

Energy Company Obligation (ECO) Deemed Scores Consultation Questions

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 by **close of business on 8 July 2016**.

1. Respondent Details

Organisation Name:	National Energy Services Ltd
Completed By:	Dyfrig Hughes & Lisa Blake
Contact Details:	Dyfrig.hughes@nesltd.co.uk ; 07973143966

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.

We appreciate that this consultation is about the methodology for deemed scores should these be introduced instead of using EPCs within the next phase of ECO. However, we do identify in our response various deficiencies of deemed scores as compared with EPCs that we believe should be considered seriously. We will address these points more fully in our response to the ECO Help to Heat Consultation.

We do agree that these few variables provide simplicity to the process and reduce costs by not requiring a DEA to visit the property; and can reduce the opportunity for fraudulent activity associated with assessors choosing worst case values to increase savings.

However, this simple approach removes all attempts to locate the most energy inefficient properties by treating the thermal characteristics of all properties the same, and not taking the existing boiler efficiency into account. Will household income then become the only criterion for identifying those households most in need? This could lead to a limited pot of money not being spent on those individuals in most fuel poverty. Has an assessment been made of the relative cost saving from not using a DEA as compared with the loss in cost and carbon emission savings due to this simplified approach?

It really does not seem right that a 1980's cavity house will get the same score for the new boiler as the solid walled pre-1900 property. Or that, for a given income level, they would be deemed to have the same level of fuel poverty. Or that all existing homes are assumed to have the same boiler efficiency before they are improved.

To summarise our comments in the rest of this document, regarding deemed scores (included here to provide some context to our 'Strongly disagree' response to this question):

- We are unconvinced about the choice of variables for defining archetypes
- There is a lack of differentiation in some measures e.g. PV & roof rooms
- There are decisions to be made in data collection that are in many cases not easy for someone without training & experience. In particular (a) for solid wall e.g. Age, Wall construction (b) the definition of whether to select cavity or solid is not easy for mixed wall types (c) % of property treated.
- There are areas where fraud is still possible with the limited deemed score dataset; without the associated QA framework that EPCs provide and which, with the advent of Smart auditing, will further improve.

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.

The aim of the bedroom count is to estimate floor area, a key variable affecting the resulting Eco score. As there are so few variables in the proposed deemed score methodology, the floor area estimates need to be as accurate as possible and less prone to fraud as possible.

Although 'number of bedrooms' is on the surface more immediately understandable, we do not believe that this is a good indicator of floor area; a far better indicator of floor area is the number of habitable rooms, as used in RdSAP. Although not available from EHCS data, the EPC data on the Central Register could be used to create a relationship between number of habitable rooms and floor area.

To illustrate this, we have done an analysis of the EPC data that we hold, and looked at the median floor area for a variety of house types and numbers of habitable rooms. The table below shows a massive variation in floor area for a 3 bedroom property with various numbers of habitable rooms. For example, the variance in the floor area is around 25%, between a 3 bed house with 4 and 6 habitable rooms.

Hab rooms	House detached TFA (m2)	House Semi/end terrace TFA (m2)	House mid/enclosed end terrace TFA (m2)
2	46.4	45.04	43.75
3	66.89	65.72	65.559
4	85.53	77.98	77.1
5	97.83	86	85.7
6	118.99	106.5	103.82
7	140.2	128.645	125.3
8	168.38	150.2	146.62
9	205.16	174.26	165.28

With the proposed approach, an installer will have an incentive to maximize the floor area by maximizing the bedroom count, by including any additional rooms they can. Although some rules are provided for what is allowable to include, this provides more opportunity for claiming a higher value than does the habitable room count approach used in RdSAP and for which there are established conventions.

The rules outlined in 3.8, for defining the number of bedrooms, do not address this issue. For example, with these rules any room that is not a dining/kitchen or lounge could be considered a bedroom e.g. non-separated conservatory, study, play area. If these are included by installers, the floor areas assumed in the deemed score calculation would be hugely inflated, as the inferences are based on the relationship between 'true' number of bedrooms observed in the EHCS data. (We say 'true' because in EHCS surveys neither the householder nor the person collecting the data has any reason to say there are more bedrooms in the home than there are present). Therefore any such action by installers could lead to hugely inflated scores.

As a key variable prone to fraud, how is the definition of number of bedrooms going to be audited?

With an EPC, the site notes provide a standard way of enabling the number of habitable rooms to be checked, as well as the floor area. And the measurement is made by someone relatively independent who is routinely audited. In addition there are established conventions for defining the number of habitable rooms, that have been refined over the many years of RdSAP being used in practice.

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.

DEAs are trained to determine which is the primary and which is the secondary heating. In some cases, it is obvious. But often it is not, especially so in dwellings without central heating. If installers are making this decision then there is potential for fraud, as they will have a stronger incentive than a DEA to choose the option giving the best score.

Are heat pumps (mostly electric) well enough represented by gas central heating? We compared the running costs and carbon emissions from a condensing gas boiler and heat pumps (SAP default and PCDF). We found that the running costs and emissions were considerably higher for heat pumps.

	Heat pump (SAP default ASHP)	ASHP PCDF	Gas boiler post 98 condensing
Running costs (£)	1273	1280	876
CO2 (tonnes)	4.315	4.337	3.774

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.

Electric heat pumps and Gas Heat pumps need to be distinguished

Community Heating

Warm Air Systems – gas and electric

You are asking installers to follow RdSAP Conventions to select the primary heating system, but then reducing the number of heating system options available to choose from. There would therefore need to be Ofgem Conventions available for installers to know which primary heating system to select.

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.

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.

If wall type is not included as a variable in the archetype then perhaps it should be a differentiation within a measure. It really does not seem right that a 1980's cavity house will get the same score for a boiler (and be in the same amount of fuel poverty) as the solid walled pre-1900 property.

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.

Heating measure scores should differentiate between wall types. Our own analysis of submitted scores under ECO2 found a significant difference between scores for cavity wall properties and solid wall properties.

Roof Room size estimates are small and starting U values are low and so insulation of roof rooms will be discouraged; whereas recently in ECO there has been an upsurge in this measure being installed.

There is no incentive to go beyond the minimum Regs requirement for heating controls. There should be an option for time and temperature zone control.

All installed PV is assumed to be 2.5kWp; however in practice available suitable roofspace may not allow 2.5kwp but 1.5 kWp. Installers will be happy to install < 2.5 Kwp as it costs them less for the same score; however they will not overspecify as it will eat into margins. If % of measure is to be used for this measure, how will that be audited? Differentiation of this measure would enable different sized systems to be scored.

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

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.

We believe that the deemed scores produced will be true to the input data. However, as indicated in other answers the methodology is lacking and too simplistic.

We have carried out a comparison of the proposed deemed scores vs RdSAP based scores for 99 dwellings where NES managed the installation of qualifying boilers by installers and where we had the RdSAP xml files available. We compared the ECO2 score to the deemed score for each of these dwellings. Overall deemed scores were:

27% lower than actual submitted scores for qualifying boilers
This increased to 32% for larger properties (> 120 m2)

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.

It is not always easy to estimate the % treated; for example, in a property with 2 extensions and 3 different wall types. When an EPC is carried out, the % is easy to calculate as the detailed information has been collected and only part of the dwelling can be selected for the measure.

Installers will always estimate high.

How will the % be audited?

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.

Even if Ofgem is doing the scoring, there will still be a demand for scoring tools as installers will want to know the likely income before committing to a job.

Ample time should be allowed for software providers to provide scoring tools for installers.

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

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.

The deemed scores, as defined here, have so few data items to collect that it is not cost effective to use a DEA to check these.

The proposed approach is so simplistic though that the money spent on improvements will most likely not go to the most needy homes, and those measures installed will get cost scores that in many cases will not reflect the improvement made and will be the minimum specification to reach the score.

It seems to us that going back to deemed scores that are slightly more accurate is a retrograde step. Deemed scores were probably appropriate in the days of EEC, CERT & CESP, when most properties were uninsulated and energy inefficient. However, now it is increasingly harder to find properties to install cost effective measures in and the EPC, due to the far greater sensitivity of the RdSAP methodology, is a more appropriate tool than a deemed score.

Far better then to retain the EPC rather than move to deemed scores.

As illustrated earlier, there is scope for fraud in whatever approach is taken, including deemed scores. EPCs have the advantage though that the existing audit regime for EPCs can kick in.

There are various areas where an installer will have no training in making decisions e.g. primary heating, is this a roof room (often not obvious), determining property age and other data items for solid wall insulation and cavity walls.

In our view, the best approach to address the above issues is to retain the EPC as the basis for calculating the ECO score.