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ECO2 consultation on requirements for overwriting U-values for cavity wall insulation measures

Consultation

Publication date: 8 February 2016

Response deadline: 7 March 2016 by close play

Contact: Hannah Clapham

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Overview:

This consultation focuses on one area of scheme delivery under ECO2: the evidence required for overwriting a U-value in cavity wall insulation measures.

We welcome your views on these proposals. Please respond to eco.consultation@ofgem.gov.uk by close of play on 7 March 2016.

1. Introduction

The Energy Company Obligation (ECO) is a government scheme which requires larger energy companies to deliver energy efficiency measures to domestic properties in Great Britain. This consultation relates to ECO2, which is the second obligation period under the scheme. It runs from 1 April 2015 to 31 March 2017 and is the successor of ECO1, which ran from 1 January 2013 to 31 March 2015.

Measures installed under ECO are attributed savings which, where possible, must be calculated using SAP or RdSAP[1]. These methodologies enable the calculation of ECO savings using a large number of inputs to account for building performance, which are either measured values or defaults based on assumptions within the methodology. RdSAP uses default values for the U-values[2] of walls based on the wall construction and age of the premises. In certain situations the default U-value may not reflect the premises being assessed and therefore overwriting the U-value may be appropriate (in line with RdSAP conventions). For these situations we want to ensure there is certainty on how the U-values for these measures should be overwritten so that delivery to these properties can continue.

However, we are concerned that wall U-values for cavity wall insulation measures (CWI) are being overwritten to values that we consider to be unreasonably high for the premises in question, and as a result the calculated savings for a measure are artificially inflated. This could lead to fewer households benefitting under ECO.

Through this consultation, we are seeking your views on our proposals for additional requirements in relation to overwritten U-values for CWI measures. We have developed these proposals to make sure there is a consistent way of providing evidence for overwritten U-values for CWI measures under ECO. This will give us and obligated supplier's further assurance that savings are being correctly calculated under ECO.

It is intended that these requirements will only apply to CWI measures installed following the implementation date of this policy (which will be set out in our consultation response).

Separately, we are currently considering whether action would be appropriate in relation to measures that have already been notified. If you wish to speak to us about this please contact us at eco@ofgem.gov.uk.

[1] SAP means the Government's Standard Assessment Procedure for energy rating of dwellings. RdSAP means the Government's Reduced Data Standard Assessment Procedure for energy ratings of dwellings (2012 Edition, version 9.92).

[2] A measure of heat loss through a structural element, such as a wall.

Next Steps

The consultation will be open from 8 February to close of play on 7 March 2016. Responses should be directed to eco.consultation@ofgem.gov.uk or:

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Template for responses

We have provided a template for you to complete your response; this is available on our website. We aim to publish our decision, including a summary of responses in April 2016. Unless marked confidential, all responses will be published on our website.

Contents

1. Overwriting U-values for cavity wall measures

Background to our proposal

1.1. We are concerned that an increasing number of default U-values are being overwritten to unreasonably high values for CWI measures installed under ECO. This finding has been supported by evidence from obligated suppliers and the supply chain.

1.2. RdSAP assigns a default U-value for walls based on the construction type and age band of premises (see Table 1). In certain situations, however, it may be appropriate to overwrite this value.

1.3. RdSAP contains a convention for overwriting default U-values in cases where those default U-values are not appropriate for the specific premises; for example where the actual level of insulation in a cavity wall does not match the level of insulation assumed by RdSAP given the age band of the premises concerned. An overwritten U-value in this case, would allow a more accurate score for the measure.

Table 1: RdSAP default U-values for cavity as built

Age band (England and Wales)	Assumed U-value for a cavity wall 'as built' (W/m²K) (England and Wales	Age band (Scotland)	Assumed U-value for a cavity wall 'as built' (W/ m²K) (Scotland)
A (before 1900)	2.1	A (before 1919)	2.1
B (1900-1929)	1.6	B (1919-1929)	1.6
C (1930-1949)	1.6	C (1930-1949)	1.6
D (1950-1966)	1.6	D (1950-1964)	1.6
E (1967-1975)	1.6	E (1965-1975)	1.6
F (1976-1982)	1.0	F (1976-1983)	1.0
G (1983-1990)	0.6	G (1984-1991)	0.6
H (1991-1995)	0.6	H (1992-1998)	0.45
I (1996-2002)	0.45	I (1999-2002)	0.45
J (2003-2006)	0.35	J (2003-2007)	0.3
K (2007 onwards)	0.3	K (2008 onwards)	0.25

1.4. RdSAP conventions[3] for overwriting U-values require that the U-value calculation is calculated or verified by a suitably qualified person or through relevant building control approval.

1.5. To be confident in the savings we attribute to a supplier's obligation, we need assurance that the overwritten U-values are correct for a particular premises and its particular wall construction.

1.6. Based on engagement with stakeholders to date, we have identified the need to provide extra guidance (in addition to the current RdSAP conventions) in cases where U-values of ECO2 cavity wall measures are overwritten by a suitably qualified person. This consultation outlines proposals for an upper limit for overwritten U-values, the evidencing of overwritten U-values and a method to verify that the inputs used in the U-value calculation accurately reflect the premises in question.

[3] Please see Appendix 2 for the RdSAP convention on overwriting U-values.

2. Proposals for consultation

2.1. Below we detail our proposal for providing assurance around CWI measures. Our proposals consist of three parts:

a. introducing an upper limit for overwritten U-values,

b. stipulating the evidence that we expect to be in place when a U-value is overwritten and how we expect inputs to be collected, and

c. a regime to monitor these measures; we have suggested three possible approaches for implementing monitoring.

2.2. As stated in the introduction it is intended that any new requirements will only apply to CWI measures installed following the implementation date of this policy (which will be set out in our consultation response).

Upper limit for overwritten U-values for CWI measures

2.3. We are of the view that it is unreasonable for the U-value of a cavity wall to exceed 1.6 W/m²K in premises in the age bands B-K (see table 1). We are therefore proposing to introduce a maximum U-value for CWI measures installed at premises in these age bands of 1.6 W/m²K.

1. U-value Limit:

1.1 Do you agree that it is unreasonable for the U-value of a cavity wall measure to exceed 1.6 W/m²K in premises in the age bands B-K? Please provide details and supporting evidence for your response.

1.2 Do you agree that we should implement a limit of 1.6 W/m²K for overwritten U-values for cavity wall measures in premises in age bands B-K? Please provide details and supporting evidence for your response.

Evidence requirements

2.4. Where default U-values are overwritten for CWI measures we expect that RdSAP conventions are followed.[4] However, when determining each element of the wall (including the level of insulation already present) we propose that an intrusive inspection is carried out, using a borescope for example, which

[4] As defined in the RdSAP convention, found in Appendix 2 of this document.

will be used to determine the inputs for the U-value calculation, whether calculated or verified by a suitably qualified person.

2.5. Below we have detailed the documentary evidence that we propose should be available when a default U-value is overwritten for a CWI measure:

- a U-value calculation that is either calculated or verified by a suitably qualified person
- evidence that the person is suitably qualified through one of the methods outlined in the RdSAP convention
- evidence that supports each of the inputs used for the new U-value calculation, and
- site notes including justification for the default U-value being overwritten and justification for any assumptions made when determining each element of the wall construction.

2.6. We expect this evidence to be made available on request.

2.7. Alongside the evidence requirements above we are also considering whether an independent person should collect the inputs required for a U-value calculation through a site visit prior to CWI being installed. The independent person could be the same individual as the suitably qualified person (as defined in RdSAP) who is calculating or verifying the U-value. We would describe an independent person as somebody who is independent from:

a. the installer

b. the supplier

c. any party involved in the installation of the measure

d. any party involved in the assessment of the measure, and

e. any party that has control or ownership of the premises.

2. Evidence Requirements

2.1 Do you agree that relevant inputs should be collected for the U-value calculation via an intrusive inspection, using a borescope for example? Please provide reasons for your response.

2.2 What types of evidence do you suggest would support the inputs used for a new U-value calculation? Please provide reasons for your response.

2.3 Do you agree that the types of evidence listed in paragraph 2.5 are practical to provide? Please provide reasons for your response.

2.4 Do you agree that the evidence listed in paragraph 2.5 is sufficient to support an overwritten U-value? Please provide reasons for your response.

2.5 Do you agree that the inputs for a U-value calculation should be collected by an independent person to increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

2.6 Do you agree that an independent person collecting the inputs for a U-value calculation would be practical to implement taking into consideration cost, time and customer journey implications? Please provide reasons for your response.

Checks to ensure that U-values are being accurately overwritten for CWI measures

2.8. Below we propose three monitoring options, one of which could be adopted to provide assurance that overwriting of U-values for CWI measures are completed accurately.

Option 1: Additional monitoring questions (preferred approach)

2.9. To verify that the inputs used in the U-value calculation accurately reflect the premises in question, we propose to include additional questions for score monitoring.[5] The U-value calculation should be made available to the score monitoring agent to assist them to accurately answer the proposed questions below. These additional questions will relate to CWI measures only.

- Is the age band stated in the xml files the same or within one age band of the premises?
- Is there evidence of any pre-existing wall insulation?
- Does the wall thickness shown in the evidence match the property to a +/- 10% tolerance?
- Does the density of the inner block match that used in the U-value calculation?
- Do any of the inputs in the U-value calculation differ from those identified on site?

2.10. As score monitoring is an established process under ECO we believe that this approach would be a cost/resource-efficient solution to the uncertainty over

[5] For further detail about our technical and score monitoring process please follow this link: https://www.ofgem.gov.uk/publications-and-updates/energy-company-obligation-monitoring

the accuracy of overwritten U-values. It would add minimal burden to the supply chain, while providing additional assurance for carbon or cost saving calculations for ECO CWI measures.

3. Option 1 – Additional Monitoring Questions:

3.1 Do you agree that option 1 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

3.2 Do you agree that option 1 would be practical to implement taking into consideration cost and time implications? Please provide reasons for your response.

3.3 Do you agree that a score monitoring agent is suitably qualified to answer the proposed questions relating to the U-value inputs? Please provide reasons for your response.

3.4 Do you agree that the proposed additional score monitoring questions are appropriate for identifying where overwritten U-values are incorrect? Please provide reasons for your response.

3.5 Are there any additional questions that you think would help to identify inaccuracies in overwritten U-value calculations? Please provide reasons for your response.

3.6 Can you please estimate how long you think it will take for these new questions to be implemented into your systems? Please provide reasons for your response.

3.7 Do you foresee any issues if the questions were implemented within a monitoring quarter? Please provide reasons for your response.

Option 2: New, ongoing monitoring regime

2.11. Option 2 aims to verify the accuracy of overwritten U-values for CWI measures by reviewing the evidence listed in paragraph 2.5. This would apply to a 5% random sample of each supplier's CWI measures notified with overwritten U-values. Obligated suppliers would have to provide this evidence to us on a monthly basis.

2.12. This option would require suppliers to randomly select 5% of their notified CWI measures with overwritten U-values. Evidence relating to the sample, along with a list of all notified CWI measures with overwritten U-values, should be provided to us no later than the end of each month following the month of notification. For example, for measures notified in April we would expect to receive the sample from suppliers by 31 May.

2.13. We will then be in a position to review the evidence provided and take action if we have any concerns about the accuracy of an overwritten U-value for a measure or group of measures. Where overwritten U-values are found to be incorrect the measure will have to be rescored using the correct inputs so that they can be attributed savings under ECO.

2.14. Although this approach would provide a representative sample of the relevant measures we are concerned that this would be burdensome for obligated suppliers. It would also duplicate aspects (and costs) of the established score monitoring process.

4. Option 2 – Ongoing Monitoring:

4.1 Do you agree that option 2 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

4.2 Do you agree that option 2 would be practical to implement, taking into consideration cost and time implications? Please provide reasons for your response.

4.3 If we were to implement a new monitoring regime in order to verify the accuracy of overwritten U-values for CWI measures, do you agree with the sample size and reporting timeframes outlined in paragraph 2.12? Please provide reasons for your response.

Option 3 – Audit regime.

2.15. Option 3 aims to ensure overwritten U-values for CWI measures are accurate through one off or ad hoc audits. Audits would consist of an independent review of the supporting evidence listed in paragraph 2.5 for a statistically significant sample of overwritten U-values for CWI measures. Audits could be completed at any time up to the final determination.

2.16. Although this approach may offer a cost effective solution, we are unsure whether it would provide sufficient assurance, to both suppliers and the supply chain, in a timely manner. A lack of certainty around CWI measures with overwritten U-values could have negative effects on the supply chain.

5. Option 3 – Audit Regime:

5.1 Do you agree that option 3 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

5.2 Do you agree that option 3 would be practical to implement, taking into consideration cost and time implications? Please provide reasons for your response.

6. Additional Questions:

6.1 Do you have concerns with U-values being overwritten for other ECO measure types? Please provide details and supporting evidence for your response.

6.2 If you do not agree with any of the proposals outlined, could you please suggest an alternative approach which you consider would provide assurance that U-values are being accurately overwritten for CWI measures? Please provide details and supporting evidence for your response.

6.3 Do you agree that the proposals outlined above will enable U-values to continue to be overwritten for CWI measures where this is appropriate? Please provide reasons for your response.

3. Appendices

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Appendix 1 - Consultation response and questions

3.1. We want to hear from anyone interested in the issues and proposed approaches set out in this consultation. We have chosen a 4 week consultation period in order to provide clarity to obligated suppliers and the supply chain on this issue as soon as possible.

3.2. We ask for your feedback to each of the questions that have been asked throughout this consultation document; you will also find these listed below. We would appreciate it if you could record your answers to each of the questions in the template published on our website.

3.3. Unless marked confidential, we will publish all responses by placing them in our library and on our website www.ofgem.gov.uk. You can ask for us to keep your response confidential and we will respect this unless we are required to disclose this information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

3.4. If you want your response to remain confidential, clearly mark the document/s to that effect and include the reasons for confidentiality. You should put any confidential material in the appendices to your response.

3.5. Next steps: After we've considered the responses to this consultation, we will publish a response document and guidance note outlining our decision on how to approach this issue moving forward. If you have any questions on this document in the first instance direct them to Eco.consultation@ofgem.gov.uk or

Hannah Clapham
Energy Efficiency and Social Programmes,
Ofgem, 9 Millbank, London, SW1P 3GE

Consultation Questions

1. U-value Limit:

1.1 Do you agree that it is unreasonable for the U-value of a cavity wall measure to exceed 1.6 W/m²K in premises in the age bands B-K? Please provide details and supporting evidence for your response.

1.2 Do you agree that we should implement a limit of 1.6 W/m²K for overwritten U-values for cavity wall measures in premises in age bands B-K? Please provide details and supporting evidence for your response.

2. Evidence Requirements

2.1 Do you agree that relevant inputs should be collected for the U-value calculation via an intrusive inspection, using a borescope for example? Please provide reasons for your response.

2.2 What types of evidence do you suggest would support the inputs used for a new U-value calculation? Please provide reasons for your response.

2.3 Do you agree that the types of evidence listed in paragraph 2.5 are practical to provide? Please provide reasons for your response.

2.4 Do you agree that the evidence listed in paragraph 2.5 is sufficient to support an overwritten U-value? Please provide reasons for your response.

2.5 Do you agree that the inputs for a U-value calculation should be collected by an independent person to increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

2.6 Do you agree that an independent person collecting the inputs for a U-value calculation would be practical to implement taking into consideration cost, time and customer journey implications? Please provide reasons for your response.

3. Option 1 – Additional Monitoring Questions:

3.1 Do you agree that option 1 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

3.2 Do you agree that option 1 would be practical to implement taking into consideration cost and time implications? Please provide reasons for your response.

3.3 Do you agree that a score monitoring agent is suitably qualified to answer the proposed questions relating to the U-value inputs? Please provide reasons for your response.

3.4 Do you agree that the proposed additional score monitoring questions are appropriate for identifying where overwritten U-values are incorrect? Please provide reasons for your response.

3.5 Are there any additional questions that you think would help to identify inaccuracies in overwritten U-value calculations? Please provide reasons for your response.

3.6 Can you please estimate how long you think it will take for these new questions to be implemented into your systems? Please provide reasons for your response.

3.7 Do you foresee any issues if the questions were implemented within a monitoring quarter? Please provide reasons for your response.

4. Option 2 – Ongoing Monitoring

4.1 Do you agree that option 2 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

4.2 Do you agree that option 2 would be practical to implement, taking into consideration cost and time implications? Please provide reasons for your response.

4.3 If we were to implement a new monitoring regime in order to verify the accuracy of overwritten U-values for CWI measures, do you agree with the sample size and reporting timeframes outlined in paragraph 2.12? Please provide reasons for your response.

5. Option 3 – Audit Regime:

5.1 Do you agree that option 3 would increase confidence in the accuracy of overwritten U-values for CWI measures? Please provide reasons for your response.

5.2 Do you agree that option 3 would be practical to implement, taking into consideration cost and time implications? Please provide reasons for your response.

6. Additional Questions:

6.1 Do you have concerns with U-values being overwritten for other ECO measure types? Please provide details and supporting evidence for your response.

6.2 If you do not agree with any of proposals outlined, could you please suggest an alternative approach which you consider would provide assurance that U-values are being accurately overwritten for CWI measures? Please provide details and supporting evidence for your response.

6.3 Do you agree that the proposals outlined above will enable U-values to continue to be overwritten for CWI measures where this is appropriate? Please provide reasons for your response.

Appendix 2 – RdSAP convention on U-values[6]

U-value entry (walls, roofs, floors)

The U-value is that of the whole element, including any added insulation. Documentary evidence applicable to the property being assessed (see convention 9.02) must be provided and recorded if overwriting any default U-value. This evidence shall be either:

- relevant building control approval, which both correctly defines the construction in question and states the calculated U-value; or

- a U-value calculation produced or verified by a suitably qualified person. Evidence of suitable qualification is through membership of a recognised U-value calculation competency scheme (BBA/TIMSA), OCDEA membership[7] or any other scheme formally agreed between Accreditation Schemes/Approved Organisations and Government.

U-values for sheltered walls should not include a shelter factor, since it is added by RdSAP.

The assumed insulation thickness or U-values from tables in the current edition of SAP (e.g. Table 6e for windows) or RdSAP (e.g. Table S10 for roofs and Table S15A for doors) can also be treated as documentary evidence provided that the evidence on which it is based is demonstrably robust (e.g. in relation to the age band for Table S10 or S15A).

Where it is known that only part of an element has been insulated use the alternative wall if possible for the insulated part, or use extensions.

[6] This convention can be found here: https://www.bre.co.uk/filelibrary/SAP/2012/RdSAP-Conventions.pdf

[7] In Scotland membership of an Approved Organisation scheme for EPCs for new domestic buildings.