecting and commissioning the boiler, and labour.

The costs that are taken into account by the operative when calculating the actual cost of repair should, where applicable, include those listed above, plus the cost of a warranty of at least one year. The operative must specify the cost of the warranty provided for the boiler in the actual cost of repair. Where, in addition to the repair work itself, further boiler works are necessary at the time of repair to protect the boiler for the life of the warranty, the cost of these works should be included in the actual cost of repair (subject to those works being carried out).

Assessing boiler condition

The operative should use the boiler fault details in 'Boiler Assessment Part 2' of the boiler checklist to determine the boiler condition, as follows:

- a. **Poor:** the apparent age of the boiler is a minimum of five years more than the actual age
- b. **Standard:** the apparent age of the boiler corresponds with the actual age
- c. **Good:** the apparent age of the boiler is a minimum of three years less than the actual age.

It should be noted that unless the boiler condition is demonstrably better or worse than expected for its age, the standard condition should be used.

5. Carrying out boiler assessments

The operative must complete the boiler checklist in order to demonstrate to us whether or not the boiler is qualifying and to assess whether the boiler should be repaired or replaced.

This section provides information on:

- a. who is considered to have appropriate skill and experience, and
- b. using the boiler checklist.

Who is considered to have appropriate skill and experience

For boilers that are replaced and referred to in PAS, the boiler must be assessed and replaced by operatives who meet the competency requirements listed in the boiler-specific annex to that specification. For boilers not in PAS, and for boiler repairs, the assessment and repair/replacement must be carried out by operatives who meet industry competency standards for that particular fuel type.

All operatives undertaking boiler repair/replacement work must also meet regulatory requirements to work with the relevant fuel type. For example, in the case of gas-fuelled boilers, operatives must be Gas Safe registered in accordance with regulation 3 of the Gas Safety (Installation and Use) Regulations 1998. There is no requirement for the assessment and repair/replacement to be carried out by the same person. Each appropriately qualified operative should sign the relevant section of the boiler checklist.

Using the boiler checklist

As stated above, Ofgem has prepared a boiler checklist which should be completed, signed, and dated by the relevant operative(s), and made available by the supplier for subsequent audits by us. All steps taken by the operative in determining the boiler condition should be recorded in the boiler checklist, as well as the operative's recommendation as to whether the boiler should be repaired or replaced. The information provided in the boiler checklist will form the basis of our determination of whether the boiler is broken down, not functioning efficiently and can/cannot be economically repaired, as defined above.

Suppliers may adapt the format of the checklist to match their own systems, as long as the content is not changed. Suppliers may submit adapted checklists to us before use for confirmation that the content is acceptable.

It is important to note that the operative's decision to repair or replace a boiler on the basis that they consider that it is broken down/not functioning efficiently and can/cannot be economically repaired does not necessarily mean that we will reach the same conclusion, particularly if we consider that an assessment has been incorrectly carried out. For this reason, suppliers should ensure that the operative, in assessing the boiler, accurately completes the boiler checklist.

Monitoring and auditing will be undertaken by us to ensure that boiler assessments are carried out in accordance with our requirements. To effectively protect against fraudulent activity, monitoring initiatives will include inspection of boiler repair and replacement measures.

6. Warranty requirement for boiler measures

All boilers repaired or installed in ECO must be accompanied by a warranty of at least one year. The requirements that the warranty must meet are dependent on the boiler measure being delivered.

The replacement of a boiler, irrespective of whether it is qualifying or non-qualifying boiler, must be accompanied by a 'qualifying warranty' of at least one year.

Where the supplier is aware that the repair or replacement of the existing boiler is covered by a guarantee or warranty provided under ECO or another government scheme (eg Warm Front), the savings from the measure cannot be claimed under ECO.

Warranties for the repair of a qualifying boiler

In the case of the repair of a qualifying boiler, the repair must be accompanied by a warranty of at least one year. The warranty must relate to the proper functioning of the entire boiler, and must not be limited to the part of the boiler that has been repaired or replaced. The cost of a warranty of at least one year should be included when calculating the cost of a boiler repair and must also be provided in the boiler checklist. The warranty should, as a minimum, provide cover for total repair works, during the life of the warranty, valued up to the greater of:

- a. the financial level indicated in the Boiler Economic Repair Cost Comparison Tables, for a boiler of that type, age and condition

OR

- b. £500 (excluding VAT).

Operatives will need to obtain the householder's written confirmation that they have been provided with a warranty and the operative has:

- i. informed them that the boiler is under a warranty from the date of repair, and the duration of that warranty, and
- ii. explained the nature of the warranty.

A copy of the warranty provided to the householder must be made available to us on request.

Where a supplier issues a warranty in respect of the repair of a qualifying boiler, any subsequent repair of the boiler under that warranty will not be eligible for savings.

Qualifying warranties for the replacement of a qualifying boiler and non-qualifying boiler installations

All replacement boilers installed under ECO2 must be accompanied by a 'qualifying warranty'.

A qualifying warranty is one that:

- a. provides for the rectification of problems notified to the person(s) providing the warranty within one year of the replacement boiler being installed
- b. accompanies the replacement boiler at the time the installation is complete. We will be satisfied that the warranty has been provided when the installation was completed if a one year qualifying warranty is in place at the date of handover¹⁶⁹
- c. provides for the rectification, free of charge, of problems which affect the functioning of the boiler or heating system, and which relate to the replacement boiler's installation and/or design work carried out by the operative(s). Generally the scope of work required to install a boiler is as described in the manufacturer's instructions for installation. The design work is the suitability of the replacement boiler for the heating system it is intended to serve, including appropriate sizing, and
- d. is accompanied by a declaration by or on behalf of the occupier of the premises demonstrating that to the occupier's knowledge no one¹⁷⁰ has been charged for the warranty.

The warranty is not required to provide for the rectification of a problem which is covered by the manufacturer's warranty for the replacement boiler. Such warranties are likely to be limited to parts and manufacturing faults.

The warranty is not required to provide for the rectification of a problem which arises after the replacement boiler is installed where that problem arises from one or more of the following:

- a. negligence
- b. accident
- c. misuse of the replacement boiler

¹⁶⁹ Please refer to Chapter 8 more information on 'date of handover'.

¹⁷⁰ This does not include the installer, supplier or any other party in the supply chain.

d. repair of the replacement boiler

by a person other than the operative(s), warranty provider or person acting on behalf of the operative or warranty provider.

Additional information for qualifying warranties for replacement boilers

Where a qualifying warranty has been issued for the replacement boiler, any repair of the boiler under that warranty or under the manufacturer's warranty cannot be claimed under ECO as a heating qualifying action.

To demonstrate that a qualifying warranty has been provided to the occupier free of charge we will accept a copy of the qualifying warranty, marked with a signed declaration by the occupier which states:

"To my knowledge no one has been charged for this warranty. The person providing the warranty has explained what it does and does not cover".

Signed

Date

The declaration must be on a copy of the qualifying warranty rather than on a separate document.

FOR reference

Appendix 4 - Electric Storage Heaters (ESHs) Information Pack

Introduction

This information pack provides an overview of the different eligible electric storage heater (ESH) measures in ECO. It also details when an ESH is considered to be 'qualifying ESH', how to assess ESHs, and outlines the warranty requirements for the repair and replacement of ESHs. This appendix should be read in conjunction with Chapter 6.

This pack provides information on the following:

1. Replacement ESH page 124
2. Eligible ESH measures in ECO page 124
3. Determining whether an ESH is a qualifying ESH for repair and replacement page 126
4. Carrying out ESH assessments page 128
5. Warranty requirements for ESH measures page 129

1. Replacement electric storage heater (ESH)

A replacement ESH is an ESH that has been installed which replaces a previous heating source.¹⁷¹

Where there is no heating system present before installation we consider that the replacement ESH replaces direct acting portable electric heaters, as this is the assumed main space heating.

Replacement ESHs must be installed in accordance with Publicly Available Specification 2030:2014 Edition 1 (PAS) and as per the ESH manufacturer's instructions.

2. Eligible ESH measures in ECO

The cost scores achieved through replacing, and in some cases repairing ESHs, can be credited against a supplier's HHCRO.¹⁷²

¹⁷¹ Such as a qualifying boiler, a non-qualifying boiler, fixed room heaters or an electric storage heater.

¹⁷² See Chapter 6 for more information on HHCRO.

There are three eligible ESH measures in HHCRO. The way in which an ESH measure is categorised depends on the heating source present in the premises before the measure is installed.

The three eligible ESH measures are:

- a. Installation of an ESHs
- b. Qualifying ESH replacements, and
- c. Qualifying ESH repairs.

The scoring methodology that should be used to calculate the cost score for the installation, replacement or repair of an ESH depends on the type of heating source¹⁷³ already present at the premises. See Chapter 7.b for more information on calculating cost scores and the different cost score methodologies.

Installation of electric storage heaters

Where an ESH is installed and it is not replacing a qualifying ESH, it may still be an eligible HHCRO measure where it makes a saving in the cost of heating the premises.

Qualifying ESH replacements

A 'qualifying ESH replacement' is where an ESH being replaced meets the definition of a 'qualifying ESH' (QESH) and it is being replaced with another ESH.

In the case of an ESH being replaced, a QESH is one that we are satisfied:

- a. has broken down and cannot be economically repaired
- OR
- b. has a responsiveness when assessed against SAP equal to or less than 0.2 and is located at the same premises as an ESH which has broken down and
 - i. has a responsiveness when assessed against SAP of more than 0.2
- OR
- ii. cannot be economically repaired.

¹⁷³ For example, a qualifying boiler, a non-qualifying boiler, fixed room heaters or electric storage heaters.

Qualifying ESH repairs

The repair of an ESH is only an eligible measure where the ESH being repaired is a QESH.

In the case of an ESH being repaired, a QESH is one that we are satisfied:

- a. is broken down, and
- b. has a responsiveness of more than 0.2 when assessed against the SAP.¹⁷⁴

3. Determining whether an ESH is a QESH for replacement or repair

This section provides information on:

- a. the criteria an ESH must meet to be judged as a QESH, and
- b. how to determine whether an ESH should be repaired or replaced.

The criteria an ESH must meet to be judged as a QESH

An ESH must meet certain criteria to be considered a QESH for replacement or repair.

The first step in assessing whether an ESH is qualifying, for both replacements and repairs, is to determine whether the ESH is 'broken down'.

Once the operative has determined that the ESH is 'broken down', they must then assess whether the ESH should be repaired or replaced.

This section provides the definition of when an ESH is broken down and whether or not it can be economically repaired.

Broken down

An ESH is 'broken down' if, when connected to an electric supply, it does not store heat or does not deliver any heat.

The operative should list the symptoms observed and the steps taken to reach his/her conclusion that the ESH is broken down in the *Energy Company Obligation (ECO)*:

¹⁷⁴ Table 4a in the Government's Standard Assessment Procedure for Energy Rating of Dwellings (2012).

Electric Storage Heater Assessment Checklist ('the ESH checklist').¹⁷⁵ See Section 4 below for more information on the ESH checklist.

Cannot be economically repaired

An ESH which has a responsiveness of less than or equal to 0.2 (when assessed against SAP 2012) 'cannot be economically repaired'. This means that, subject to being broken down, all such ESHs can be replaced as QESHs. No assessment of the cost of repair versus replacement is required for these ESHs.

ESHs which have a responsiveness of more than 0.2 can be replaced as QESHs, but only where, through an assessment of the cost of repair versus replacement, it is determined that they 'cannot be economically repaired' (in addition to being broken down). An ESH cannot be economically repaired where:

- a. the required replacement parts for the ESH are not available (ie unavailable for purchase at a reasonable cost or within a reasonable timeframe. What is considered a reasonable timeframe and cost will depend on all the circumstances including the nature of the repair required)

OR

- b. the insulation in the ESH contains asbestos and therefore cannot be removed to access broken parts

OR

- c. the actual cost of repair is greater than the cost of replacing the ESH

OR

- d. the actual cost of repair is greater than the relevant threshold on the ESH Economic Repair Cost Comparison Table.

ESH Economic Repair Cost Comparison Table

When using option d. above to determine that an ESH with a responsiveness of 0.2 or more cannot be economically repaired, the ESH Economic Repair Cost Comparison Table should be used.

This table can be found in the ESH checklist.

¹⁷⁵ See: <https://www.ofgem.gov.uk/publications-and-updates/energy-companies-obligation-eco-2>.

The table displays the maximum cost of repair for it to be considered economic for the ESH to be repaired rather than replaced. If the actual cost of repair, as calculated by the operative, is higher than the maximum cost of repair outlined in the table, the ESH cannot be economically repaired and can therefore be replaced. The maximum cost of repair depends on the type and age of the ESH.

The maximum cost of repair for each ESH type is based on the estimated replacement cost of an ESH and depreciation over time. The estimated replacement cost includes the cost of the ESH, fittings, quotation, cost of electric phase connection to match the load capacity required by the ESH, and labour.

The costs that are taken into account by the operative when calculating the actual cost of repair should, where applicable, include those listed above, plus the cost of a warranty of at least one year. Where, in addition to the repair work itself, further ESH works are necessary at the time of repair to protect the ESH for the life of the warranty (eg replacing damaged insulation), the cost of these works should be included in the actual cost of repair (subject to those works being carried out).

4. Carrying out ESH assessments

In order to determine whether an ESH is a QESH, for replacement or repair, the ESH must be assessed by a person of appropriate skill and experience ('the operative').

The operative must complete the ESH checklist to demonstrate to us whether the ESH is broken down and to assess whether the ESH can be repaired or whether it should be replaced.

This section provides information on:

- a. who is considered to have appropriate skill and experience, and
- b. using the ESH checklist.

Who is considered to be have appropriate skill and experience

The assessment and the repair or replacement of a qualifying ESH must be carried out by a person with the appropriate skill and experience (the 'operative'). Appropriate skill and experience can be demonstrated by the operative meeting the competency requirements for domestic electrical installation work listed in the 'measure specific requirements for electric storage heaters' in Annex D1 of PAS. There is no requirement for the assessment and repair/replacement to be carried out by the same person. Each appropriately qualified operative should sign the relevant section of the ESH checklist

Using the ESH checklist

As mentioned above, the ESH checklist should be completed, signed, and dated by the relevant operative(s), and must be made available to us on request. All steps taken by the operative in determining if the ESH is broken down should be recorded in the checklist, as well as the operative's recommendation as to whether the ESH should be repaired or replaced. The information in the checklist will form the basis of our determination of whether the ESH is broken down and whether it can/cannot be economically repaired.

Suppliers may adapt the format of the ESH checklist to match their own systems, as long as the content is not changed. Suppliers may submit adapted checklists to us before use for confirmation that the content is acceptable.

It is important to note that the operative's decision to repair or replace an ESH on the basis that they consider that it is broken down and can/cannot be economically repaired does not necessarily mean that we will reach the same conclusion, particularly if we consider that an assessment has been incorrectly carried out. For this reason, suppliers should ensure that the operative, in assessing the ESH, accurately completes the ESH checklist.

Monitoring and auditing will be undertaken by us to ensure that ESH assessments are done in accordance with our requirements.

5. Warranty requirements for ESH measures

All ESHs repaired or installed in ECO must be accompanied by a warranty of at least one year. The requirements that the warranty must meet is dependent on the ESH measure being delivered.

Warranties for replacement ESHs

All replacement ESHs installed under ECO must be accompanied by a one year warranty.

The warranty that accompanies a replacement ESH must reflect the proper functioning of the entire ESH that has been installed. We are satisfied that this requirement can be met by a manufacturer's warranty.

If more than one ESH is installed in premises suppliers may choose to provide one warranty covering all replacement ESHs, as long as the details of the individual heaters (such as the heater serial number or any other unique detail to identify each heater) are included in the warranty.

A copy of the ESH warranty provided to the occupier must be made available to us on request.

Where a warranty has been issued for the replacement ESH, any repair of the ESH under that warranty will not be eligible for ECO savings.

Warranties for the repair of a QESH

The warranty must be for the proper functioning of the entire ESH, and must not be limited to the part of the ESH that has been repaired or replaced. The cost of a warranty of at least one year should be included when calculating the cost of an ESH repair and also must be provided in the ESH checklist.

A copy of the QESH repair warranty provided to the occupier must be made available to us on request.

Where a supplier issues a warranty in respect of the repair of the QESH, any subsequent repair of the ESH under that warranty will not be eligible for ECO savings.

For reference

Appendix 5 – Abbreviations

| Abbreviation | Explanation |
|---------------------|---|
| AIStructE | Associate of the Institution of Structural Engineers |
| AWG | Affordable Warmth Group |
| BRE | Building Research Establishment |
| CERO | Carbon Emissions Reduction Obligation |
| CSCO | Carbon Saving Community Obligation |
| CTC | Child Tax Credit |
| CWI | Cavity Wall Insulation |
| DEA | Domestic Energy Assessor |
| DECC | Department of Energy and Climate Change |
| DHS | District Heating System |
| DLA | Disability Living Allowance |
| DWP | Department for Work and Pensions |
| ECO | Energy Company Obligation |
| EPC | Energy Performance Certificate |
| ESA | Employment and Support Allowance |
| ESAS | Energy Saving Advice Service |
| ESH | Electric Storage Heater |
| EST | Energy Saving Trust |
| EWI | External Wall Insulation |
| FIStructE | Fellow of the Institution of Structural Engineers |
| GDA | Green Deal Advisor |
| GDAR | Green Deal Advice Report |
| GDIP | Green Deal Improvement Package |
| HES | Home Energy Scotland |
| HHCRO | Home Heating Cost Reduction Obligation |
| HMRC | Her Majesty's Revenue and Customs |
| IUF | In-use Factor |
| IWI | Internal Wall Insulation |
| JSA | Job Seeker's Allowance |
| LSOA | Lower Layer Super Output Area |
| MCS | Microgeneration Certification Scheme |
| MIStructE | Membership of the Institution of Structural Engineers |
| OCDEA | On Construction Domestic Energy Assessor |
| PAS | Publicly Available Specification |
| PCDB | Product Characteristics Database |
| PIP | Personal Independence Payment |
| QESH | Qualifying Electric Storage Heater |
| RdSAP | Reduced data Standard Assessment Procedure |

| | |
|-------------|--|
| RHM | Relevant HHCRO Multiplier |
| RICS | Royal Institution of Chartered Surveyors |
| SAP | Standard Assessment Procedure |
| SWI | Solid Wall Insulation |
| tESH | Total number of ESH |
| TRV | Thermostatic Radiator Valve |
| UKAS | United Kingdom Accredited Service |
| WHD | Warm Home Discount |
| WTC | Working Tax Credit |

For reference