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Energy Company Obligation (ECO) consultation: Updating deemed scores for ECO3

Consultation

Publication date: 4 April 2018

Response deadline: 16 May 2018

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Overview:

This consultation seeks your views on our approach to updating the current deemed scores for use in the future ECO scheme ('ECO3') from 1 October 2018, should it be introduced as set out in the Government consultation.

This consultation is open for six weeks from 4 April to 16 May 2018.

We welcome your views on these proposals. Please respond to eco.consultation@ofgem.gov.uk by close of business on Wednesday 16 May 2018.

Background

The Energy Company Obligation (ECO) is a government scheme that requires larger energy companies to deliver energy efficiency measures to domestic premises in Great Britain. The policy for ECO is set by the Department for Business, Energy and Industrial Strategy (BEIS) and it is administered by Ofgem.

The current scheme, ECO2t, runs from 1 April 2017 to 30 September 2018 and is an extension to the ECO2 scheme, which ran from 1 April 2015 to 31 March 2017.[1] It is the successor to ECO1, which ran from 1 January 2013 to 31 March 2015.

One of the changes introduced as part of ECO2t was a deemed scoring approach. Deemed scores are a finite set of scores that reflect the savings expected from different measures in different types of properties. They are based on a limited number of inputs. Government decided that Ofgem would determine ECO deemed scores. We consulted on our approach and methodology for deemed scores in 2016.[2] In previous energy efficiency schemes, such as the Carbon Emissions Reduction Target (CERT) and the Community Savings Energy Programme (CESP), deemed scores were also used.[3]

The Clean Growth Strategy, published in October 2017, states that support for home energy efficiency will continue until 2028 and funding will continue at least at the current level of support.[4] As outlined in the consultation recently published by BEIS, there will be a future energy efficiency scheme from October 2018 once ECO2t has ended ('ECO3') which will run to 31 March 2022.[5] In their consultation, BEIS has confirmed that Ofgem will administer the scheme and the deemed scoring approach will continue. This consultation document assumes that the new ECO3 Order will carry forward our current duties to publish a methodology on deemed scores and that the wording in the ECO3 Order will be consistent with that of the ECO2 Order.[6]

We want to update certain aspects of the current ECO2t deemed scores ahead of the new ECO3 scheme and, as can be seen in their current consultation, BEIS has proposed a number of changes which directly impact the way in which some

[1] ECO2t is the third phase of the ECO scheme, both ECO2t and ECO2 are governed by the Electricity and Gas (Energy Company Obligation) Order 2014 (SI 2014/3219) as amended by SI 2017/490 ("the ECO2 Order")
[2] See: https://www.ofgem.gov.uk/publications-and-updates/eco2-consultation-deemed-scores
[3] The Carbon Emissions Reduction Target (CERT) ran between 1 April 2008 and 31 December 2012 and followed the Energy Efficiency Commitment (EEC) 2005-2008. The Community Energy Saving Programme (CESP) ran from 1 October 2009 to 31 December 2012.
[4] See: https://www.gov.uk/government/publications/clean-growth-strategy
[5] See BEIS consultation: Energy Company Obligation: ECO3, 2018-2022, published 30 March 2018 at: https://www.gov.uk/government/consultations/energy-company-obligation-eco3-2018-to-2022
[6] The ECO2 Order is SI 2017/490 (see footnote 1) and can be found at: http://www.legislation.gov.uk/uksi/2017/490/made

measures would be scored. This consultation seeks your views on our approach to updating the deemed scores for ECO3.

BEIS are currently consulting on ECO3. Their consultation opened on 30 March and closes on 29 April. Although there are some aspects of the proposed policy that may change, we have assumed that the consequential impact on the deemed scores would be low.

Associated documents

The proposed deemed scores and the associated methodology document including assumptions have been published as subsidiary documents to this consulation and should be read in conjunction with this consultation document.

BEIS Consultation on ECO3:
https://www.gov.uk/government/consultations/energy-company-obligation-eco3-2018-to-2022

Percentage of property treated review:
https://www.ofgem.gov.uk/publications-and-updates/eco2t-percentage-property-treated-popt-review

Previous deemed scores consultation and response:
https://www.ofgem.gov.uk/publications-and-updates/eco2-consultation-deemed-scores

Next Steps

The consultation will be open from 4 April to close of business on 16 May 2018. Responses should be directed to eco.consultation@ofgem.gov.uk or:

Anna O'Connor
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Ofgem, 10 South Colonnade, Canary Wharf, London, E14 4PU

Template for responses

We have provided a template for you to complete your response. This will reduce the time taken to process the responses and enable us to publish the outcome of the consultation sooner than we would otherwise. This is available on our website.

We aim to publish our decisions including a summary of responses and final scores by the end of August 2018. This timetable is subject to change in the event that BEIS introduce significant changes and/or there are delays to laying the ECO3 Order. Unless marked confidential, all responses will be published on our website.

Contents

Executive Summary

This document describes our proposed approach to updating deemed scores for ECO3. This consultation seeks your views on the proposed updates so that we can finalise our approach in advance of the ECO3 scheme.

Reasons for updating scores

The reasons for updating the current deemed scores are as follows:

- BEIS proposals on the future scheme design, as outlined in their current consultation,
- updates to RdSAP and fuel prices,
- updates based on the availablility of new data and feedback from stakeholders during ECO2t, and
- the outcome of the Percentage of Property Treated (POPT) review, where we stated that we would explore whether we could remove the POPT element of the scoring approach in a future scheme.[7]

In this consultation document, we have described the proposed changes to the current ECO2t deemed scores and the reasoning behind these changes. We are requesting stakeholder input on these changes.

BEIS are currently consulting on their proposals for ECO3 and the final scheme design may deviate from these proposals as a result of the consultation process. We are consulting on updates to the deemed scores now, at an early stage. This will allow us to provide stakeholders with the final deemed scores with as much lead-in time as possible before their implementation. Some of the updates to the deemed scores relate directly to BEIS's proposed changes to the scheme design. Therefore the deemed scores published alongside this consultation must be considered as provisional.

Focus on fuel poverty

In their ECO3 consultation, BEIS state that they intend to focus ECO3 on addressing fuel poverty. As such, they propose to remove the Carbon Emission Reduction Obligation (CERO) element so the obligation is entirely focused on the Home Heating Cost Reduction Obligation (HHCRO). As HHCRO is based on cost savings rather than carbon savings, the deemed scores described in this consultation relate to cost savings only.

[7] See: https://www.ofgem.gov.uk/publications-and-updates/eco2t-percentage-property-treated-popt-review

Our approach to updating deemed scores

The Building Research Establishment (BRE)[8] developed the current deemed scores for us for ECO2t. They have utilised their expertise in the Standard Assessment Procedure (SAP), Reduced data Standard Assessment Procedure (RdSAP), and national housing data. We have worked closely with the BRE to develop, and where necessary modify, aspects of the methodology used to produce the proposed ECO3 deemed scores. The BRE have produced a methodology document which explains the assumptions and data sources used to develop the deemed scores in more detail. This document has been published alongside this consultation.

Priorities for ECO3 deemed scores

In line with current deemed scores, we have developed the proposed ECO3 deemed scores utilising SAP and RdSAP, which ensures consistency with the overall ECO scheme. Our key priorities are, as previously, to provide deemed scores that:

- are available for all current ECO measures,
- represent the cost savings that ECO measures will achieve,
- are unambiguous and easy to use, and
- are easy to verify.

The documents that make up this consultation, listed in the associated documents section, explain the method and assumptions used in developing the proposed deemed scores for ECO3.

Final scores

Following this consultation, we will review all responses then publish our response along with a final set of deemed scores for use in ECO3. The updated deemed scores that are published in the consultation response will not change throughout ECO3. This consistency is intended to provide greater assurance for the wider industry.

[8] See: https://www.bre.co.uk/

1. Updates related to RdSAP and Fuel Prices

Chapter summary
This chapter describes the updates to deemed scores based on changes to U-values in the latest version of RdSAP. This chapter also describes the updated fuel prices that we will apply.

Question 1:
Do you agree with our proposal to apply the RdSAP v9.93 updates across all wall types which currently use a pre-installation U-value of 2.1 W/m^{2}K? Please provide reasons for your answer and include as much detail and evidence as possible.

Question 2:
Do you agree with our proposal to use the most up to date fuel prices available from the Product Characteristic Database (PCDB) for the deemed scores throughout ECO3? Please provide reasons for your answer and include as much detail and evidence as possible.

1.1. The current ECO2t deemed scores were developed using assumptions from SAP and RdSAP 2012 version 9.92. The latest version of RdSAP, version 9.93, was published in November 2017 and came into effect from 31 December 2017.[9] This version of RdSAP includes updates to some assumptions which we will build into the ECO3 deemed scores. We also propose to use the latest available fuel prices from the Product Characteristics Database (PCDB) for the final ECO3 deemed scores.[10]

Updates to U-values for solid and cavity walls

1.2. U-Values are a measure of the thermal performance of a building's fabric and are one of the inputs used to calculate the deemed scores. RdSAP v9.93 contains updated U-values for older solid and cavity walls.

1.3. This change will impact on the deemed scores for the installation of solid wall insulation (SWI) and it will also impact on 'base case' assumptions for all property types. This will result in slight changes to the scores for all measure types. The changes and impacts are listed below for SWI.

[9] See: https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-9.93/RdSAP_2012_9.93.pdf
[10] The fuel prices are located at www.bre.co.uk/sap2012/

Solid wall insulation

1.4. The specific changes to U-values for solid walls directly impact the SWI deemed scores. A subset of the SWI deemed scores assume a pre-installation U-value of 2.1 W/m^{2}K. These relate to the following walls:

a. 'Solid brick as built' walls built before or during 1967 in England and Wales and 1965 in Scotland,

b. 'System build as built' walls built before or during 1967 in England and Wales, and 1965 in Scotland (age band 'D'),

c. 'Timber frame as built' walls built before or during 1950 in England, Wales and Scotland,

d. 'Stone as built' walls built before or during 1967 in England and Wales, and before 1965 in Scotland, and

e. 'Cavity as built' walls built before or during 1900 in England and Wales, and before 1919 in Scotland.

1.5. Wall types a, d, and e have reduced U-values in RdSAP v9.93, such that a 2.1 W/m^{2}K pre-installation U-value is not appropriate for these walls. Wall types b and c do not have updated U-values. BRE analysis has indicated that there are relatively few of wall types b and c in the GB housing stock. Therefore, we will remove the deemed scores relating to the 2.1 W/m^{2}K starting U-value, and incorporate insulating these walls into the deemed scores relating to the 1.7 W/m^{2}K starting U-value.

1.6. Some of the other U-values that have been updated in RdSAP v9.93 will also have an impact on the post-installation U-values as can be seen in Table 1.[11]

1.7. These changes to RdSAP v9.93 U-value assumptions will therefore result in the total number of deemed scores for SWI measure variants decreasing. The current SWI deemed scores are broken down by the five pre-installation U-values. Table 1 includes both the 24 current ECO2t U-value changes and the 19 proposed U-value changes for ECO3.

[11] All U-value changes are detailed in the outcome document to BEIS consultation on updates to SAP: "CHANGES TO GOVERNMENT'S STANDARD ASSESSMENT PROCEDURE (SAP): GOVERNMENT RESPONSE"
See:https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/660478/Government_Response_-_Changes_to_SAP_FINAL-v2.pdf

Table 1 Current ECO2t and ECO3 U-value changes for SWI measures (amended post-installation values are **bold and underlined**)

ECO2t Deemed Score U-value change	ECO3 Deemed Score U-Value change
2.1 -> 0.6	
2.1 -> 0.35	
2.1 -> 0.3	
2.1 -> 0.25	
2.1 -> 0.18	
1.7 -> 0.55	1.7 -> 0.55
1.7 -> 0.35	1.7 -> **0.32**
1.7 -> 0.3	1.7 -> 0.3
1.7 -> 0.25	1.7 -> **0.23**
1.7 -> 0.18	1.7 -> 0.18
1.0 -> 0.45	1.0 -> 0.45
1.0 -> 0.32	1.0 -> 0.3
1.0 -> 0.3	1.0 -> **0.28**
1.0 -> 0.21	1.0 -> 0.21
1.0 -> 0.17	1.0 -> 0.17
0.6 -> 0.35	0.6 -> 0.35
0.6 -> 0.3	0.6 -> 0.3
0.6 -> 0.24	0.6 -> 0.24
0.6 -> 0.18	0.6 -> 0.18
0.6 -> 0.15	0.6 -> 0.15
0.45 -> 0.3	0.45 -> 0.3
0.45 -> 0.21	0.45 -> 0.21
0.45 -> 0.17	0.45 -> 0.17
0.45 -> 0.14	0.45 -> 0.14

Cavity wall insulation

1.8. Originally, the pre-installation U-value for cavity wall was assumed to be 1.6 W/m^{2}K, in line with RdSAP v9.92. However, RdSAP v9.93 contains a change to the assumed U-values for cavity walls in properties built during or before age band E[12] so that in all cases the U-value is assumed to be 1.5 W/m^{2}K.

1.9. The cavity wall insulation (CWI) deemed scores were not developed using RdSAP values for the pre-and post-installation position, but from installer data that the BRE hold. Therefore, this change does not directly impact the deemed scores for CWI measures. RdSAP values were however used to determine the base assumptions for each of the standard property archetypes so this change does impact other measure types. This is explained in 1.11 below.

1.10. More detail on the underlying assumptions can be found in the BRE methodology document published alongside this consultation.

All measures

1.11. The deemed scores for all measures (except park home insulation)[13] have been developed using standard property archetypes derived from the English Housing Survey (EHS). The scores have been developed with assumed U-values which are impacted to some extent by the changes to U-value assumptions in RdSAP v9.93.

1.12. We have used the revised U-values in the development of the relevant property archetypes and wall type variants for heating measures.

Fuel prices

1.13. Fuel prices are one of the necessary inputs to calculate the deemed scores. The deemed scores use fuel prices from the Product Characteristics Database (PCDB). These are updated twice each year in June and December. The fuel prices used for the current ECO2t deemed scores were taken from the December 2016 values which were current in the PCDB at the time the deemed scores were developed.

[12] For England and Wales, 1967-1975, Scotland, 1965-1975
See: Table S1 in RdSAP v9.93: https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-9.93/RdSAP_2012_9.93.pdf
[13] More detail on park home insulation can be found in Chapter 6 of this document

1.14. The scores included alongside this consultation were developed using June 2017 fuel prices. Following this consultation, these will be updated using the most up-to-date available fuel prices, currently December 2017, and as a result, there will be minor changes to the final ECO3 deemed scores.

1.15. We propose that the same fuel price inputs are used throughout the 3.5 years of ECO3. The reasoning for this includes the following:

- although the ECO3 deemed scores could be updated at intervals to reflect updates to fuel prices, feedback from the BRE shows that the impact on the scores is likely to be minimal,
- we believe that it would be more beneficial to provide a consistent set of deemed scores so that the ECO supply chain are better able to plan,
- this approach also maintains alignment between the ECO3 deemed scores and BEIS's Impact Assessment for ECO3 which depends on consistent deemed scores.

1.16. On this basis, we propose that the deemed scores will remain fixed for the duration of ECO3. As per the current approach, suppliers may still apply to Ofgem to produce new deemed scores or to approve new scoring methodologies.[14]

[14] Subject to any amendments implemented as a result of BEIS's proposals relating to innovation.

2. Proposed Alternative to Percentage of Property Treated

Chapter summary
This chapter details proposals related to introducing 'average treatable areas' as an alternative to Percentage of Property Treated (POPT). It describes the sources of data, where available, that would be used for each measure type. For those measures without sufficient data, we have proposed a different approach.

Question 3:
Do you agree with our proposed approach to removing POPT for the majority of measures by identifying average treatable areas and adjusting the scores accordingly? Please provide reasons for your answer, and if applicable provide an alternative approach including as much detail and evidence as possible.

Question 4:
Do you agree with our use of English Housing Survey data to identify average treatable areas for SWI, CWI, loft insulation, flat roof insulation and underfloor insulation? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 5:
Do you agree with our use of English Follow up Survey data to identify average treatable areas for heating measures? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 6:
Do you agree with our use of Ofgem data and industry opinion to identify average treatable areas for RIRI and park home insulation measures? Please provide reasons for your answer, and if applicable an alternative approach with justification including as much detail and evidence as possible.

Question 7:
Do you agree with our proposed approach for measures for which there is insufficient data available to identify treatable areas? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 8:
Do you agree with our minimum requirement that at least 67% of the property is treated in order to qualify for the full ECO3 deemed score? Please provide reasons for your answer, and if applicable an alternative approach including as much detail and evidence as possible.

Question 9:
Do you agree with our proposed approach of using POPT to score measures which do not meet the 67% minimum requirement? Please provide reasons for your answer,

and if applicable an alternative approach including as much detail and evidence as possible.

2.1. The current ECO2t deemed scores were developed based on the assumption that 100% of the property has been treated by a particular measure. Where a measure does not treat the entire property, the deemed score should be scaled down on a pro-rata basis to reflect the proportion of the property which was actually treated. We called this approach 'Percentage of Property Treated' (POPT).

2.2. We carried out a review of the POPT approach between September and November 2017 and published a report on our findings.[15] In particular, the stakeholders had difficulties with calculating POPT for wall insulation, room-in-roof insulation (RIRI) and electric storage heater (ESH) measures. Extensions, conservatories, porches and tile-hung areas were cited as the cause of most difficulties in calculating and verifying POPT. More generally, respondents told us that the paperwork and verification associated with POPT greatly increased their administrative burden.

2.3. In our report on the POPT review, we committed to investigating the possibility of removing or changing the approach to POPT in ECO3. We have worked with the BRE to identify a proposed alternative approach where appropriate which is described below.

Suggested approach for replacing POPT

2.4. We propose to use existing data sources to estimate the average treatable areas for each measure type covered by the deemed scores. This average treatable area 'factor' would then be applied to the deemed scores to calculate the final scores, thereby removing the need to calculate POPT for each measure installed. For example, for CWI it can be problematic to install insulation behind conservatories, or tile hung areas. If 10% of properties have conservatories, and, on average, conservatories restrict the installation of CWI across 25% of the total wall area, we would reduce the total average treatable wall area by a factor of $0.1 \times 0.25 = 0.025$ (i.e. 2.5%) for all properties. This reduction factor of 2.5% would then be applied to the deemed scores for CWI and this reduced deemed score would be claimed irrespective of whether there was a conservatory present at a particular property or not.

[15] See: https://www.ofgem.gov.uk/system/files/docs/2017/12/popt_review.pdf

2.5. We propose to use data from the English Housing Survey (EHS) to calculate the average treatable area for most insulation measures. However, there is not sufficient data to use this approach for certain measure types such as heating measures, RIRI and park home insulation measures. For those measures we have proposed different methods.

2.6. The EHS data used to calculate the average treatable area factors was initially split into samples corresponding to the individual property types. In cases where there was not enough data, we combined property types to ensure the sample size was sufficient to calculate the final factors. Analysis of the data has shown that it is not necessary to apply different factors for separate property types as there would be minimal gains in accuracy, particularly as this would also add complexity. We therefore propose to apply an average treatable area factor on a per measure type basis but not by property type. More information on this analysis can be found in the BRE methodology document.

2.7. Table 2 details the suggested approach and associated data source for removing POPT for each measure type.

Table 2 Summary of approach to replacing POPT and associated source of data for each measure type

Measure type	Proposed approach to removing POPT	Data source
Cavity wall insulation Solid wall Insulation Loft insulation Flat roof insulation Underfloor insulation	Calculate an average POPT factor using quantitative data	English Housing Survey (EHS)
Heating measures Heating controls	Calculate an average POPT factor using quantitative data	Energy Follow-up Survey
Room-in-roof insulation	Calculate an average POPT factor using quantitative data	Ofgem notification data
Park homes	Calculate an average POPT factor using a combination of quantitative and qualitative data	Ofgem notification data and industry advice
Glazing High performing external doors Draught proofing Party wall insulation Micro generation	Do not apply a POPT factor	n/a
New measures	To be determined on a case by case basis	TBC

2.8. The following sections list the features which restrict the installation of a measure to 100% of a property and the data sources that can be used to calculate them.

Measures with associated English Housing Survey data available

Cavity wall insulation

2.9. We have assumed that all areas of an unfilled cavity wall can be treated, with the exception of:

- Areas of other wall types (e.g. solid)
- Areas of wall covered in tiles, timber or plastic panels
- Areas immediately behind and above conservatories

Solid wall insulation

2.10. We have assumed that all areas of an uninsulated solid wall can be treated, with the exception of:

- Areas of other wall types (e.g. cavity)
- Areas of wall covered in tiles, timber or plastic panels
- Areas immediately behind and above conservatories

Loft insulation

2.11. For all dwellings with any area of pitched roof, we have assumed that the entire area of the roof can be filled, with the exception of:

- Areas of flat roof
- Areas of mansard or chalet roof

Flat roof insulation

2.12. For all dwellings with any area of flat roof, we have assumed that the entire area of the roof can be improved, with the exception of:

- Areas of pitched roof
- Areas of mansard or chalet roof

Underfloor insulation

2.13. For all dwellings with suspended timber ground floors, we have assumed that the entire area of the floor can be improved, with the exception of:

- Areas of solid floor

2.14. The area of solid floor is not identified directly in the EHS, although the room with the solid floor is named. We have used this information to make an assumption on the floor area based on the total number of habitable rooms in the dwelling (which is recorded).

Measures using alternative sources of data

Heating measures using Energy Follow-up Survey data

2.15. We have examined data from the 2011 Energy Follow-Up Survey to identify the number of rooms in each dwelling type which are not heated by a central heating system.[16]

2.16. This was used, in conjunction with data on the total number of habitable rooms from the EHS, to produce an estimate of the 'treatable' area for all dwelling types (excluding the area of these rooms, for which an assumption on floor area will need to be made).

2.17. So, for all dwellings, we have assumed that a heating measure installed in a property, heats the entire property, with the exception of an average unheated area.

Room-in-roof insulation (RIRI) using Ofgem notification data

2.18. We propose to estimate the average treatable areas of properties based on the RIRI measures that have been notified to Ofgem in ECO2t. This is primarily because we do not have access to any other reliable sources of data on this.

2.19. We have chosen not to use such an approach based on Ofgem notification data for other measure types. Stakeholder feedback during ECO2t indicated that for most ECO measures the supply chain target only properties where 100% of the property can be treated. This can be seen in the notifications under ECO2t to date. However, notifications for RIRI measures show that the supply chain do carry out installations to properties where less than 100% of the room-in-roof can be treated. We therefore have more confidence that the average POPT notified for RIRI measures in ECO2t is representative of the average portion of a RIRI which is available to be treated.

2.20. Based on the analysis of Ofgem notification data,[17] the average treatable area for RIRIs is 69.68%.

Park homes using Ofgem notification data and industry advice

2.21. To date, there has been limited uptake of park homes insulation under ECO. We propose to base our approach to determining the average treatable area on a combination of the limited quantitative and qualitative data available.

2.22. Ofgem notification data suggests that 91% of a park home is typically treated. However, feedback from the park homes' insulation industry suggests that for all installations in the UK, whether supported by ECO or not, between 70% and 80% of a park home is typically treated.

2.23. Although the feedback from industry has indicated that as little as 70% is treated, we propose to use a point between this and the figure of 91% from the limited Ofgem notification data available. This results in an average treatable area for park home insulation of 80%.

Measures with no alternative sources of data

2.24. Some ECO measures do not fall into any of the approaches decribed above as we do not hold or have access to sufficient data on them. These include glazing, high performing external doors (HPED), draught proofing, party wall

[17] Data used consisted of the 7,015 ECO2t RIRI measures notified up to 29th January 2018.

insulation, and micro generation.[18] For these measures we have identified two possible approaches:

- Allow these measures to claim 100% of the deemed score, or
- Maintain the current approach requiring that POPT is calculated for each measure.

2.25. Given the very low uptake of these measures and for the purposes of simplicity, we recommend the first approach of allowing the measures to claim 100%.

New measure types

2.26. Where a supplier applies for a new measure type, we will decide on our approach to POPT on a case by case basis. We will however aim to be consistent in our approach where possible.

Minimum required to claim deemed score

2.27. There are a number of potential issues with the 'average treatable area' approach. These include:

- That there is a risk of gaming the system whereby a small portion of a property is treated but the whole score is claimed.
- That for certain measure types the average treatable area is very low and that this impacts the commercial viability of a measure to the extent that the measure is never installed (even where certain properties would benefit from it).

2.28. A mitigating approach is to set a minimum condition and to base the average treatable area on a sample where at least this minimum can be met. This would result in the average treatable area (and therefore the deemed score) increasing but would mean where the minimum condition cannot be met, that the deemed score could not be claimed.

2.29. Table 3 below shows the average treatable area when considering;

[18] At the time of writing, none of these measure types have been delivered and approved under ECO2t.

- all properties,
- where at least 50% of the property can be treated, and
- where at least 67% of the property can be treated.

2.30. The figures in this table were calculated using the data sources and approach described earlier in this chapter.

Table 3 Estimated proportion of property treatable for each measure type[19]

Measure type	Average treatable area (%)		
	Properties with any treatable area	**Properties with >= 50% total area treatable**	**Properties with >= 67% total area treatable**
Cavity wall insulation	73	92	95
Solid wall insualtion	76	92	95
Loft insulation	95	96	97
Flat roof insulation	36	93	99
Under floor insulation	71	76	97
Heating measures	95	95	96
RIRI	70	76	86
Park home insulation	80		
All other measure types	100		

2.31. We propose that only those properties with at least 67% treatable area would be used to calculate the average POPT factor. In line with this, we propose to require that a minimum of 67% of a property be treated by a particular measure in order to claim the deemed score. The data shows that this would result in scores that would generally be closer to the actual

[19] All figures are correct to the nearest percentage

proportion of property treated while achieving the aim of removing POPT in the interest of simplicity.

2.32. Any potential approach will have associated pros and cons. We have considered these in reaching our proposed approach but would welcome feedback on the three options in table 3 above.

2.33. We recognise that in some situations, it may not be possible to meet the minimum requirement. We do not want to discourage the installation in all of these situations as there may well be reasonable grounds for not treating at least 67% of the property. For example, for flat roof insulation where the flat roof is only associated with a property extension, or for party wall insulation if a property had two party walls and only one could be treated due to consent restrictions. In these situations we propose that the current ECO2t POPT approach is used.

2.34. We recognise that the minimum requirement could mean that some of the issues associated with POPT continue. For example, the supply chain would still need to estimate whether the minimum condition is met for a particular measure. However we believe that this is a reasonable expectation of the supply chain, and there is precedent for this approach as it was used during CERT and we are not aware of any concerns raised at that time.

2.35. Note that regardless of these proposals around POPT, it is still our expectation that suppliers must install 100% of a measure at premises unless there are reasonable grounds for not doing so. As detailed in our delivery guidance for ECO2t, suppliers must install 100% of a measure at premises, unless there are reasonable grounds for not doing so.[20]

[20] See section 2.53 of guidance at: https://www.ofgem.gov.uk/system/files/docs/2017/12/energy_company_obligation_2017-18_eco2t_guidance_delivery_v1.1_0.pdf

3. Updates to the format of deemed scores

Chapter summary
This chapter gives a short overview of proposed updates to the format of the published deemed scores.

Question 10:
Do you agree with our proposed format for deemed scores? Please provide reasons for your answer, and if applicable alternative suggestions with justification including as much detail and evidence as possible.

3.1. The format of the current ECO2t deemed scores was chosen on the basis that it would be easy to use. However, feedback during ECO2t suggested that the format was not particularly useful for some stakeholders, particularly those wishing to input the scores into IT systems. From an Ofgem perspective, the current format is also time consuming to prepare.

Updated format

3.2. We have therefore developed a new format, taking account of stakeholder feedback, which is a flat excel file using the columns listed below. This format will not include redundant scores or any unnecessary fields;

- Measure type
- Property type (including number of bedrooms)
- Pre-main heating source for the property
- Post-main heating source for the property
- Cost score (£)
- Annual saving (£)
- Lifetimes
- Uplifts (which will be decided by BEIS as part of the outcome of their consultation)

- Average POPT factor[21]

Uplifts

3.3. The current deemed scores are subject to an uplift of 1.3 which is laid out in the ECO2 Order. This was determined by BEIS to bring current deemed scores in line with average SAP and RdSAP based scores used during ECO2. In their current consultation, BEIS indicated that they do not propose to continue this for ECO3. However, they have proposed to include other uplifts. These consist of an uplift of 1.35 for insulation measures installed in non-gas fuelled properties and an uplift of 4.0 for broken boiler replacement measures. These uplifts have been applied to the draft ECO3 deemed scores published alongside this consultation.

[21] See Chapter 2, Table 3 of this consultation

4. Updates to Room-in-Roof Insulation Scores

Chapter summary
This chapter describes proposed changes to the assumptions used for the RIRI deemed scores. These include changes to assumptions around the assumed floor area of a room-in-roof and the assumed pre-insulation U-values. These changes are based on issues we have identified since the introduction of the scores in April 2017. The scores described in this chapter will also be impacted by the outcome of the proposed alternative to POPT outlined in Chapter 2.

Question 11:
Do you agree with our proposal to update the assumed size of the floor area of the room-in-roof used to develop the RIRI score? Please provide reasons for your answer, and if applicable please suggest an alternative approach including as much detail and evidence as possible.

Question 12:
Do you agree with our proposal relating to the assumed levels of insulation in the elements of the room-in-roof used to develop the RIRI score? Please provide reasons for your answer, and if applicable an alternative approach including as much detail and evidence as possible.

4.1. The current ECO2t RIRI deemed scores are based on the development of a 'typical' room-in-roof for each property type.

4.2. In our previous deemed scores consultation published in May 2016, we sought feedback on the assumptions behind the RIRI deemed scores. At the time, there was minimal evidence available and for some assumptions we adopted an approach primarily based on anecdotal evidence from stakeholders.

4.3. These assumptions are outlined in the ECO2t Deemed Scores Methodology document ("Ofgem Deemed Scores Methodology").[22] Key assumptions for this measure type are the dimensions of the RIR and the assumed levels of pre-existing insulation.

4.4. Since the introduction of deemed scores in April 2017, the BRE has undertaken additional analysis of English Housing Survey (EHS) data relating

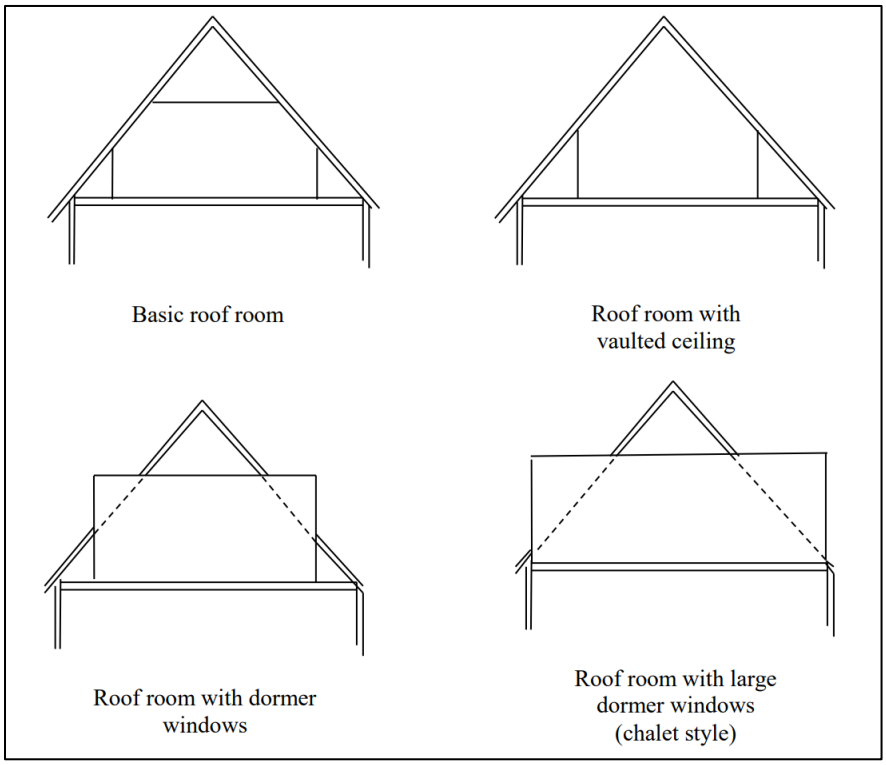
[22] See: https://www.ofgem.gov.uk/system/files/docs/2016/05/ofgem_deemed_scores_methodology.pdf

to the room-in-roofs in the GB housing stock.[23] As a result of this new analysis, we are now able to propose assumptions which are more representative of the GB housing stock. In particular, we have updated the assumptions around the dimensions and starting U-values of a room-in-roof.

Size of the room-in-roof

4.5. For the current ECO2t deemed scores, the floor area of the assumed RIR is taken as 50% of the roof plan area of the property. This is in line with the convention used in EHS estimates for room-in-roof dimensions. This assumption is broadly representative of a room-in-roof built without a rear or front extension dormer.[24] The following figure taken from RdSAP v9.93 displays the different types of room-in-roof.[25]

Figure 1 Types of RIR (Figure S1 in RdSAP v9.93)



4.6. However, a significant proportion (31%) of room-in-roofs have either a front roof extension dormer, a rear roof extension dormer, or both. The room-in-

[23] All references to the English Housing Survey refer to the 2013 dataset
[24] See p118 of SAP v9.92 https://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf
[25] See p6 of RdSAP v9.93: https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-9.93/RdSAP_2012_9.93.pdf

roof with both a front and rear roof extension dormer corresponds to the 'Roof room with large dormer windows (chalet style)' from Figure 1. Analysis of the EHS data reveals that these types of room-in-roof are likely to have a far greater floor area than those without any extension dormer.

4.7. We have used EHS data to calculate a weighted average for the proportion of floor area that a room-in-roof typically takes up. The underlying assumptions of this approach are as follows:

- if a room-in-roof has no roof extension dormer, its floor area is 50% of the floor below.
- if a room-in-roof has a roof extension dormer on either the front or the back, its floor area is 75% of the floor below.
- if a room-in-roof has a roof extension dormer on both the back and the front, its floor area is likely to be 95% of the floor below.

4.8. An average floor area of these types has been produced by taking the assumed proportion of each roof type in the GB housing stock. Table 4 shows that the majority of room-in-roofs in the GB housing stock have either no dormer or a standard dormer, but that about a third have at least one roof extension dormer.

Table 4 Distribution of dormer types in GB room-in-roofs and associated assumed floor area

Dormer type of room-in-roof	Distribution of room-in-roof type in GB housing stock (EHS data)[26]	Assumed proportion of floor area occupied by room-in-roof
No dormer or standard dormer	68%	50%
Front or back roof extension dormer	24%	75%
Front and back roof extension dormer	7%	95%
All room-in-roofs	100%	**Weighted average = 59%**

[26] Note that there is a 1% error due to rounding

4.9. As shown in the table above, the average of the assumed proportions, weighted by the prevalence in the GB housing stock of the relevant RIR type, is 59% (to the nearest percentage point).

4.10. We propose that for the purposes of updating the RIRI deemed scores, the size of the 'typical' room-in-roof is increased from the current estimate of 50% to an assumed 59% of the floor area below.

Assumed pre-installation insulation levels of ceilings and walls

4.11. The current ECO2t deemed scores for RIRI were developed using the assumption that there was no insulation present in the ceiling or walls of the room-in-roof prior to installation and as such, a base U-value of 2.3 was used. This assumption was based on anecdotal evidence captured in our previous consultation on deemed scores for ECO2t from stakeholders in the absence of an alternative data source. However, this approach is inconsistent with the approach for other insulation measures (such as cavity wall and loft), where weighted averages are used to determine the assumptions behind the deemed scores.

4.12. The BRE has now conducted further analysis of EHS data, which allows us to propose an average level of insulation for the ceilings and walls of a room-in-roof. This is calculated by analysing data on the age of the room-in-roof alongside the associated default U-values, as listed in Appendix S of SAP.[27] This is shown in Table 5 below along with the resulting weighted average.

[27] See p118 of SAP9.92: https://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf

Table 5 Distribution of ages of room-in-roofs in the GB and associated U-values

Age of room-in-roof	Proportion of room-in-roof in age band	Associated U-value of elements (W/m^2K)
Pre 1966	35%	2.30
1967 – 1975	8%	1.50
1976 – 1982	5%	0.80
1983 – 1990	9%	0.50
1991 – 1995	7%	0.35
1996 – 2002	11%	0.35
2003 – 2006	9%	0.30
2007 – 2012	12%	0.25
Post 2012	4%	0.18
Weighted Average		**1.14**

4.13. We propose that the weighted average U-value of 1.14 W/m^2K is taken as the pre-installation position for ceilings and walls of a room-in-roof. The evidence shows that this is more representative of the GB housing stock than the approach taken for the current ECO2t deemed scores.

5. Updates to scores for heating measures

Chapter summary
This chapter describes updates to scores for heating measures resulting from the policy proposals from BEIS in their ECO3 consultation and the new Boiler Plus requirements.[28] The scores described in this chapter will also be impacted by the outcome of the proposed alternative to POPT outlined in Chapter 2.

Question 13:
With regard to upgrades for inefficient mains-gas and LPG boilers, do you agree with the assumptions we have used to identify the pre-installation efficiency for non-condensing boilers? Please provide reasons for your answer, including as much detail and evidence as possible.

Question 14:
Ofgem are responsible for determining what constitutes a similar efficiency rating to non-condensing boilers and for electric storage heating with a responsiveness rating of 0.2 or less. We are in the initial stages of developing our position on this area and we welcome views from stakeholders. In responding you may have regard to the following non-exhaustive examples of issues to consider;

(i) A methodology for determining this rating for each heating type
(ii) Data sources that we could use

Please provide as much evidence and detail as possible in your response.

5.1. The reasons for updating the deemed scores for heating measures are related to;

- changes to policy as proposed by BEIS in their current ECO3 consultation and,
- the outcomes of the Boiler plus consultation.[29]

[28] BEIS' policy could be subject to further development and change, any resulting impact on our proposals would be reviewed as required.
[29] See the Boiler plus consultation response at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651853/Boiler_Plus_final_policy_and_consultation_response.pdf

5.2. A summary of these changes and the related updates to ECO3 deemed scores are included in Table 6. The implications of each of these changes for ECO3 deemed scores are described in greater detail below.

Table 6 Proposed Policy Changes and related updates for ECO3 deemed scores

Changes in BEIS ECO3 Consultation & Boiler Plus requirements	**Summary of related updates for ECO3 deemed scores**
Oil boilers	Removal of scores for the installation of oil fired boilers
First Time Central Heating (FTCH)	Updating labelling for relevant scores
Broken heating system replacement	Qualifying boiler scores relabelled as 'broken heating system replacements', and the updates to lifetimes as detailed in the BEIS consultation
Inefficient heating system upgrades delivered alongside insulation	Updated assumptions to reflect pre-installation position of inefficient heating systems
Boiler plus requirements relating to boilers and heating controls[30]	Improved post-installation efficiency for gas and LPG boilers, and updates to scores for heating controls

[30] See the Boiler plus consultation response at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651853/Boiler_Plus_final_policy_and_consultation_response.pdf

Deemed scores not included for ECO3

Oil and coal fuelled heating systems

5.3. We have not included scores for the installation or repair of oil boilers as BEIS has proposed that they will no longer be installed or repaired under ECO3.

5.4. BEIS has also proposed that coal heating measures will not be supported under ECO3, although as these measures used biomass as a proxy deemed score this will not impact on updating scores.

Slimline electric storage heaters (ESHs)

5.5. We have not included scores for the installation of slimline heaters with a responsiveness of 0.2 or less. This is due to the EU Regulation 2015/1188 which requires that from January 2018 any electric space heaters manufactured for sale in the European Union must meet certain energy efficiency thresholds.[31] We expect that any slimline heaters that were manufactured before this deadline will already have been installed prior to the start of ECO3. Given the move away from slimline ESHs, we have also removed deemed scores for repairs of slimline ESHs.

First Time Central Heating (FTCH)

5.6. BEIS has proposed to broaden the definition of what counts as a FTCH measure and as a result, delivery of FTCH could increase. In order to make the scores for FTCH measures easy to identify, the labelling of these scores has been updated. For example, the installation of a first time central heating boiler measure with solid wall is labelled as "B_First_time_CH_solid". This change does not impact on the deemed scores themselvses and measures labelled as FTCH can be claimed outside of the Social EFG element of HHCRO.

Broken heating system replacements & repairs

Broken heating systems replacement

5.7. The current BEIS consultation on ECO3 includes some proposed changes to how broken heating system replacements will be supported. In ECO2t, the replacement and repair of broken heating systems is covered by the concept of qualifying boilers and qualifying electric storage heaters. BEIS has

[31] See Article 3 and Annex II of the European Ecodesign Regulation: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2015.193.01.0076.01.ENG

proposed the removal of the qualifying concept for ECO3 and the introduction of broken heating system replacements and repairs, subject to a cap.

5.8. This approach would maintain support for the replacement of broken heating systems. As with the current approach to qualifying boiler and electric storage heater replacements, the savings will assume a baseline of electric room heaters. The lifetime of a broken heating system will however change. The current lifetimes for boiler and electric storage heater installations are 12 and 20 years respectively. In the ECO3 consultation, BEIS has proposed that lifetimes are set at three years for broken boiler replacements and five years for broken ESH replacements.

5.9. We have developed scores for broken heating system replacements which, as with the current ECO2t deemed scores, assume the pre-installation position of electric room heaters, but have updated the lifetimes as per paragraph 5.8.

Broken heating systems repair

5.10. Where a property contains a boiler or electric storage heating that has broken down and is economical to repair, suppliers can make the relevant repairs and count the savings towards their obligation. The lifetime for these measures will be one or two years, in line with the current approach.

Inefficient heating system upgrades

5.11. In ECO2t, there are deemed scores for non-qualifying boiler replacements and these are based on the cost savings achieved where an existing working boiler is replaced by another boiler. A boiler can be replaced by any other heating system, where the installation provides a cost saving to the consumer and all other relevant eligibility criteria are met. The current deemed scores for these measures therefore assume a pre-installation efficiency which is based on average efficiencies across the GB housing stock.

5.12. BEIS has proposed to modify this approach. Under ECO3, inefficient heating systems can only be upgraded alongside insulation. Efficient heating sources can only be replaced by renewable or district heating.

5.13. It is therefore appropriate to develop deemed scores specific to these proposals, rather than the all-encompassing approach used in developing the scores for non-qualifying boiler replacements.

5.14. In their current consultation, BEIS has proposed the following definitions of inefficient heating systems.

- a non-condensing boiler; or

- electric storage heating with a responsiveness rating of 0.2 or less when assessed against the Standard Assessment Procedure; or

- any other measure that Ofgem deem to be of a similar efficiency rating to those specified above.

5.15. These definitions of efficient and inefficient will impact the pre-installation and post-installation assumptions of the deemed scores. These assumptions are integral to the scores and the changes are described below. More detail on the assumptions themselves are described in the BRE methodology document.

Non-condensing boiler upgrades

5.16. BRE analysis of the EHS and Product Characteristics Database (PCDB) has shown that the average efficiency of all non-condensing gas boilers (both mains gas and LPG) in the GB housing stock is 72%. We therefore propose that 72% is used as the pre-installation efficiency value for the deemed scores related to mains gas and LPG boiler upgrades.

5.17. Current deemed scores for the installation of a gas or LPG boiler assume that the boiler being installed is 88% efficient, in line with the requirement at that time that all boiler installations should have had a SEDBUK[32] efficiency rating of 88%.

5.18. The new 'Boiler plus' standards are detailed in the consultation response and come into force from April 2018.[33] These include the requirement that gas or LPG boilers have an ErP efficiency of 92%.[34] This is equivalent to the SEDBUK rating of 88%. However, the Boiler Plus regulations state that boiler installations must have associated heating controls and an additional efficiency feature.[35]

5.19. We have updated the assumed post-installation efficiency of new mains gas and LPG boilers to reflect the Boiler Plus requirements. More detail on this

[32] Seasonal Efficiency of a Domestic Boiler in the UK
[33] See the Boiler plus consultation response at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651853/Boiler_Plus_final_policy_and_consultation_response.pdf
[34] Since April 2016, boiler manufacturers in the UK started using a new model for calculating performance, the Energy Related Products methodology (ErP).
[35] See: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673023/Boiler_Plus_Factsheet_v3.pdf

can be found in the BRE Deemed Scores Methodology Document published as part of this consultation.

5.20. Boiler Plus includes a requirement for an additional energy efficiency feature to be installed alongside a gas or LPG combination boiler, however there are a number of different energy efficiency features which could meet this requirement. For the purposes of the deemed scores we have assumed that load or weather compensators are installed as these are the cheapest option and therefore the most likely choice. If an alternative energy efficiency feature is installed then suppliers can apply to Ofgem for a new deemed score, as per the standard process outlined in ECO2t delivery guidance.[36]

5.21. For amendments relating to alternative heating sources, see paragraph 5.24.

Electric storage heater upgrades

5.22. BEIS has proposed that an electric storage heater is inefficient, and as such can be upgraded, if it has a responsiveness of 0.2 or less. We have updated the pre-installation assumptions for electric storage heater measure deemed scores accordingly.

5.23. The two installation options of fan storage heater and high heat retention storage heater with associated controls remain.

'Any other measure' upgrade

5.24. BEIS has proposed that Ofgem confirm the efficiency rating for any other measures that we deem to be of a 'similar efficiency rating' to those they have specified. We intend to provide detail on this separately.[37]

5.25. We have not updated the pre-installation efficiency for the following pre-main heating sources for heating measure upgrades at this stage:

- Oil boiler
- Electric boiler

[36] See Chapter 6, paragraph 6.19 to 6.26: https://www.ofgem.gov.uk/system/files/docs/2017/12/energy_company_obligation_2017-18_eco2t_guidance_delivery_v1.1_0.pdf

[37] See Chapter 3, paragraph 99 of the BEIS ECO3 constultation at: https://www.gov.uk/government/consultations/energy-company-obligation-eco3-2018-to-2022

- Solid fossil fuel boiler
- Air Source Heat Pump
- Ground Source Heat Pump
- Gas back boiler to radiators
- Gas fire with back boiler

5.26. We would welcome feedback on what could be assumed as equivalent to BEIS's proposed definitions in paragraph 5.14 above.

Combining scores for insulation with heating system upgrades

5.27. The current BEIS consultation proposes a requirement for a primary insulation measure to be installed in order to install a heating system upgrade. We have not developed scores with assumptions for additional insulation in the base case for heating system upgrades. The ECO3 deemed scores will continue to assume the standard property base case.

5.28. In our previous consultation on deemed scores, some respondents requested guidance on accounting for multiple installations of ECO measures to a single property using deemed scores.[38] Some respondents noted that where multiple measures were installed in one property the overall savings were likely to be artificially high.

5.29. We considered the issue at the time and chose not to implement a methodology for the following reasons which still apply;

- calculating the varied impacts of existing measure types would be highly complex which would result in a huge number of scores and in turn increase the risk of error,
- introducing a requirement for identification of existing energy efficiency measures in a property would reduce the supply chain's ability to calculate savings before visiting the property.

[38] See p30: https://www.ofgem.gov.uk/system/files/docs/2016/11/deemed_scores_consultation_response_0.pdf

5.30. In a property where an insulation and heating measure are installed together, the scores should be selected as outlined in the ECO2t guidance.[39]

Heating controls

5.31. Previously, the improvement in efficiency resulting from heating controls was incorporated within the deemed scores for non-qualifying boiler measures however they were separated out for qualifying boiler measures in order to allow installed heating control measures to be counted towards the Home Heating Minimum Requirement (HHMR).

5.32. We have applied the approach previously used for qualifying boilers to all relevant broken heating system replacement measures and all heating system upgrade measures. Table 7 below shows where each measure type should be claimed.

[39] See Chapter 7, paragraphs 7.101 to 7.103: https://www.ofgem.gov.uk/system/files/docs/2017/12/energy_company_obligation_2017-18_eco2t_guidance_delivery_v1.1_0.pdf

Table 7 Deemed scores for heating measures and options for heating controls

'Measure_Type' (label in deemed scores spreadsheet)	When this score should be claimed	Directions for heating controls
All scores with labels ending in 'nopreHCs'	When there is not a full set of functioning heating controls already present	• A full set of heating controls should be installed and, • a separate heating control deemed score should be claimed
All scores with labels ending in_'preHCs' (including 'preHCs_1'; and 'preHCs_2' for repair measures)	When there is already a full set of functioning heating controls present	• A separate heating control measure cannot be claimed
All scores with labels beginning with 'B_First_time…'	For all first time central heating measures	• A full set of heating controls should be installed and, • a separate heating control deemed score should be claimed

5.33. For broken heating system replacement measures, this will enable heating control measures to be claimed outside of the broken heating system cap. We also believe a consistent approach for heating system upgrades would be beneficial as feedback during ECO2t has indicated that there was some confusion over the different approaches to different measure types. This update means that going forward, where they are installed, heating controls can always be claimed for (provided they meet all other relevant eligibility requirements).

5.34. In light of the new boiler plus requirements, this approach will also make it simpler to claim for improved heating controls where a supplier applies for new deemed scores for them.

6. Updates to scores for Park Home insulation measures

Chapter summary
This chapter describes the proposed update to the deemed scores for park home insulation measures. The scores described in this chapter will also be impacted by the outcome of the proposed alternative to POPT outlined in Chapter 2.

Question 15:
Do you agree with the proposed update to the park home insulation deemed scores? Please provide reasons for your answer, including as much detail and evidence as possible.

6.1. In ECO2t, there are two sets of deemed scores for park home insulation measures.

- The first, 'EWI_Parkhomes', is a 'standard' score used for all park home measures.
- The second, 'EWI_Parkhomes II', may only be used if the obligated supplier meets certain requirements to evidence that certain pre and post-installation U-values have been met.

6.2. This chapter proposes an update to the current standard park home deemed scores.

6.3. The current deemed scores for park home insulation are based on assumed improvements to the walls, roof and floor of the park home. The assumptions behind these deemed scores were based on information on park homes that was available at the time of development. The assumed pre-installation and post-installation U-values are key to the calculation of the scores and the U-values used for current deemed scores for standard park home insulation measures are in Table 11.

Table 8 Pre-installation and post-installation U-value assumptions for the current standard park home insulation deemed scores

Park home element	Pre-installation U-value (W/m^2K)	Post-installation U-value (W/m^2K)
Wall	1.0	0.59
Roof	0.6	0.42
Floor	0.73 (single park home) or 0.92 (double park home)	0.52

6.4. Since the beginning of ECO2t, we have gathered information on park homes and park home insulation. Based on this information, we propose to update the current deemed scores to include a more representative pre-installation U-value assumption of 1.2 W/m^2K for the wall element, and retain all other pre-installation U-values in Table 8. The reasoning for this proposed update is described below.

6.5. As stated previously in this document, we developed the current deemed scores with regard to SAP and RdSAP. The assumed U-values for park homes in RdSAP are dependent on the age band in which the park home was built. These are shown in Table 9.

Table 9 RdSAP U-values for park homes by age band

Age band of construction 40 (relevant years)	F (Before 1983)	G (1983 – 1995)	I (1996 – 2005)	K (2006 onwards)
Wall U-value (W/m^2K)	1.7	1.2	0.7	0.6
Roof U-value (W/m^2K)	1.7	0.6	0.35	0.3
Floor insulation thickness[41] (mm)	0	25	50	70

6.6. Ideally, the assumed pre-installation U-values would have been based on a weighted average of the RdSAP values, using EHS data to identify the distribution of property types in the GB housing stock. However, there is

[40] In SAP, the age bands for park homes are different to other property types. As such, age bands 'H' and 'J' are not used.
[41] The U-values for floors of park homes are dependent on the floor area used, so these values are applied to 'single' and 'double' park homes to generate the relevant U-value

insufficient data available on park homes in the GB housing stock so instead, we selected an appropriate RdSAP age band on which to base the pre-installation U-values.

6.7. Band G was selected as a reasonable assumption for park homes which were still present in the housing stock and would also likely need to be insulated. However, the relevant British Standard (BS3632:1983)[42] was used for the pre-installation U-value instead as this was deemed more appropriate at the time. The British Standard required a wall U-value of 1.0 W/m^{2}K as opposed to the RdSAP assumption of 1.2 W/m^{2}K.

6.8. Following stakeholder feedback during ECO2t we have reassessed this approach. This reassessment involved a review of a report developed as part of a Demonstration Action for the Carbon Emissions Reduction Target (CERT)[43], the Alba Building Sciences report. This report indicated that the U-values of park home walls of this time period were close to 1.4 W/m^{2}K.

6.9. Considering the report does not cover a large sample of park homes, we do not think it is appropriate to use the U-value indicated in the Alba Building Sciences report. However, we do think that this report casts sufficient doubt on the previous wall U-value assumption so we instead propose that the ECO3 deemed scores use a wall U-value of 1.2 W/m^{2}K, the assumption used within RdSAP for age band G.

6.10. The park home insulation deemed scores assume that a given level of insulation is applied to the walls, floor and roof of a park home. This standard and thickness is representative of the typical improvement expected from insulating a park home, developed from internal BRE research. We do not propose to change this assumed level of improvement, which means that the post-installation U-value for walls has also changed as a result of using 1.2 W/m^{2}K for the pre-installation U-value.

6.11. We do not propose to make any other changes to the standard park home insulation deemed scores but would welcome further feedback and evidence on this subject as part of this consultation. The proposed pre and post-installation U-values for standard park home insulation measures are shown in Table 13.

[42] https://shop.bsigroup.com/ProductDetail/?pid=000000000030253830

Table 10 Proposed pre-installation and post-installation U-value assumptions for the standard park home installation deemed scores (changes are underlined)

Park home element	Pre-installation U-value (W/m^2K)	Post-installation U-value (W/m^2K)
Wall	1.2	0.65
Roof	0.6	0.42
Floor	0.73 (single park home) or 0.92 (double park home)	0.52

Park home insulation 'II' deemed scores

6.12. We developed the 'Park home insulation II' deemed scores midway through the ECO2t scheme. This was due to the doubt cast on the assumptions underlying the standard park home score outlined previously in this chapter.

6.13. By updating the assumptions for the standard park home insulation deemed score (as described earlier in this chapter), the reason for developing the park home insulation II deemed scores is no longer relevant. We will therefore not carry forward this measure type into ECO3.

6.14. All park home insulation measures will therefore use the standard park home insulation deemed scores regardless of the age of the park home being insulated. This approach may mean that the savings claimed for a given measure are not representative of the actual level of improvement that installation achieves. However, this could be the case for many measures claiming a deemed score (due to the average approach taken) and hence, is consistent with the overall approach to developing deemed scores. The approach is designed to introduce simplicity and is expected to be representative of the savings achieved across the scheme as a whole.

7. Invitation to Provide General Comments

Chapter summary
As highlighted throughout this consultation document, the updates that we have proposed reflect both the BEIS proposals which directly impact on deemed scores, and also the availablility of new data and feedback from stakeholders received during ECO2t. We aim to develop a set of scores for ECO3 that is as representative as possible of the properties and measures which might be installed while seeking to reduce complexity as much as possible.

We have not been able to engage early with stakeholders in relation to this consultation, nor have we specifically requested broad feedback or suggestions from stakeholders in relation to changes or improvements to the current ECO2t deemed scores.

We therefore want to ensure that stakeholders have an opportunity to provide further comments on the deemed scores in advance of ECO3. In particular, we would welcome thoughts on further updates or improvements which could be made in order to meet the main objectives of the deemed scores (bearing in mind the likely legislative constraints).

Question 16:
We are also interested in high-level and material issues which are relevant to and likely to have a substantive impact on our approach to improving deemed scores for ECO3, for example, you may have views on:

(i) How could we streamline our administrative processes to further the main objectives of the deemed scores;
(ii) How could we amend the underlying assumptions or methodology to improve the deemed scores.

Please provide as much evidence and detail as possible in your response.

Catalogue of consultation questions

Question 1:
Do you agree with our proposal to apply the RdSAP v9.93 updates across all wall types which currently use a pre-installation U-value of 2.1 W/m^{2}K? Please provide reasons for your answer and include as much detail and evidence as possible.

Question 2:
Do you agree with our proposal to use the most up to date fuel prices available from the PCDB for the deemed scores throughout ECO3? Please provide reasons for your answer and include as much detail and evidence as possible.

Question 3:
Do you agree with our proposed approach to removing POPT for the majority of measures by identifying average treatable areas and adjusting the scores accordingly? Please provide reasons for your answer, and if applicable provide an alternative approach including as much detail and evidence as possible.

Question 4:
Do you agree with our use of English Housing Survey data to identify average treatable areas for SWI, CWI, loft insulation, flat roof insulation and underfloor insulation? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 5:
Do you agree with our use of English Follow up Survey data to identify average treatable areas for heating measures? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 6:
Do you agree with our use of Ofgem data and industry opinion to identify average treatable areas for RIRI and park home insulation measures? Please provide reasons for your answer, and if applicable an alternative approach with justification including as much detail and evidence as possible.

Question 7:
Do you agree with our proposed approach for measures for which there is insufficient data available to identify treatable areas? Please provide reasons for your answer, and if applicable suggest an alternative source of data with justification including as much detail and evidence as possible.

Question 8:
Do you agree with our minimum requirement that at least 67% of the property is treated in order to qualify for the full ECO3 deemed score? Please provide reasons for your answer, and if applicable an alternative approach including as much detail and evidence as possible.

Question 9:
Do you agree with our proposed approach of using POPT to score measures which do not meet the 67% minimum requirement? Please provide reasons for your answer, and if applicable an alternative approach including as much detail and evidence as possible.

Question 10:
Do you agree with our proposed format for deemed scores? Please provide reasons for your answer, and if applicable alternative suggestions with justification including as much detail and evidence as possible.

Question 11:
Do you agree with our proposal to update the assumed size of the floor area of the room-in-roof used to develop the RIRI score? Please provide reasons for your answer, and if applicable please suggest an alternative approach including as much detail and evidence as possible.

Question 12:
Do you agree with our proposal relating to the assumed levels of insulation in the elements of the room-in-roof used to develop the RIRI score? Please provide reasons for your answer, and if applicable an alternative approach including as much detail and evidence as possible.

Question 13:
With regard to upgrades for inefficient mains-gas and LPG boilers, do you agree with the assumptions we have used to identify the pre-installation efficiency for non-condensing boilers? Please provide reasons for your answer, including as much detail and evidence as possible.

Question 14:
Ofgem are responsible for determining what constitutes a similar efficiency rating to non-condensing boilers and for electric storage heating with a responsiveness rating of 0.2 or less. We are in the initial stages of developing our position on this area and we welcome views from stakeholders. In responding you may have regard to the following non-exhaustive examples of issues to consider;

(i) A methodology for determining this rating for each heating type
(ii) Data sources that we could use

Please provide as much evidence and detail as possible in your response.

Question 15:
Do you agree with the proposed update to the park home insulation deemed scores? Please provide reasons for your answer, including as much detail and evidence as possible.

Question 16:
We are also interested in high-level and material issues which are relevant and material to improving deemed scores for ECO3, for example, you may have views on:

(i) How could we streamline our administrative processes to further the main objectives of the deemed scores;
(ii) How could we amend the underlying assumptions or methodology to improve the deemed scores.

Please provide as much evidence and detail as possible in your response.

Appendix 1 - Feedback on this consultation

We want to hear from anyone interested in this document. Send your response to the person or team named at the top of the front page.

We've asked for your feedback in each of the questions throughout it. Please respond to each one as fully as you can.

Unless you mark your response confidential, we'll publish it on our website, www.ofgem.gov.uk, and put it in our library. You can ask us to keep your response confidential, and we'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004. If you want us to keep your response confidential, you should clearly mark your response to that effect and include reasons.

If the information you give in your response contains personal data under the Data Protection Act 1998,[44] the Gas and Electricity Markets Authority will be the data controller. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. If you are including any confidential material in your response, please put it in the appendices.

General feedback

We believe that consultation is at the heart of good policy development. We are keen to hear your comments about how we've conducted this consultation. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send your comments to stakeholders@ofgem.gov.uk

[44] When in force, reference is assumed to the General Data Protection Regulation and Data Protection Act 2018 as required.