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Energy Company Obligation (ECO2t) Electric Storage Heater (ESH) Assessment Checklist

This ESH Assessment Checklist ('the checklist') is designed to assess whether an ESH should be repaired or replaced as a qualifying ESH (QESH).[1] The checklist applies to measures installed on or after 1 April 2017, ('ECO2t measures").

This checklist does not provide any detailed information on the requirements of the ECO2 Order[2]. Further information can be found in our guidance document, *Energy Company Obligation (ECO2t) Guidance: Delivery*, available on our website. Please refer to section titled 'Using the ESH checklist' of the Electric Storage Heaters (ESHs) Information Pack Appendix.

Our industry and installers FAQ section on ESH provides further measure specific information.

Completing the checklist

The information provided in this checklist forms the basis of our determination of whether or not the ESH is a QESH and whether it should be repaired or replaced. This is established by assessing if the ESH is 'broken down', the responsiveness of the ESH, and whether or not it can be 'economically repaired'.

In completing the checklist you should ensure that you (the relevant operative):

- are appropriately qualified to work on ESHs
- complete all relevant sections
- sign and date the checklist
- record the steps (tests, measurements etc) you have taken in determining that the ESH is qualifying
- record your conclusion as to whether the ESH should be repaired or replaced, and
- sign the document and provide details of your accreditation and, where applicable, your company's accreditation.

Suppliers must be able to provide a copy of a completed checklist to us on request.

Operative competency

The assessment and the repair/replacement of a QESH must be carried out by a person with appropriate skill and experience (the 'operative'). Appropriate skill and experience can be demonstrated by the operative meeting the competency requirements for domestic electrical installation work listed in the measure specific requirements for electric storage heaters in Annex D1 of the relevant PAS 2030.[3]

Dealing with multiple ESHs at one premises

This checklist may be used to record the assessment of more than one ESH in a premises.

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[1] Article 2(1) The Electricity and Gas (Energy Company Obligation) Order 2014, ('ECO2 Order') as amended by the Electricity and Gas (Energy Company Obligation) (Amendment) Order 2017.

[2] Any further references to the ECO2 Order are references to the ECO2 Order as amended by the Electricity and Gas (Energy Company Obligation) (Amendment) Order 2017.

[3] All ECO2t measures must be installed by a PAS certified installer. Measures installed from 1 June 2017 must be installed in accordance with the Publicly Available Specification 2030:2017 Edition 1. ECO2t measures installed before this may be installed in accordance with PAS 2030: 2014 Edition 1 or PAS 2030: 2017 Edition 1, (articles 2(1), 16(3), 16(4), and16(5) of the ECO2 Order).

Where an ESH in a premises is assessed and meets the definition of a QESH for repair or replacement, other ESHs located in that premises that have a responsiveness of less than or equal to 0.2 when assessed against SAP 2012 can also be replaced as QESHs. Details of these ESHs should be included in section H of this checklist.

Determining the age of an ESH

The age of the ESH will be required to assess whether or not a QESH can be economically repaired if the operative is using the Economic Repair Cost Comparison Table.

There may be a number of ways to demonstrate the age of the ESH and we expect operatives to use their knowledge and experience to determine the correct method. The method used should be recorded in this checklist.

We understand from industry that the majority of ESHs are installed with a label on the outside of the appliance which shows the serial number, model type and indicates the year of manufacture. The following example has been provided by industry:

> Before 1997, the year of manufacture was shown as the last two digits of the year (for eg, 90 for 1990) on the label. Since 1997 the year is signified by a letter starting at A = 1997, B = 1998, C = 1999, etc.

Accuracy of the checklist

It is important to note that your decision to repair or replace an ESH on the basis that you consider it to be broken down, and in the case of an ESH replacement cannot be economically repaired, does not necessarily mean that we will reach the same conclusion, particularly if we consider that an assessment has been incorrectly carried out. For this reason, suppliers should ensure that the checklist is completed accurately by the relevant operative(s). We will include inspections of ESHs within our monitoring and auditing activities.

Format of the checklist

Suppliers may adapt the format of the checklist to match their own systems, as long as the content is not changed. Suppliers should ensure they use the correct version of the checklist. Suppliers should submit adapted checklists to us before use for confirmation that the content is acceptable.

Energy Company Obligation (ECO2t) ESH Assessment Checklist

Sections that must be completed		
Sections in the checklist	**All ESH measures including repairs**	**ESH replacements only**
A	✓	✓
B	✓	✓
C	✓	✓
D	✓	✓
E	✓ (if responsiveness > 0.2)	✓
F	✓	✓
G	✓	✓
H		✓
I		✓
J	✓	✓
K	✓	✓
L	✓	✓

A.	**Information Required: Complete for all ESH measures**	
1	Date of ESH assessment (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _
2	Address: (Building number/name, Street name, Town, City, County)	
3	Postcode	
4	Total number of ESHs in the premises	
5	Electricity tariff – used to identify the responsiveness	Off peak ☐ 24-hour ☐

B.	**Details of ESHs being assessed: Complete for all ESH measures (add extra columns/sheets if more than 2 ESHs are being assessed)**		
		ESH 1	**ESH 2**
1	Location of ESH (where is the ESH located in the dwelling?)		
2	Type of ESH (e.g. old large volume storage heater, fan storage heater etc)		
3	ESH Responsiveness[4]		
4	Brand and Model		
5	ESH serial number (or any other unique identification detail of the ESH)		

[4] See Table 1 of this document (page 8) or refer to SAP 2012 Table 4a at: http://www.bre.co.uk/sap2012/.

C.	ESH Assessment Part 1: Complete for all ESH measures		
An ESH must meet certain criteria to be considered a qualifying ESH for repair or replacement. The first step in assessing whether an ESH is a qualifying ESH is to determine whether it is 'broken down'.			
		ESH 1	**ESH 2**
1	Is the ESH broken down, i.e. when connected to an electric supply, it does not store heat or does not deliver any heat?	Yes ☐ go to C2 No ☐ ESH does not meet the criteria for a qualifying ESH	Yes ☐ go to C2 No ☐ ESH does not meet the criteria for a qualifying ESH
2	What steps did you take to determine that the ESH is broken down?		

D.	ESH Assessment Part 2: Evidencing why the qualifying ESH is broken down			
Once you have identified if the ESH is 'broken down', you must identify all the faults that have caused the ESH to be broken down.				
	ESH Fault List - tick if fault is applicable (Note: this list is not exhaustive, please detail any additional faults in 'Other')	ESH 1	ESH 2	Provide details of how you identified the faults (This information will be used during audit to determine whether the ESH has been correctly assessed. Therefore, please provide as much information as possible.)
	Example: Tick if fault applicable	✓		*Write a detailed explanation*
1	Damaged thermal fuse or input cut out			
2	Failure of storage element(s)			
3	Faulty charge control			
4	Faulty output control			
5	Faulty electronic controller			
6	Faulty or broken fan			
7	Other (Please provide detailed description)			

Once you have determined that the ESH is 'broken down', you must then assess whether the ESH should be repaired or replaced.

ESHs that are broken down and have a responsiveness of less than or equal to 0.2 are not required to be repaired and therefore, can be replaced.

ESHs that are broken down and have a responsiveness of more than 0.2 must be assessed to determine whether or not they can be 'economically repaired'.

		ESH 1	ESH 2
8	Is the responsiveness of the ESH less than or equal to 0.2?	Yes ☐ go to F1 and select 'Replace' No ☐ go to E1	Yes ☐ go to F1 and select 'Replace' No ☐ go to E1

E.	**ESH Assessment Part 3: Complete to determine whether the broken down ESH can be economically repaired (Qualifying ESH only)**		
		ESH 1	**ESH 2**
1	Age of ESH in years		
2	State how you have established the age of the ESH.		
3	Does the ESH contain asbestos? (A broken down ESH with asbestos 'cannot be economically repaired')	Yes ☐ go to F1 and select 'Replace' No ☐	Yes ☐ go to F1 and select 'Replace' No ☐
4	Are all parts required for the repair available? (if parts are available at a reasonable cost and within a reasonable timeframe or the repair does not require any parts tick Yes)	Yes ☐ No ☐ go to F1 and select 'Replace'	Yes ☐ No ☐ go to F1 and select 'Replace'
5	Is the actual cost of repair more than the actual cost of a replacement ESH[5]?	Yes ☐ add relevant costs below and go to F1 and select 'Replace' cost of repair: £_____ cost of replacement: £_____ No ☐	Yes ☐ add relevant costs below and go to F1 and select 'Replace' cost of repair: £_____ cost of replacement: £_____ No ☐
6	What is the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table'[6]?	£_____	£_____
7	Is the actual cost of repair less than the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table'?	Yes ☐ go to F1 and select 'Repair' No ☐ go to F1 and select 'Replace'	Yes ☐ go to F1 and select 'Repair' No ☐ go to F1 and select 'Replace'

F.	**Conclusion: Complete for all ESH measures**		
		ESH 1	**ESH 2**
1	Repair or Replace?	Repair ☐ Replace ☐	Repair ☐ Replace ☐

[5] See page 8 for costs to be included in actual ESH repair and replacement calculations.
[6] See page 9 for Economic Repair Cost Comparison Table.

G.	Operative details: Complete for all ESH measures	
	To be completed by the Operative conducting the ESH assessment.	
1	Operative company name	
2	Operative name (as on the accreditation record)	
3	Operative competency: Accreditation/accrediting body	
4	Operative's accreditation number/ECS card number	
5	Operative signature	
6	Date (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _

H.	Replacement of other ESHs at the premises			
1	Are there any other ESHs in the premises with a responsiveness of 0.2 or less?	Yes ☐ number of ESH _____ go to H2 No ☐ go to I1 or J1, as applicable		
2	If yes, please provide description of the ESHs in this table.	**Type of ESH**	**Responsiveness**	**Location in the premises**
		eg: slimline storage heater	0.2	Living room

I.	Details of new ESH: Complete for ESH replacements only[7]				
	1. Location of replacement ESH in premises	**2. Brand and model**	**3. ESH serial number**	**4. Type of ESH (please refer to column 1 of table 1)**	**5. Confirm that ESH includes automatic charge control. Please state Yes/No**
ESH 1					
ESH 2					
ESH 3					
ESH 4					
ESH 5					

[7] If necessary add extra rows to provide information about ESH replacements in response to question H2.

J.	Details of warranty[8] offered to customer: Complete for all ESH measures[9]		
	Start date of warranty (dd/mm/yyyy)	End date of warranty (dd/mm/yyyy)	Has the occupier been informed by you, the operative, that the ESH is under warranty from the date of repair or replacement (including an explanation of the nature of the warranty and the duration of the warranty)?
ESH 1	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _	Yes, 1 year ☐ Yes, 2 years or more ☐
ESH 2	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _	Yes, 1 year ☐ Yes, 2 years or more ☐
ESH 3	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _	Yes, 1 year ☐ Yes, 2 years or more ☐
ESH 4	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _	Yes, 1 year ☐ Yes, 2 years or more ☐
ESH 5	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _	Yes, 1 year ☐ Yes, 2 years or more ☐

K.	For completion by the occupier: Complete for all ESH measures	
1	Occupier's declaration	*I, the occupier, have been informed by you, the operative, that all the ESHs being repaired/replaced are under warranty for: a) 1 year or b) 2 years or more from the date of repair/replacement (Delete as applicable). I have been/will be provided with a copy of the warranty. I confirm that the nature of the warranty has been explained to me.*
2	Occupier's signature	
3	Date (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _

L.	Operative details: Complete for all ESH measures	
To be completed by Operative who repaired/replaced the ESHs.		
This section must be completed even if the same Operative did both the assessment and repair/replacement of the ESHs.		
1	Date of repair/replacement[10] (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _
2	Operative company name	
3	Operative name (as on the accreditation record)	
4	Operative competency: Accreditation/Accrediting Body	
5	Operative's accreditation number/ECS card number	
6	Operative signature	
7	Date (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _

[8] Full details of the warranty requirements are available in Appendix 8 of the ECO2t Guidance: Delivery.

[9] If necessary add extra rows to provide information about ESH replacements in response to question H2.

[10] If more than one ESH is repaired or replaced, provide the date when the work was completed on the last ESH.

Table 1 ESH types and their responsiveness

Electric Storage Heater	Responsiveness	Deemed Score to be used if installed
Off-peak tariffs:		
Old (large volume) storage heaters	0.0	N/A (no deemed score made for this installation)
Slimline storage heaters	0.2	Slimline
Convector storage heaters	0.2	Slimline
Slimline storage heaters with Celect-type control	0.4	Slimline
Convector storage heaters with Celect-type control	0.4	Slimline
Fan storage heaters	0.4	Fan Storage
Fan storage heaters with Celect-type control	0.6	Fan Storage
Integrated storage+direct-acting heater	0.6	Fan Storage
High heat retention storage heaters	0.8	High Heat Retention
24-hour heating tariff:		
Slimline storage heaters	0.4	Slimline
Convector storage heaters	0.4	Slimline
Fan storage heaters	0.4	Fan Storage
Slimline storage heaters with Celect-type control	0.6	Slimline
Convector storage heaters with Celect-type control	0.6	Slimline
Fan storage heaters with Celect-type control	0.6	Fan Storage
High heat retention storage heaters	0.8	High Heat Retention

Source: SAP 2012 Table 4a: http://www.bre.co.uk/sap2012/

Actual costs of repair and replacement

The actual cost of repair for each ESH should account for, where applicable:

- parts and fittings
- quotation
- labour
- warranty of at least one year, and
- any works deemed necessary at time of repair to protect the ESH for the life of the warranty.

The warranty should at a minimum provide cover for total repair works, during the life of the warranty, valued up to the financial level indicated in the 'Economic Repair Cost Comparison Table' for that type of ESH.

The actual cost of a replacement ESH should include:

- the cost of the ESH
- fittings
- quotation
- labour, and
- warranty of at least one year.

We are satisfied that the requirement for a warranty for a replacement ESH can be met by a manufacturer's warranty of one year.

Economic Repair Cost Comparison Table

The Economic Repair Cost Comparison Table (Table 2 below) should be used to answer E6 and E7[11].

The table shows the maximum repair costs for ESHs of different types and ages. If the actual cost of repair is higher than the relevant maximum cost, it is considered more economical to replace the ESH than repair it and as such it is judged that it cannot be economically repaired.

The maximum cost of repair for an ESH is derived from the type of ESH, the estimated average installation cost of replacing the ESH and the age of the ESH. These costs have been developed in association with industry. These costs also show the minimum cap that should be applied to ESH repair warranties.

From our engagement with industry, we understand that there are no slimline storage heaters or convector storage heaters with a responsiveness of more than 0.2. As such, we will always judge that broken down slimline storage heaters or convector storage heaters cannot be economically repaired, and therefore we have not included them in the Economic Repair Cost Comparison Table.

Table 2 Economic Repair Cost Comparison Table[12]

Maximum repair cost for electric storage heaters		
Types of electric storage heaters		
Age of heater (years)	Integrated storage+ direct acting heater (£)	Fan storage/high heat retention storage heater (£)
1 - 4	460	715
5	422	656
6	383	596
7	345	536
8	307	477
9	268	417
10	230	358
11	192	298
12	153	238
13+	115	179

Example:
ESH type: Fan storage heater **Age:** 6 years

	Types of electric storage heaters
Age of heater	Fan storage/high heat retention storage heater (£)
1-4	715
5	656
6	596
7	536
8	477
9	417
10	358
11	298
12	238
13+	179

Result: If ESH repair work costs over £596, this ESH can be replaced.If the ESH repair work costs less than £596, ESH repair should be carried out. In this case, the ESH warranty should cover the ESH for work up to at least the financial level of £596.

[11] Note that all costs shown are exclusive of VAT.
[12] We judge that the electricity tariff, responsiveness and controls have no impact on repair cost.