ECO2 consultation: Deemed scores

Consultation

<table>
<thead>
<tr>
<th>Publication date:</th>
<th>27 May 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response deadline:</td>
<td>8 July 2016</td>
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<tr>
<td>Contact:</td>
<td>James Morgan</td>
</tr>
<tr>
<td>Team:</td>
<td>Energy Efficiency and Social Programmes</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:eco.consultation@ofgem.gov.uk">eco.consultation@ofgem.gov.uk</a></td>
</tr>
</tbody>
</table>

Overview:

This consultation sets out our proposed approach to implementing a system of deemed scores for use in the ECO scheme from 1 April 2017, if introduced in legislation.

We welcome your views on these proposals. Please respond to eco.consultation@ofgem.gov.uk by close of business on 8 July 2016.
Background

The Energy Company Obligation (ECO) is a Government scheme which requires larger energy companies to deliver energy efficiency measures to domestic premises in Great Britain. The current scheme runs from 1 April 2015 to 31 March 2017 and is referred to as ECO2. It is the successor to ECO1, which ran from 1 January 2013 to 31 March 2015. ECO is administered by Ofgem E-Serve.

Under the current scheme, carbon and cost savings are calculated using the Standard Assessment Procedure (SAP) which requires a whole house survey in order to collect the numerous data inputs relating to the property where a measure is to be installed. This approach results in measure savings which are bespoke to the property in which the measure was installed.

In previous energy efficiency schemes, such as the Carbon Emissions Reduction Target (CERT) and the Community Savings Energy Programme (CESP), deemed scores were used. These were a finite set of scores that reflected the savings expected from different measures in different properties, based on a limited number of inputs.

We understand that Government intends to consult on proposals for the successor to ECO2 shortly. We understand that one area Government may consult on is whether to move from the current scoring approach to deemed scores. We have developed these proposals for deemed scores on the basis that if they are introduced from April 2017, the ECO supply chain will have seen the likely mechanism for calculating scores with enough lead-in time before their implementation. However, at the moment all consideration of deemed scores must be provisional.

Following a competitive tender process we appointed the Building Research Establishment (BRE) to develop the proposed deemed scores, utilising their expertise in the areas of Standard Assessment Procedure (SAP) and the Reduced data Standard Assessment Procedure (RdSAP), national housing data and deemed scores used under previous energy efficiency schemes.

During the development process we engaged with experts from industry and academia, obligated energy suppliers, representatives of the ECO supply chain, the Department of Energy and Climate Change (DECC) and Scottish and Welsh Governments to understand their views and take them into account where possible. We would like to thank these parties for their valuable input during this pre-consultation period.

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1 Established by the Electricity and Gas (Energy Company Obligation) Order 2014 (SI 2014/3219)
2 Established by the Electricity and Gas (Energy Companies Obligation)Order 2012 (SI 2012/3018), as amended
3 Ofgem is the Office of the Gas and Electricity Markets Authority
4 http://www.bre.co.uk/filelibrary/SAP/2012/SAP-2012_9-92.pdf
6 https://www.bre.co.uk/
This consultation seeks your views on the proposed deemed scores, the methodology and assumptions used to generate the deemed scores, and our proposed approach to introducing new scores during the scheme. The proposed deemed scores and the deemed scores assumptions have been published as subsidiary documents and should be read in conjunction with this consultation.
**Next Steps**

The consultation will be open from 27 May 2016 to close of play on 8 July 2016. Responses should be directed to eco.consultation@ofgem.gov.uk or:

James Morgan  
Energy Efficiency and Social Programmes  
Ofgem, 9 Millbank, London, SW1P 3GE

**Template for responses**

We have provided a template for you to complete your response. This will reduce the time taken to process the responses. This is available on our website. We aim to publish our decisions including a summary of responses in September 2016. Unless marked confidential, all responses will be published on our website.
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1. **Introduction**

1.1. We understand that the Government may propose, in its forthcoming consultation on ECO, that measures completed from 1 April 2017 should be scored using ‘deemed scores’, rather than the current bespoke scoring approach. This would entail producing a finite set of scores that reflect the savings expected from different measures in different properties, based on a limited number of predictable and checkable inputs. We understand that Government may propose that these scores would be determined by us.

1.2. Under the current scheme, for each measure that a supplier notifies it must provide the associated carbon and/or cost savings. These carbon and cost savings are calculated using SAP or RdSAP and require a whole house survey in order to collect the numerous data inputs relating to the property where a measure is to be installed. The resulting measure savings are bespoke to the property in which it was installed. A move to deemed scores simplifies the process by removing the need to collect the data required for a SAP assessment, and removes the layer of complexity associated with making the relevant measurements.

1.3. We have worked closely with the BRE to develop the methodology used to produce the proposed deemed scores. The BRE have experience of working with Ofgem in this area, having developed the deemed scoring system used under the previous energy efficiency schemes, CERT and CESP.

1.4. We have developed the proposed deemed scores with regard to SAP, which ensures consistency with the current ECO2 scheme. Our key priorities were to develop a suite of scores that:

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

1.5. The documents which make up this consultation explain the method and assumptions used in developing the proposed set of deemed scores, how the deemed scores could be used in practice (including the impact of the changes on score monitoring and notification), and our proposed approach for producing new scores.
2. Methodology

2.1. To ensure that deemed scores are easy to use we have sought to limit the number of permutations as much as possible. Where savings for a measure type can vary significantly depending on the nature of the installation, for example the material used or the thickness of the insulation installed, we have developed multiple scores to recognise the range of savings that can be achieved.

2.2. Three factors explain most of the variation in savings across different installations:

- property type and size,
- primary heating system, and
- the measure type installed.

2.3. These three variables, which are relatively simple to determine and were used for deemed scores under previous schemes, have been used as the main inputs for calculating the deemed scores.

2.4. Another factor which can have a significant impact on the savings achieved by a measure is the percentage of property treated. Unlike the current bespoke scoring system, the deemed scores assume that the entire property has been treated. Our proposed method of correcting the deemed score savings for cases where only part of the property is treated is set out in chapter 7 of this consultation.

2.5. We have considered whether other variables, such as property age and location, should also be included when selecting a deemed score. Modelling suggests that the inclusion of such additional variables would only provide a limited increase in scoring accuracy, while increasing complexity of selection and risk of error. We have therefore limited the core variables used when selecting a deemed score to the three factors listed in 2.2.

2.6. A wide range of variables covering the size, age and thermal performance of dwellings have been statistically accounted for in the assumptions underpinning the core variables. These assumptions have been developed through analysis of extensive survey data for the housing stock. Further details are available in the Deemed Scores Methodology document (p4, section 2.1).

Questions

**Q1.** Do you agree with our selection of the key variables to use as the main inputs for calculating the deemed scores? If not, please clarify which aspect you do not agree with and suggest an alternative, with reasoning.
3. Property archetypes

3.1. The type and size of a property are key variables when calculating savings. Under the current scoring mechanism, property dimensions are measured to calculate the heat loss area for each individual property. In previous energy efficiency schemes, deemed scores used standard property archetypes instead. These were split by the type of dwelling and the number of bedrooms (eg 1-bed flat or 3-bed detached house).

3.2. Over the course of ECO we have found that the measurement of property dimensions can be prone to error. Distinguishing deemed scores by standard property archetypes removes the need to measure the dimensions of individual properties, simplifying the process of obtaining a score while also reducing the risk of error.

3.3. The deemed scores use property archetypes in order to estimate the overall measurements of a dwelling, one of the main factors which determine the savings that can be achieved. It is therefore important that the property archetype selected is the most reflective of the type and size of the dwelling where the measure has been installed.

3.4. Information on the current housing stock has been used to develop standard property archetypes. This is similar to the approach adopted in deemed scores for past energy efficiency schemes. However, the archetypes have now been updated to better reflect the diversity of the current housing stock; dwellings with a greater number of bedrooms and larger floor areas are now included, for example. This approach can therefore cater for these larger premises without the need for oversized property calculations, which were used under CERT. The property archetypes and how they were developed are available in the Deemed Scores Methodology document (p4, section 2.1).

Type of dwelling

3.5. All standard dwelling types are accounted for in the standard set of deemed scores and, in general, we expect that the dwelling type (eg flat, mid-terrace house) will be simple to identify.

3.6. The following notes explain which scores should be used for less common dwelling types:

   a. For studio flats, use the scores shown for 1 bedroom flats
   b. For maisonettes, use the scores for flats
   c. For park homes, use the scores for detached bungalows, except in the case of ‘park home insulation’ measures, for which two park home property archetypes are available.

Bedrooms

3.7. In most cases the number of bedrooms to be used when selecting a deemed score will represent the number of rooms being used as a bedroom in the property. However, where a dining room or living room is
in use as a bedroom, these should be discounted from the total or the overall size of the property may not be appropriately represented.

3.8. If there is any further ambiguity regarding the number of bedrooms in the dwelling, refer to the following guidelines:

Where a property contains a room which is not being used as a bedroom but could be used as a bedroom, it can be included in the bedroom count if;

a. it is additional to a kitchen, living space and dining space;

b. it meets the SAP definition of a habitable room; and

c. it can accommodate a standard sized single bed.

Questions

Q2. Do you agree with the method used in developing typical property archetypes in order to remove the need for measuring property dimensions? If not, please clarify which aspect you do not agree with and suggest an alternative, with reasoning.

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[7] https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-Conventions.pdf (p3, #2.04)
4. Primary heating sources

4.1 Another key variable when calculating savings for energy efficiency measures is the primary heating source of the property. The deemed scores have been developed to reflect the fact that savings from the installation of energy efficiency measures vary depending on the primary heating source of the property.

4.2 The primary heating sources in the housing stock have been identified and these have be used to differentiate the deemed scores. Primary heating sources which provide similar savings have been combined into broader categories. These categories take into account the average efficiency of the systems found in the housing stock. Further detail on the primary heating sources can be seen in the Deemed Scores Methodology document (p6, section 2.2).

4.3 Some heating systems are not present in the housing stock at sufficient scale to warrant a separate set of scores. As a result there may be cases where the primary heating source for a particular property is not explicitly referred to in the deemed scores (for example, wood central heating). Table 1, below, explains which score to use in these cases.

Selecting the appropriate primary heating source

4.4 The primary heating source refers to the existing primary heating of the property (at the time of installing a measure). Primary heating systems should be identified using existing RdSAP conventions.8

4.5 Table 1 sets out the heating systems that we know are present in the housing stock but not to a sufficient scale to warrant a separate set of scores. The table should be used to identify the most appropriate input to use when selecting a deemed score for properties with these heating systems.

<table>
<thead>
<tr>
<th>Primary heating source at the property</th>
<th>Deemed score input</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottled Propane central heating</td>
<td>Bulk LPG</td>
</tr>
<tr>
<td>Bottled Propane room heating</td>
<td>Bulk LPG</td>
</tr>
<tr>
<td>Oil room heating</td>
<td>Oil</td>
</tr>
<tr>
<td>Wood central heating</td>
<td>Solid</td>
</tr>
<tr>
<td>Wood room heating</td>
<td>Solid</td>
</tr>
<tr>
<td>Heat pumps central heating</td>
<td>Mains gas</td>
</tr>
</tbody>
</table>

4.6 Where a heating system is identified which is not included in the deemed scores, and is not included in Table 1, you should contact us to determine the most appropriate course of action.

8 [https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-Conventions.pdf](https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-Conventions.pdf) (p17, #4.09)
4.7 If an ECO measure is to be installed during refurbishment works which involve a change to the heating system in a property, the new heating system should be used to determine the deemed score (even if it has not yet been installed). If the new heating system is not known then the original heating system should be used (even if it has now been removed). This approach better reflects the savings made when measures are installed during refurbishment works.

Questions

**Q3.** Do you agree with the approach to accounting for all primary heating sources present in the housing stock? If not, please explain your reasoning and evidence your preferred approach.

**Q4.** Do you agree that we have appropriately accounted for heating systems present in the housing stock either as an input for the deemed scores or in Table 1? If not, please clarify which additional heating systems you believe need to be accounted for.
5. Measure types

5.1 We have developed deemed scores for all measure types delivered under ECO2 up to May 2016. We have not developed deemed scores for eligible ECO2 measure types that had never been claimed under the scheme by this point (eg passageway walkthrough doors and micro wind turbines).

5.2 We have also not developed deemed scores for eligible ECO2 measure types that had never been claimed under the scheme by this point (eg passageway walkthrough doors and micro wind turbines).

5.3 We have also not developed deemed scores for district heating connections. These measures are complex and highly variable in their nature and size, and so we consider that the current approach of producing bespoke scores using SAP or RdSAP is more appropriate.

5.4 We have accounted for differentiation within some measure types. For example, we have recognised different depths of solid wall insulation which may be installed, or different thermal performance of cavity wall insulation materials. To ensure simplicity, this differentiation accounts for broad levels of performance rather than recognising the performance of individual products. Further information on differentiation within measure types can be found in the Deemed Scores Methodology document (p10, section 2.4).

5.5 Selecting the correct measure type – Solid wall insulation

5.5 Deemed scores relating to solid wall insulation measures are differentiated by the SAP default pre- and post-installation U-values (see the Deemed Scores Methodology document (p10, section 2.4.1).)

5.6 We understand that calculating U-values can be complex and difficult to evidence so we propose that characteristics of the property and the installation be used to identify the most appropriate deemed scores. These characteristics (ie property age, wall construction and depth of insulation) are specified in the deemed scores tables alongside their associated SAP default U-values.

5.7 Energy suppliers may choose to use evidence of the final U-value (instead of using the thickness of the insulation installed) alongside details of the property age and wall construction to determine the appropriate score. This option is intended to give energy suppliers and their partners flexibility in determining how best to evidence ECO scores.

5.8 Where the post-installation U-value has been calculated but is not specified in our tables, the person selecting the score should refer to Table 2 to identify the appropriate deemed score. The range in which the actual value falls should be identified and then the appropriate deemed score can be selected.

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9 The Government’s Standard Assessment Procedure for Energy Rating of Dwellings 2012 Edition (p133, Table S6)
Where post-installation U-values have not been calculated, Table 3 provides guidance on how to select the most appropriate deemed score depending on the exact depth of insulation installed.

**Table 2: Ranges for solid wall insulation input U-values**

<table>
<thead>
<tr>
<th>Solid wall insulation (EWI, IWI) – all figures given in units of W/m²K</th>
<th>Deemed score: pre-installation U-value of wall</th>
<th>Deemed score: post-installation U-value of wall</th>
<th>Associated range of post-installation U-values:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.45</td>
<td>0.14</td>
<td>0.17</td>
<td>&lt;= 0.14</td>
</tr>
<tr>
<td></td>
<td>0.21</td>
<td>0.15 - 0.17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>0.18 - 0.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=0.22</td>
<td></td>
</tr>
<tr>
<td>0.6</td>
<td>0.15</td>
<td>0.18</td>
<td>&lt;=0.15</td>
</tr>
<tr>
<td></td>
<td>0.24</td>
<td>0.16 - 0.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.35</td>
<td>0.19 - 0.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=0.25</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.17</td>
<td>0.17</td>
<td>&lt;= 0.17</td>
</tr>
<tr>
<td></td>
<td>0.21</td>
<td>0.18 - 0.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.32</td>
<td>0.22 - 0.32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.45</td>
<td>&gt;=0.33</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>0.18</td>
<td>0.18</td>
<td>&lt;= 0.18</td>
</tr>
<tr>
<td></td>
<td>0.25</td>
<td>0.19 - 0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.35</td>
<td>0.26 - 0.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.55</td>
<td>&gt;=0.36</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>0.18</td>
<td>0.18</td>
<td>&lt;= 0.18</td>
</tr>
<tr>
<td></td>
<td>0.25</td>
<td>0.19 - 0.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.35</td>
<td>0.26 - 0.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>&gt;=0.36</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3: Ranges for solid wall insulation depths**

<table>
<thead>
<tr>
<th>Solid Wall Insulation Depths - All values given in mm</th>
<th>Deemed scores: insulation depth</th>
<th>Actual depth of insulation installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>26-99</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>100-149</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>150-199</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>&gt;=200</td>
<td></td>
</tr>
</tbody>
</table>

5.10 These tables relate to scoring only. All ECO measures, including solid wall insulation, must be installed in accordance with building regulations and any other relevant regulations that relate to the installation of the measure.
Selecting the correct measure type – Cavity wall insulation

5.11 Deemed scores for cavity wall insulation measures have been differentiated by the thermal conductivity of the material used to fill the cavity. We recognise that the actual performance of the materials installed may not exactly align with the thermal conductivity value specified in the deemed scores. In these cases we expect installers to refer to Table 4 to identify which input should be selected. To select the appropriate deemed score, installers should identify the range in which the actual value falls and select the appropriate thermal conductivity input value.

Table 4: Ranges for cavity wall insulation values

<table>
<thead>
<tr>
<th>Cavity Wall insulation – All values given in units of W/mK</th>
<th>Associated range of thermal conductivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal conductivity input value</td>
<td></td>
</tr>
<tr>
<td>0.04</td>
<td>0.034 – 0.0420</td>
</tr>
<tr>
<td>0.033</td>
<td>&lt;= 0.033</td>
</tr>
</tbody>
</table>

Selecting the correct measure type – electric storage heaters

5.12 Deemed scores for electric storage heaters have been differentiated by the proportion of the property which is heated by the electric storage heaters as a result of the installation (33%, 66% and 100%). We recognise that the actual proportion may not exactly align with the deemed scores. In these cases users should refer to Table 5 to identify in which range the proportion falls and select the appropriate deemed score.

Table 5: Ranges for electric storage heaters

<table>
<thead>
<tr>
<th>Electric Storage Heaters</th>
<th>Deemed score: % of property treated</th>
<th>Actual % of property treated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33%</td>
<td>&lt;50%</td>
</tr>
<tr>
<td></td>
<td>66%</td>
<td>50 – 89%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>90 – 100%</td>
</tr>
</tbody>
</table>

Selecting the correct measure type – boilers

5.13 Deemed scores for boiler installations have been differentiated by the fuel type of the boiler and by whether or not a full set of heating controls are present after completion of the installation.

5.14 We consider a full set of heating controls to be a timer, a room thermostat and thermostatic radiator valves (TRVs). If all three types are not in place, the person selecting the score should pick the installation with ‘no controls’. This approach is based on the way that savings for boiler measures and heating controls are calculated in SAP software. The software assumes that boiler measures achieve their full potential, unless the accompanying heating controls are insufficient. The scores for heating controls are based on a correction within the software to the boiler efficiency. The impact of heating controls can be best recognised within the deemed scores where all three of these technologies are in place.
5.15 For further details on boiler and heating control measures, see the Deemed Scores Methodology document (p16, section 2.4.12).

**Questions**

**Q5.** Do you agree that the deemed scores include all main measure types? If not, please clarify which additional measure type you expect will be installed.

**Q6.** Do you agree with our proposals for differentiating within measure types? If not please clarify where alternative differentiation should be applied.

**Q7.** Are there any measure types where you think that further differentiation is warranted? If so, please clarify which measure type could benefit from further differentiation and suggest an approach.

**Q8.** Are there any areas where you could benefit from further guidance in using deemed scores?
6. Scores

6.1. The deemed scores can be found in the deemed scores document. The scores represent the annual carbon savings in tonnes of CO\textsubscript{2}e (carbon dioxide equivalent) and the annual cost savings in £ for each measure type. The savings contained in the deemed scores document do not include the multiplication factors which need to be applied in order to calculate the lifetime score for a measure type. These multiplication factors are below.

**Weighted average factor (where applicable)**

6.2. The deemed scores have been developed with regard to SAP. SAP and RdSAP 2012 provide emissions in terms of carbon dioxide equivalent (CO\textsubscript{2}e); however, ECO carbon reduction targets are measured in CO\textsubscript{2}. Therefore a weighted average factor of 0.925 should be applied to the deemed score. Note that this is not necessary for cost savings.

**Lifetimes**

6.3. The deemed scores have been developed as annual savings. Every ECO measure has been given a standard lifetime and they should be used by suppliers when calculating the carbon or cost saving for a measure.

**In-use factor (where applicable)**

6.4. 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. IUFs are only applied when calculating carbon savings.

**HHCRO multipliers (where applicable)**

6.5. For certain HHCRO measures, a relevant HHCRO multiplier may be applied as part of the cost score calculation. Depending on the type of measure and/or the type of premises, the HHCRO multiplier will result in an increased or decreased cost score.

6.6. We have assumed that these factors will remain the same from April 2017. Following this consultation if deemed scores are introduced, we propose to publish the final annual savings in tonnes of CO\textsubscript{2} (with the CO\textsubscript{2}e conversion factor already applied) and £ savings.

6.7. We are interested in views on whether there would be merit in publishing an additional set of tables taking into account all multiplication factors, in order to provide installers with greater clarity of the lifetime scores and therefore the value of measures.
Questions

Q9. Do you agree with the deemed scores produced? If not please clarify which particular score(s) that you believe do not accurately reflect the savings for a measure.

Q10. Do you agree that it would be useful to also provide the deemed scores as lifetime savings (ie after applying all relevant multiplication factors), to make the relative value of each measure easier to identify?
7. Percentage of property treated

7.1. Suppliers must install 100% of a measure at premises, unless there are reasonable grounds for not doing so. We assume that this requirement will remain the same from April 2017.

7.2. The deemed scores have been developed on the assumption that 100% of the property has been treated. For wall insulation measures, this assumes that all exterior-facing walls have been insulated; for heating measures, it assumes that the new heating system is capable of heating the full dwelling.

How to calculate savings where less than 100% of a property is treated by the measure

7.3. In situations where less than 100% of the property is treated, the full deemed score cannot be claimed.

7.4. Research conducted by the BRE has shown that in the large majority of cases, the relationship between savings and percentage of property treated is broadly linear. We therefore propose that the deemed score be reduced on a pro-rata basis, based on the percentage of the property treated using the formula

\[ A \times B = \text{lifetime score} \]

Where:

- ‘\( A \)’ is the saving for the measure taking into account the relevant lifetime, in-use factor (if relevant), weighted average factor and HHCRE multiplier (if relevant)
- ‘\( B \)’ is the percentage of the property that has been treated

Practical information and examples

7.5. For a cavity wall insulation measure in a mid-terraced house, both of the two exterior-facing walls should be insulated in order to receive the full deemed score. If only one of these walls is a cavity wall and the other is a solid brick wall, for example, only 50% of the property can be treated with cavity wall insulation. In this case, only 50% of the deemed score should be notified.

7.6. If deemed scores are implemented, we propose to capture percentage of property treated as part of a measure notification. This is so that the score claimed for a measure can be verified taking this information into account.

Questions

**Q11.** Do you agree with the proposal to use ‘percentage of property treated’ to identify whether 100% of a score should be claimed? If not, please explain your reasoning.
8. New scores

8.1. The deemed scores which we have developed are representative of the existing housing stock and measures currently installed under ECO2 up to May 2016. However, we recognise that in future new measure types may be developed or new scenarios may occur. For example, a new product type may be launched with significantly higher performance than those currently available.

8.2. In such situations, where an appropriate existing deemed score is not available we propose the process set out below be used to allow savings to be calculated and claimed under the scheme. We see three distinct circumstances where a new set of scores may be requested or a methodology for determining savings may be proposed:

- Improved performance of existing measure types (or sub categories of measures) which produce quantifiably higher savings than the existing deemed score
- New measure types for which an existing deemed score is not available
- Properties which are not currently catered for by the deemed scores

8.3. Ensuring that our requirements are clear to all parties involved will help to avoid wasted cost and resource and give clarity regarding when we will, and will not, consider approval of new scores. We set out our proposed process below.

**Process**

8.4. The flow chart in the Appendix details the process that we propose for determining new scores for measures falling within the categories in 8.2. A supplier will be required to provide the following information as part of an application for a new score:

- Details of the measure type being applied for
- Projected scale of delivery
- Test results from a UKAS (or equivalent) accredited lab\(^\text{10}\) demonstrating:
  - (for measures which improve upon existing technologies) greater savings than those in the current deemed scores
  - (for completely new measure types) cost or carbon savings can be achieved consistently through the installation of the measure
- If the measure is not able to be scored in SAP, proposals for how it could be scored with regard to SAP (ie, taking into account the characteristics of the premises which are considered in SAP)
- Considerations for standards of installation and installer competency, especially where the measure type is not included in the Publicly Available Specification 2030 (PAS 2030)\(^\text{11}\)
- Proposal for an appropriate lifetime, with evidence

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\(^\text{10}\) This requirement does not apply for measures for which SAP already contains a methodology, including instances where new technologies are added to SAP Appendix Q
\(^\text{11}\) Or any subsequent versions referred to under ECO
8.5. To align with the existing deemed scores, any new scores must have regard to SAP or equivalent. When considering lab testing it is therefore important that the same assumptions are used (e.g., assumptions on space heating), unless there is clear rationale for alternatives.

8.6. Where lab testing is required we would encourage suppliers to engage with us at an early stage to ensure that the testing methodology meets our requirements. This will ensure that the results can be taken into account and, where appropriate, that they can be used to develop new scores.

8.7. Where we are assessing applications for improvements to existing measure types, a key assessment condition is that the improvement is significantly better than achieved in existing deemed scores. We will determine what is ‘significant’ on a case-by-case basis. This reflects one of our objectives to capture variables which account for the most significant differences in savings.

8.8. There are several potential outcomes to an application, which are detailed in a flow chart in the Appendix.

Scope

8.9. Our process for developing new scores is intended to allow for cases where there has been innovation in the energy efficiency market, so that measures which can achieve quantifiable savings can be accounted for in ECO.

8.10. In developing these scores, we are mindful that there are a number of multiplication factors set in legislation (see section 6.1 of this document) which correct the savings to take into account factors such as performance in use, fuel type and carbon emissions. Any interaction between these multiplication factors and an ECO measure is determined by the legislation and is out of scope for our work to develop new scores.

8.11. When developing new scores, we would be unable to take into account the difference between in-situ performance compared with laboratory test results.

8.12. We would not consider cases where the property type to be treated is one of our standard archetypes but where the thermal performance before installation differs from our standard assumptions. (Note that, as per section 3 of this document, our assumptions have been developed based on extensive survey data covering the wider housing stock).

8.13. Scores relate only to the savings achieved by the measure; we would not take into account innovative measure delivery in our development of new deemed scores.

8.14. Following approval, new scores will be published and available for all suppliers to use. We will not facilitate any agreement for exclusivity between members of the supply chain.
8.15. A supplier may install measures that require a new score 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 new score.

Questions

**Q12.** Do you agree with our proposed approach for applying for a new score from April 2017? If not please explain your reasoning, which specific parts of the process you do not agree with and inform us of your preferred approach.

**Q13.** Do you agree that we should determine whether or not to accept an application, and specifically what is a ‘significant’ improvement in score, on a case-by-case basis? If not, please provide reasoning and an alternate approach.
9. Score monitoring

9.1. If deemed scores are implemented, score monitoring would remain important in providing assurance that savings claimed under the scheme are accurate. However, as the inputs required would be less ambiguous and easy to verify, the score monitoring process would become simpler. Our view is that it would not be necessary for a qualified Domestic Energy Assessor (DEA) to verify the inputs for a deemed score. Rather, we consider that a series of checks to verify the key measure and property characteristics determining the score could be verified during standard technical monitoring visits.

9.2. We therefore propose that the technical monitoring and score monitoring processes be aligned in future, with no separate requirements for score monitoring agents. This should facilitate a simpler approach to monitoring where both score monitoring and technical monitoring may be conducted by the same agent and during the same visit.

9.3. We will develop the specific score monitoring questions in consultation with industry at a later date.

Questions

Q14. Do you agree that a DEA is not required to check inputs used when identifying a deemed score for a measure? If not, please clarify why you do not agree and provide an alternative approach with your reasoning.
10. Process of notification

10.1. For each measure that a supplier notifies under ECO2, it must provide a number of data fields. Some of these data fields relate to the carbon or cost score being claimed for a measure however we do not currently require suppliers to provide us with all inputs used in a savings calculation at the point of notification.

10.2. Under an approach using deemed scores, very few inputs are used to select the most appropriate score. We therefore propose that all deemed score inputs are provided to us as part of the notification of a measure. We intend to reconfigure the input options for the key fields relevant to deemed scores in the notification template (property type, pre- and post-installation fuel type, measure type) to allow our automated checks at the notification stage to verify that the correct deemed score has been notified. It may be necessary to add additional fields to the template but we recognise the importance of limiting the number of data fields.

10.3. We recognise that such a change will require amendments to existing IT systems. We will work to minimise the impact of any IT changes. When publishing our response to this consultation, we will inform suppliers of any planned changes to the notification template so that there is time for amendments to relevant IT systems.
Appendix - Proposed process for new scores

1. Obligated energy supplier seeks new score
   - Is the subject of application an improvement on the existing deemed score?
     - Yes: Use existing deemed score
     - No: Proceed to next step
   - Is the measure type (e.g., cavity wall insulation) already included in the deemed scores?
     - Yes: End
     - No: Proceed to next step

2. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 1)
   - Ofgem reviews lab test plan
     - Ofgem satisfied with lab test plan
       - Yes: Supplier commissions lab test
         - Yes: Ofgem develops and publishes new score
         - No: End
       - No: End
     - No: End

3. Supplier submits application (see requirements for application scenario 1)
   - Assess application
     - Are we satisfied with application?
       - Yes: Sufficient projected delivery
         - Yes: End
         - No: Sufficient projected delivery
       - No: End

4. Supplier calculates measure score using SAP
   - Is the measure type already included in SAP?
     - Yes: End
     - No: Proceed to next step

5. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 2)
   - Ofgem reviews lab test plan
     - Ofgem satisfied with lab test plan
       - Yes: Supplier commissions lab test
         - Yes: Ofgem develops and publishes new score
         - No: End
       - No: End

6. Supplier submits application (see requirements for application scenario 2)
   - Assess application
     - Are we satisfied with application?
       - Yes: Sufficient projected delivery
         - Yes: End
         - No: Sufficient projected delivery
       - No: End

7. Supplier calculates measure score using SAP
   - Is the measure type already included in SAP?
     - Yes: End
     - No: Proceed to next step

8. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 3)
   - Ofgem reviews lab test plan
     - Ofgem satisfied with lab test plan
       - Yes: Supplier commissions lab test
         - Yes: Ofgem develops and publishes new score
         - No: End
       - No: End

9. Supplier submits application (see requirements for application scenario 3)
   - Assess application
     - Are we satisfied with application?
       - Yes: Sufficient projected delivery
         - Yes: End
         - No: Sufficient projected delivery
       - No: End

10. Supplier calculates measure score using SAP
    - Is the measure type already included in SAP?
      - Yes: End
      - No: Proceed to next step

11. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 4)
    - Ofgem reviews lab test plan
      - Ofgem satisfied with lab test plan
        - Yes: Supplier commissions lab test
          - Yes: Ofgem develops and publishes new score
          - No: End
        - No: End

12. Supplier submits application (see requirements for application scenario 4)
    - Assess application
      - Are we satisfied with application?
        - Yes: Sufficient projected delivery
          - Yes: End
          - No: Sufficient projected delivery
        - No: End

13. Supplier calculates measure score using SAP
    - Is the measure type already included in SAP?
      - Yes: End
      - No: Proceed to next step

14. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 5)
    - Ofgem reviews lab test plan
      - Ofgem satisfied with lab test plan
        - Yes: Supplier commissions lab test
          - Yes: Ofgem develops and publishes new score
          - No: End
        - No: End

15. Supplier submits application (see requirements for application scenario 5)
    - Assess application
      - Are we satisfied with application?
        - Yes: Sufficient projected delivery
          - Yes: End
          - No: Sufficient projected delivery
        - No: End

16. Supplier calculates measure score using SAP
    - Is the measure type already included in SAP?
      - Yes: End
      - No: Proceed to next step

17. Supplier prepares and submits lab test plan to Ofgem (see requirements for testing scenario 6)
    - Ofgem reviews lab test plan
      - Ofgem satisfied with lab test plan
        - Yes: Supplier commissions lab test
          - Yes: Ofgem develops and publishes new score
          - No: End
        - No: End

18. Supplier submits application (see requirements for application scenario 6)
    - Assess application
      - Are we satisfied with application?
        - Yes: Sufficient projected delivery
          - Yes: End
          - No: Sufficient projected delivery
        - No: End

19. Supplier calculates measure score using SAP
    - Is the measure type already included in SAP?
      - Yes: End
      - No: Proceed to next step