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Electric Storage Heater Assessment Checklist

This Electric Storage Heater (ESH) Assessment Checklist ('the checklist') is designed to assess whether an ESH should be repaired or replaced. Suppliers should complete this checklist for all ESH replacements or repairs under the ECO scheme.

This checklist does not provide any detailed information on the requirements of ECO. Further information can be found in our guidance document, Energy Company Obligation (ECO3) Guidance: Delivery, available on our website.

Completing the checklist

The checklist must be completed by an assessor who has inspected the boiler on-site.
The information provided in this checklist forms the basis of our determination of whether or not the ESH 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 ESH including any health & safety requirements
- complete all relevant sections
- sign and date the checklist
- record the steps (tests, measurements etc) you have taken in determining that the ESH should be replaced, repaired or upgraded
- 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.

Appendix 1 (repair and replacement cost tables) may be completed by a person who has not inspected the ESH, but the operative that has completed the assessment must sign this form to confirm that Appendix 1 has been completed accurately.

Operative competency

The assessment and the repair/replacement of an ESH 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[1]. Where the storage heaters have a responsiveness of 0.2 or less, and are being removed and replaced with a first-time central heating system, appropriate skill and experience for each stage the assessment of the storage heaters, can be demonstrated by the operative being a qualified Domestic Energy Assessor[2].

Dealing with multiple ESHs at one premises

This checklist may be used to record the assessment of more than one ESH in a premises. Determining the age of an ESH
The age of the ESH will be required to assess whether or not a ESH 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 that the majority of ESH 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 representatives:

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 unable to be economically repaired, does not necessarily mean we will reach the same conclusion, particularly if we consider that an assessment has

[1] All ECO measures must be installed by a PAS certified installer. Measures must be installed in accordance with the latest version of Publicly Available Specification 2030.
[2] The DEA will need a current and valid registration with an Approved Energy Assessor Accreditation Scheme, which can be verified at https://www.gov.uk/find-an-energy-assessor.

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.

If the information on this checklist is found to be false Ofgem will investigate the case and may take action if required.

When filling in this checklist assessment details should not be copied from other checklists, ie photocopying or copying and pasting should not be used to complete any part of this form.

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 submit adapted checklists to us before use for confirmation that the content is acceptable.

Energy Company Obligation (ECO3) ESH Assessment Checklist

Sections in the checklist	**Broken ESH replacements**	**All other ESH measures**	**First time central heating**	ESH (Room Heater) upgrade
A	✓	✓	✓	✓
B	✓	✓	✓	
C	✓	✓	✓	
D	✓		✓	
E	✓		✓	
F	✓	✓		
G	✓	✓	✓	
H	✓	✓		✓
I	✓	✓		✓
J	✓	✓		✓
K	✓	✓		✓
L			✓	
M			✓	
N			✓	
O			✓	

A.	**All ESH: Details of assessment**			
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	Current electricity tariff – (Please select type of off-peak tariff)	**Standard Tariff**: Standard tariff ☐	**Off Peak Tariff**: Economy 7 ☐ Other off-peak tariff (please name): ☐_____	**24-hour Tariff:** 24-hour tariff ☐

B.	All ESH: Details of ESHs being assessed (Complete Annex 1 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. slimline, fan storage heater etc)		
3	ESH Responsiveness[3] (See Table 1: ESH types and their responsiveness)		
4	Brand and Model		
5	ESH serial number (or any other unique identification detail of the ESH)		

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

C.	All ESH: Initial ESH Assessment:		
An ESH must meet certain criteria to be considered broken down and can be replaced, repaired or upgraded alongside a primary insulation measure. 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 C1a No ☐ Go to C3a	Yes ☐ Go to C1a No ☐ Go to C3a
1a	List all the steps you took to reach the conclusion that the ESH is broken down. This may include any tests or checks carried out on the ESH to identify the symptoms. Continue on a separate sheet if necessary, then go to C2.		
2	Broken ESH: Is the ESH economically repairable? (Complete section E to determine)	Yes ☐ Can be repair of a broken heating system, Go to D1. If not repairing broken ESH, Go to C3. No ☐ Can be replaced as a broken heating system measure or a FTCH. Go to C3.	Yes ☐ Can be repair of a broken heating system, Go to D1. If not repairing broken ESH, Go to C3. No ☐ Can be replaced as a broken heating system measure or a FTCH. Go to C3.

3	Broken ESH: Does the ESH have a responsiveness equal to or less than 0.2?	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. For FTCH measures go to C3b. No ☐The cost of repair should be determined. Go to D1	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. For FTCH measures go to C3b. No ☐ The cost of repair should be determined. Go to D1
3a	Working ESH: Does the ESH have a responsiveness equal to or less than 0.2?	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. No ☐ Can only be replaced by DHS or renewable heating measures. Not eligible for replacement if the tenure is social housing. Go to F1	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. No ☐ Can only be replaced by DHS or renewable heating measures. Not eligible for replacement if the tenure is social housing. Go to F1
3b	List all the steps you took to reach the conclusion that the ESH have a responsiveness equal to or less than 0.2. Continue on a separate sheet if necessary, then continue the checklist. If broken ESH go to D1, if working ESH go to F1. For FTCH measures go to G1.		

D	**Broken ESH only: Evidencing why the ESH is broken down (Complete for FTCH measures if any ESH are broken)**			
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)			

D	Broken ESH only: Evidencing why the ESH is broken down (Complete for FTCH measures if any ESH are broken)

Once you have determined that 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 more than 0.2 **must** be assessed to determine whether or not they can be 'economically repaired'. Where an ESH can be economically repaired it must be repaired or replaced by a renewable heating system or a district heating system . In social housing with an EPC rating of E, F or G, ESH can only be replaced where they have a responsiveness rating of 0.2 or less **and** are being replaced by FTCH.

ESHs that are repairable and have a responsiveness equal to or less than 0.2 can be repaired or upgraded alongside a primary insulation measure, or replaced as a first time heating measure or replaced by a renewable system or a district heating system.

ESH that are broken down should only be replaced as a broken ESH measure where they cannot be economically repaired.

Electric storage heater installations will not be considered complete unless the property is on an off-peak electricity tariff.

E.	Broken ESH only: Complete to determine whether the broken down ESH can be economically repaired (Complete for FTCH measures if any ESH are broken)		
		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 ☐

E.	Broken ESH only: Complete to determine whether the broken down ESH can be economically repaired (Complete for FTCH measures if any ESH are broken)		
4	Are all parts required for the repair available? (if parts are available at a reasonable cost and within a reasonable timeframe[4] 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 and fill in cost table in Appendix 1. No ☐ Add relevant costs below and fill in cost table in Appendix 1. Cost of repair: £_____ Cost of replacement: £_____ If Yes, go to F1 and select 'Replace'. If No, go to E6	Yes ☐ Add relevant costs and fill in cost table in Appendix 1. No ☐ Add relevant costs below and fill in cost table in Appendix 1. Cost of repair: £_____ Cost of replacement: £_____ If Yes, go to F1 and select 'Replace'. If No, go to E6
6	What is the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table'[6]?	£_____	£_____

[4] A screenshot should be retained to confirm parts were not available within a reasonable timeframe.

[5] See page 10 for costs to be included in actual ESH repair and replacement calculations.
[6] See page 11 for Economic Repair Cost Comparison Table.

E.	Broken ESH only: Complete to determine whether the broken down ESH can be economically repaired (Complete for FTCH measures if any ESH are broken)		
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' For FTCH measures go to G1.	Yes ☐ Go to F1 and select 'Repair' No ☐ Go to F1 and select 'Replace' For FTCH measures go to G1.

F.	All ESH: Conclusion (N/A for FTCH measures)		
		ESH 1	**ESH 2**
1	Repair or Replace?	Repair ☐ Replace ☐	Repair ☐ Replace ☐

G.	All ESH: Operative details (For FTCH measures, please complete section G below of this checklist, then record details of the new boiler / central heating system in sections L, M, N & Oof the Electric Storage Heater Assessment Checklist or an extract of these sections)	
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.	ESH replacements only: Details of new ESH[7]:		
		ESH 1	**ESH 2**
1	Location of replacement ESH in the premises		
2	Brand and Model		
3	ESH Serial number		
4	Type of ESH (please refer to table 1)		

I.	All ESH: Details of warranty[8] offered to customer		
		ESH 1	**ESH 2**
1	Start date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _
2	End date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _
3	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)?	Yes, 2 years or more[9] ☐	Yes, 2 years or more[9] ☐

J.	All ESH: For completion by the occupier:	
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 2 years or more from the date of repair / replacement. 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.*

[7] Add extra columns or pages to provide information about ESH replacements if necessary.
[8] Full details of the warranty requirements are available in the ECO3 Guidance.
[9] For ESH repair measures, this should meet Trustmark requirements. For more information please visit https://www.trustmark.org.uk/

J.	All ESH: For completion by the occupier:	
2	Occupier's signature	
3	Date (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _

K.	All ESH: Operative details	
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)	_ _ / _ _ / _ _ _ _

L.	All boilers: Details of new central heating system/boiler for FTCH measure[11]	
1	Brand and model	
2	Model qualifier (if applicable)	
3	Boiler Location (Post Install)	
4	Serial number	

[10] If more than one ESH is repaired or replaced, provide the date when the work was completed on the last ESH.
[11] If new DHS connection, please record all possible details of the existing boiler.

L.	All boilers: Details of new central heating system/boiler for FTCH measure[11]		
5	Fuel type		
6	Boiler efficiency (%): Provide efficiency when assessed against PCDB/SAP 2012	_____%	
7	If the new heating system is a heat pump, please answer section M 1-7 with the assumption that the questions refer to heat pumps. Additional details can be recorded in this question if required.		
8	Is the boiler compliant with Boiler Plus regulations?[12]	Yes ☐ Please select which energy saving measure was installed below. N/A[13] ☐	
		Smart controls ☐	Flue Gas Heat Recovery ☐
		Weather Compensation ☐	Load Compensation ☐

[12] Boiler Plus regulations apply to gas and LPG boilers installed in England. Details can be found here: http://boilerplus.org/

[13] N/A should be ticked if Boiler Plus regulations do not apply

M.	All boilers: Details of warranty[14] offered to the occupier for FTCH measures	
1	Start date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _
2	End date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _
3	Has the occupier been informed by you, the operative, that the boiler is under warranty from the date of repair/replacement (including an explanation of the nature of the warranty and the duration of the warranty)?	Yes, 2 years or more ☐

N.	All boilers: Operative details for FTCH measures	
To be completed by Operative who repaired/replaced the boiler or installed the new first time central heating.		
This section must be completed even if the same operative did both the assessment and repair or replacement of the boiler.		
1	Date of repair or replacement (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _
2	Operative company name	
3	Company's accreditation number	
4	Operative name (as on the accreditation record)	
5	Operative competency: Accreditation/Accrediting Body	
6	Operative's accreditation number	

[14] Full details of the warranty requirements for boiler repairs and replacements are available in the ECO3 Guidance: Delivery. Single Ground Source Heat Pumps must be MCS compliant and thus require a two year warranty. DHS connections adhere to different consumer protection standards (which can be found in paragraph 4.126 of the ECO3 Guidance: Delivery), as such this section can be left blank for DHS connection measures.

N.	All boilers: Operative details for FTCH measures	
7	Operative's declaration	*I confirm that the boiler I have installed is connected to a functioning domestic central heating (and where applicable, hot water) system.* *I confirm that the information contained in this form is true and accurate. I acknowledge and understand that it is a criminal offence to knowingly make a false declaration and that the offence is punishable by a fine, imprisonment or both.*
8	Operative signature	
9	Date (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _

O.	All boilers: Where full heating controls are not necessary for measure[15] (only FTCH)	
To be completed by Operative who has determined that heating controls (TRVs) do not need to be fitted to the following radiators.		
This section must be completed even if the same operative did both the assessment and repair or replacement of the boiler.		
1	Which room radiators have not been fitted TRVs including the bypass radiator?	
2	Why have the full set of heating controls (TRVs) not been installed?[16]	

[15] In some cases it may not be necessary for a TRV to be fitted to a heated towel rail in a bathroom. A suitably qualified operative should determine this on a case by case basis and, if applicable, fill out Section P of the ESCL.
[16] Customer refusal or reasons relating to installation costs are not sufficient reasons on their own for not installing 100% of a measure.

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)
Slimline storage heaters	0.2	N/A (no deemed score)
Convector storage heaters	0.2	N/A (no deemed score)
Fan storage heaters	0.4	Fan Storage
Slimline storage heaters with Celect-type control	0.4	Fan Storage
Convector storage heaters with Celect-type control	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	Fan Storage
Convector storage heaters	0.4	Fan Storage
Fan storage heaters	0.4	Fan Storage
Slimline storage heaters with Celect-type control	0.6	Fan Storage
Convector storage heaters with Celect-type control	0.6	Fan Storage
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 must include itemised costs for for, where applicable:

- parts and fittings
- quotation
- labour
- warranty that meets Trustmark requirements[17], 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 two years[17].

We are satisfied that the requirement for a warranty for a replacement ESH can be met by a manufacturer's warranty of two years[17].

Economic Repair Cost Comparison Table

The Economic Repair Cost Comparison Table (Table 2 below) should be used to answer E6 and E7[18].

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.

[17] For ESH repair measures, this should meet Trustmark requirements. For more information please visit https://www.trustmark.org.uk/

[18] Note that all costs shown are exclusive of VAT.

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[19]

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

[19] We judge that the electricity tariff, responsiveness and controls have no impact on repair cost.

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.

Appendix 1: Repair and Replacement Cost Table

The costs of each element listed on page 18 above must be itemised for both the total repair or replacement cost of the boiler. Each part or procedure required must be itemised separately.

The table below should be used. Alternatively, if agreed with the supplier, the quote may be provided in a different format. Please attached all relevant documentation to this form. This must be itemised such that the cost and description of each item listed on page 18 is clearly visible.

Repair Quote	
Item	**Cost**
Warranty costs	
Labour estimated for _____ hours at £_____ per hour	
Total excluding VAT	
VAT 20%	
Total	

Replacement Quote	
Item	**Cost**
Warranty costs	
Labour estimated for _____ hours at £_____ per hour	
Total excluding VAT	
VAT 20%	

Annex 1 – Extension template

This annex provides an extension template in the cases where the number of electric storage heaters, at the same premises, exceeds two. One template should be used for a maximum of two additional electric storage heaters.

B.	All ESH: Details of ESHs being assessed (Complete Annex 1 if more than 2 ESHs are being assessed)		
		ESH _	**ESH _**
1	Location of ESH (where is the ESH located in the dwelling?)		
2	Type of ESH (e.g. slimline, fan storage heater etc)		
3	ESH Responsiveness[20] (See Table 1: ESH types and their responsiveness)		
4	Brand and Model		
5	ESH serial number (or any other unique identification detail of the ESH)		

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

C.	All ESH: Initial ESH Assessment:		
An ESH must meet certain criteria to be considered broken down and can be replaced, repaired or upgraded alongside a primary insulation measure. The first step in assessing whether an ESH is a qualifying ESH is to determine whether it is 'broken down'.			
		ESH _	**ESH _**
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 C1a No ☐ Go to C3a	Yes ☐ Go to C1a No ☐ Go to C3a
1a	List all the steps you took to reach the conclusion that the ESH is broken down. This may include any tests or checks carried out on the ESH to identify the symptoms. Continue on a separate sheet if necessary, then go to C2.		
2	Broken ESH: Is the ESH economically repairable? (Complete section E to determine)	Yes ☐ Can be repair of a broken heating system, Go to D1. If not repairing broken ESH, Go to C3. No ☐ Can be replaced as a broken heating system measure or a FTCH. Go to C3.	Yes ☐ Can be repair of a broken heating system, Go to D1. If not repairing broken ESH, Go to C3. No ☐ Can be replaced as a broken heating system measure or a FTCH. Go to C3.
3	Broken ESH: Does the ESH have a responsiveness equal to or less than 0.2?	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. For FTCH measures go to C3b. No ☐ The cost of repair should be determined.Go to D1	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. For FTCH measures go to C3b. No ☐ The cost of repair should be determined.Go to D1

C.	All ESH: Initial ESH Assessment:		
3a	Working ESH: Does the ESH have a responsiveness equal to or less than 0.2?	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. No ☐ Can only be replaced by DHS or renewable heating measures. Not eligible for replacement if the tenure is social housing. Go to F1	Yes ☐ Can be replaced as an upgrade of a heating system alongside a primary insulation measure. Go to C3b. No ☐ Can only be replaced by DHS or renewable heating measures. Not eligible for replacement if the tenure is social housing. Go to F1
3b	List all the steps you took to reach the conclusion that the ESH have a responsiveness equal to or less than 0.2. Continue on a separate sheet if necessary, then continue the checklist. If broken ESH go to D1, if working ESH go to F1. For FTCH measures go to G1.		

D	Broken ESH only: Evidencing why the ESH is broken down (Complete for FTCH measures if any ESH are broken)			
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_	ESH _	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			

D	Broken ESH only: Evidencing why the ESH is broken down (Complete for FTCH measures if any ESH are broken)			
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 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 more than 0.2 **must** be assessed to determine whether or not they can be 'economically repaired'. Where an ESH can be economically repaired it must be repaired or replaced by a renewable heating system or a district heating system . In social housing with an EPC rating of E, F or G, ESH can only be replaced where they have a responsiveness rating of 0.2 or less **and** are being replaced by FTCH.

ESHs that are repairable and have a responsiveness equal to or less than 0.2 can be repaired or upgraded alongside a primary insulation measure, or replaced as a first time heating measure or replaced by a renewable system or a district heating system.

D	Broken ESH only: Evidencing why the ESH is broken down (Complete for FTCH measures if any ESH are broken)
ESH that are broken down should only be replaced as a broken ESH measure where they cannot be economically repaired. Electric storage heater installations will not be considered complete unless the property is on an off-peak electricity tariff.	

E.	Broken ESH only: Complete to determine whether the broken down ESH can be economically repaired (Complete for FTCH measures if any ESH are broken)		
		ESH _	**ESH _**
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[21] 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'

[21] A screenshot should be retained to confirm parts were not available within a reasonable timeframe.

E.	Broken ESH only: Complete to determine whether the broken down ESH can be economically repaired (Complete for FTCH measures if any ESH are broken)		
5	Is the actual cost of repair more than the actual cost of a replacement ESH[22]?	Yes ☐ Add relevant costs and fill in cost table in Appendix 1. No ☐ Add relevant costs below and fill in cost table in Appendix 1. Cost of repair: £_____ Cost of replacement: £_____ If Yes, go to F1 and select 'Replace'. If No, go to E6	Yes ☐ Add relevant costs and fill in cost table in Appendix 1. No ☐ Add relevant costs below and fill in cost table in Appendix 1. Cost of repair: £_____ Cost of replacement: £_____ If Yes, go to F1 and select 'Replace'. If No, go to E6
6	What is the maximum cost of repair as identified in the 'Economic Repair Cost Comparison Table'[23]?	£_____	£_____
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' For FTCH measures go to G1.	Yes ☐ Go to F1 and select 'Repair' No ☐ Go to F1 and select 'Replace' For FTCH measures go to G1.

[22] See page 10 for costs to be included in actual ESH repair and replacement calculations.
[23] See page 11 for Economic Repair Cost Comparison Table.

H.	ESH replacements only: Details of new ESH[24]:		
		ESH _	**ESH _**
1	Location of replacement ESH in the premises		
2	Brand and Model		
3	ESH Serial number		
4	Type of ESH (please refer to table 1)		

I.	All ESH: Details of warranty[25] offered to customer		
		ESH _	**ESH _**
1	Start date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _
2	End date of warranty (dd/mm/yyyy)	_ _ / _ _ / _ _ _ _	_ _ / _ _ / _ _ _ _
3	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)?	Yes, 2 years or more[26] ☐	Yes, 2 years or more[26] ☐

[24] Add extra columns or pages to provide information about ESH replacements if necessary.
[25] Full details of the warranty requirements are available in the ECO3 Guidance.
[26] For ESH repair measures, this should meet Trustmark requirements. For more information please visit https://www.trustmark.org.uk/