

# Energy Company Obligation (ECO) Deemed Scores Consultation Questions



Making a positive difference  
for energy consumers

## **Background**

The questions below relate to the ECO2 consultation on deemed scores which can be found on our website :

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

## **Notes For Completion**

Please complete all relevant sections of the document by selecting an answer for the question and then providing reasons/evidence for your response in the box provided. The questionnaire should be completed in typeface and returned via email to [eco.consultation@ofgem.gov.uk](mailto:eco.consultation@ofgem.gov.uk) by **close of business on 8 July 2016**.

## **1. Respondent Details**

Organisation Name:	Resourcematics Limited
Completed By:	Zankhna Shah
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## 2. Methodology

**Q1.** Do you agree with our selection of the key variables to use as the main inputs for calculating the deemed scores?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☐ Disagree
- ☒ Strongly Disagree
- ☐ Don't Know

If not, please clarify which aspect you do not agree with and suggest an alternative, with reasoning.

Para 2.5 states that including property age and location have limited role in increasing accuracy of score. This statement invalidates the basic principles of SAP, impact of building regulations, improvements achieved over the years in building materials performance, and the widely used concept of degree days in energy management. Despite this statement, the solid wall insulation scores are still using age of property as an important variable.

The definitions of property size and primary heating system used in this document leave enough scope for misinterpretation. Primary heating system is a term used in SAP to define the heating system(s) providing heat and hot water to entire or various parts of the property. The SAP definition of primary heating system requires the assessor to consider various aspects of heating arrangements, especially in case of properties with more than one heating system or partially heated properties. Practically, determining the primary heating system of a property will require training and knowledge of RdSAP conventions.

Some important questions about determining property size (explained in answer 2 below) are not fully addressed in the consultation document.

## 3. Property Archetypes

**Q2.** Do you agree with the method used in developing typical property archetypes in order to remove the need for measuring property dimensions?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☐ Disagree
- ☒ Strongly Disagree
- ☐ Don't Know

If not, please clarify which aspect you do not agree with and suggest an alternative, with reasoning.

If the objective of introducing deemed score is to simplify the scoring calculations and minimize avenues for fraud, the methodology for identifying number of bedrooms is not going to make any of that achievable. Any room can be classified as a bedroom using points b and c in para 3.8 of the consultation document. Under point c (it **can** accommodate a standard sized single bed) a utility room with some space to accommodate a bed will become a habitable room. under SAP and therefore, will also increase the score of an ECO measure.

There is also ambiguity around properties with more than one living and dining rooms, conservatories and sun rooms.

The consultation does not explain the reason behind deviating from the definition of 'habitable rooms' under SAP. SAP includes living room, dining room and kitchen with a four chair dining table in the count of habitable rooms. This definition is likely to reflect the property size more accurately and will also minimise ambiguity.

#### 4. Primary Heating Sources

**Q3.** Do you agree with the approach to accounting for all primary heating sources present in the housing stock?

☐ Strongly Agree

☐ Agree

☐ Neither Agree Nor Disagree

☐ Disagree

☒ Strongly Disagree

☐ Don't Know

If not, please explain your reasoning and evidence your preferred approach.

There are two major flaws in taking into account only the average heating system efficiency when ECO savings are calculated in terms of carbon emission reduction or cost savings. One, the emission factor of each fuel type is a more reliable and static figure than the heating system efficiency, which changes from model to model and influenced by several other factors such as age of the system, usage pattern and regular maintenance. To give an example of the inconceivability of this idea, the proposed method is treating coal, smokeless fuel and wood logs at the same level. What is more surprising is biomass boiler installation is recognized as a separate measure, but any other measure installed in a property heating on biomass will get the same score as coal or smokeless. Second, several biomass boilers available in the market run at a higher efficiency level than the assumed 60%. For example, models like Trianco Greenflame or Angus Orlingo 500 have efficiency comparable to highly efficient gas boilers.

Primary heating system will be determined based on existing RdSAP conventions. This increases the risk of error if the person determining primary heating system is not a DEA.

**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?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☐ Disagree
- ☒ Strongly Disagree
- ☐ Don't Know

If not, please clarify which additional heating systems you believe need to be accounted for.

The deemed scores do not discuss the approach for properties with more than one heating systems. For example, SAP allows to document up to two primary heating systems and a secondary heating system. For the purpose of ECO, what method will be used to identify the primary heating system when a property with 50% area heated by a gas boiler and remaining 50% heated by coal based open fires. What would happen in a scenario where a boiler is heating only the living room, dining and kitchen area and none of the bedrooms?

If a heating system must be delivering heat to the entire property to be eligible primary heating system, this needs to be clarified in the methodology. However, any such conditionality will be a deviation from the SAP Appendix A rules.

## 5. Measure Types

**Q5.** Do you agree that the deemed scores include all main measure types?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☒ Disagree
- ☐ Strongly Disagree
- ☐ Don't Know

If not, please clarify which additional measure type you expect will be installed.

The decision for continuing with SAP calculations for district heating measures is not well justified in the consultation document. When simplicity is valued more than accuracy, the same principle should be applied to district heating. In fact, district heating scores require SAP assessment, which is more complex to use than RdSAP in existing dwellings. This makes the case for deemed scores even stronger for district heating measures. Moreover, if the existing pre-conditions for district heating measures in CERO are to be continued, using two scoring methods for associated measures may increase complexity.

**Q6.** Do you agree with our proposals for differentiating within measure types?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☐ Disagree
- ☒ Strongly Disagree
- ☐ Don't Know

If not, please clarify where alternative differentiation should be applied.

Deemed scores for solid wall insulation (SWI) measures use additional variables, such as year of construction and thickness of insulation applied or U-value. There is no explanation about how the property age will be determined or how the U-values should be calculated.

The differentiation in scoring method for SWI is contradicting with section 2.5 which states that inclusion of property age and location do not have significant impact on score accuracy.

The objective behind differentiation of SWI scores is not explained.

Where U-value calculations are allowed for differentiation in SWI, the cavity wall insulation (CWI) is based on thermal conductivity! Why? Neither the consultation document nor the BRE's deemed score methodology explain the reason for using thermal conductivity to determine post-install savings. This method is very unusual as it negates the significance of insulation thickness in achieving specific U-value. Note that throughout ECO, there has been industry wide discussions about post 1980s cavity walls being assigned lower U-value based on an incorrect assumption that these walls are insulated. Such issues are overlooked in the proposed methodology. More importantly the latest Ofgem consultation on U-value calculations was focusing entirely on CWI measures. This was because majority of measures submitted with actual U-values are CWI. Unless there is a strong reason to believe that this trend will discontinue, Ofgem should allow the use of actual U-value calculations for CWI measures as well.

The proposed differentiation is unlikely to reduce the cost of scoring calculations by requiring U-value calculations. It also does not ensure simplicity, ease of calculations or transparency.

**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.

The heating system installations should be evaluated based on the emission factors/fuel costs, system efficiency and number of rooms being heated by the system.

Loft insulation is another measure where differentiation will be useful. The deemed score for loft insulation is technically based on the assumption that all properties in this countries have at least 100mm loft insulation present. This is an erroneous assumption. This also means loft top-up from say, 200mm to 270mm will get the same savings as virgin loft insulation. Loft insulation is one of the most cost and time effective measures. The deemed score will dis-incentivize virgin loft insulation and open up a door to fraudulent claims for loft top-ups. Note that the total number of properties with more than 100mm loft insulation is higher than the number of properties with less than 100mm insulation (figure 2 of BRE's ECO deemed score methodology). This increases the possibility of getting higher savings with minimum top-up of loft insulation.

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

It would have been useful to get some indication about the evidence requirements in support of deemed score calculations. This is important as the proposed scoring requires certain criteria to be determined in line with SAP conventions, but the method also proposes that DEAs are not required to make those judgements. If DEAs and input files are not required then it would be useful to know the alternative methods proposed to verify the calculations.

## 6. Scores

**Q9.** Do you agree with the deemed scores produced?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☐ Disagree
- ☒ Strongly Disagree
- ☐ Don't Know

If not, please clarify which particular score(s) that you believe do not accurately reflect the savings for a measure.

- The proposed method may lead to the race to bottom of installation quality. The market prices based on proposed deemed savings may not be sufficient to support the installation costs.
- There is no incentive for installing appropriate thickness of wall or loft insulation under the proposed approach.
- The use of weighted average in CWI scores needs further explanation.
- The use of thermal conductivity for CWI savings calculations should be reconsidered. This may lead to the application of certain so call thermal paints as an alternative to conventional CWI materials, as they do not have to prove their U-value performance or thickness of insulation installed.
- CWI, loft insulation and boiler replacements are the most commonly installed measures under ECO. This was mainly due to their cost effectiveness. Deemed calculations for these measures have been over simplified, which will be achieved by sacrificing their cost effectiveness.
- If simplicity is the prime objective, why not try setting the next obligation in terms of number of properties to be treated/number of fuel poor households to be supported? This will take away the entire burden of scoring calculations and the scheme will still achieve its objective of reducing fuel poverty.

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

- ☒ Strongly Agree
- ☐ Agree

☐ Neither Agree Nor Disagree

☐ Disagree

☐ Strongly Disagree

☐ Don't Know

## 7. Percentage of property treated

**Q11.** Do you agree with the proposal to use 'percentage of property treated' to identify whether 100% of a score should be claimed?

☐ Strongly Agree

☐ Agree

☐ Neither Agree Nor Disagree

☒ Disagree

☐ Strongly Disagree

☐ Don't Know

If not, please explain your reasoning.

The proposed method to identify the percentage of property treated may not work accurately in all situations. Two such measures are boiler installations and roof room insulation.

This method will not work accurately where only one of two or more heating systems are replaced in a property. It will also not work with partially heated properties.

The assumption used for estimating roof room area looks reasonable, but this method still requires the measurement of total roof plan area. There is no clarity about how this would be collected and verified. The total roof area of a three bed house will be smaller than a three bed bungalow. So, there is an incentive to notify the house as a bungalow to get higher savings.

A roof room has two types of walls: stud walls and gable walls. The gable walls will be insulated only as part of wall insulation of the property and not as part of the roof room insulation. This means gable walls may remain uninsulated post roof room insulation. How would this be factored in the final savings from roof room insulation? If it is to be adjusted through percentage of measure installed, how does Ofgem propose to calculate and verify the uninsulated gable walls area?

## 8. New Scores

**Q12.** Do you agree with our proposed approach for applying for a new score from April 2017?

- ☐ Strongly Agree
- ☐ Agree
- ☐ Neither Agree Nor Disagree
- ☒ Disagree
- ☐ Strongly Disagree
- ☐ Don't Know

If not, please explain your reasoning, which specific parts of the process you do not agree with and inform us of your preferred approach.

The proposed set of scores are too simplistic to be any closer to reality. Some of the assumptions (as explained above) requires to be supported with further clarification or to be reconsidered. At this stage, there is no clarity about evidence required to support the calculations.

It is very important to resolve these issues before the method is applied in the next phase.

**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?

- ☐ Strongly Agree
- ☐ Agree
- ☒ Neither Agree Nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Don't Know

We agree with the concept and process recommended, but we do not agree with the onus on the suppliers to prove whether a measure can be scored in SAP. As we understand, the purpose of deemed scores is to move away from SAP, then it should be up to Ofgem to assign an appropriate scoring methodology to a new measure irrespective of whether it could be score in SAP or not.



## 9. Score Monitoring

**Q14.** Do you agree that a DEA is not required to check inputs used when identifying a deemed score for a measure?

- ☐ Strongly Agree
- ☐ Agree
- ☒ Neither Agree Nor Disagree
- ☐ Disagree
- ☐ Strongly Disagree
- ☐ Don't Know

If not, please clarify why you do not agree and provide an alternative approach with your reasoning.

Since a lot of background information to be collected require thorough understanding on RdSAP rules and conventions, it does not make much case for not involving a DEA. However, we also acknowledge that DEAs will hold no responsibility of their decisions under the proposed scoring method, and therefore their involvement may not provide any assurance of accuracy.