Energy Technology List

Department for Energy Security & Net Zero

Product application checklist

Please complete in BLOCK CAPITALS

Air to Water Heat Pumps

Manufacturer/supplier name: .....

Applicant's name: .....

Telephone number: .....

Product information

Product name: .....

Model number: .....

Please complete each section of this form based on your product's characteristics. Incomplete or incorrect data could affect the processing of your product application.

Each product application should be made on a separate form unless a product's design characteristics are common to all the products. In this instance a single application can be made for multiple products.

1. Product testing and certification	No	Yes
Where type testing has been applied to demonstrate product performance please ensure that the information supplied is sufficient to demonstrate the performance of all the products for which applications are being made.		
1.1 Does the product have an appropriate Conformity Assessment mark?	☐	☐
1.2 Has the product been tested in accordance with the test procedures and standard rating conditions in the following standards?		
a) BS EN 14825:2018 for cooling mode	☐	☐
b) Commission Regulation (EU) No 813/2013, Annex III	☐	☐
1.3 How was the product(s) performance tested? (Please select one).		
a) Tested in the manufacturer's in-house laboratory, in accordance with a registered Quality Management System and a representative sample of the test data has been cross-checked and verified by an independent body (i.e. 'self-tested and verified or cross-checked by an independent body')	☐	☐
b) Tested in a laboratory either in house or on-site, witnessed by an independent body (i.e 'witnessed testing').	☐	☐
c) Tested by an independent laboratory (i.e. 'independent testing').	☐	☐
d) Representative models used.	☐	☐

Please refer to the ETL Testing Framework for details of the requirements that must be satisfied for each of these product testing options.

1. Product Testing and Certification (continued)

No | Yes

1.4 **Where product testing has been done in accordance with a registered Quality Management System, what is its registration number?**

1.5 **Where a representative sample of the test data has been cross-checked and verified by an independent body:**

a) What is the name of the independent laboratory?

b) What is the laboratory's registration number (where accredited)?

1.6 **Where product testing has been witnessed by an independent body, what was the name of the witness?** *(Please include contact details).*

1.7 **Where products have been tested by an independent laboratory:**

a) What is the name of the independent laboratory?

b) What is the laboratory's registration number (where accredited)?

1.8 **Is the application for:** *(Please select one).*

a) A single unique product – in this case go to 2.1 ☐

b) A range of products, which are variants of the same basic design ☐

c) One or more additional models to a range of products already on the ETPL ☐

Products will only be considered to be variants of the same basic design, if they:

- Use the same refrigerant as the representative model.
- Have the same compressor type (i.e. manufacturer, method of compression (e.g. reciprocating or scroll) and type of enclosure (e.g. hermetic or semi-hermetic) as the representative model.
- Fit within the same product category and are designed for the same application (i.e. are all low temperature air to water heat pumps designed for space heating only).

1.9 **If representative testing has been used, what are the 'representative models'?**

ETL Product ID number	Product name and model number

The representative models must be selected by dividing the range of products into groups of models with similar design characteristics, and testing a model in each group. The performance of each model in the group must be predicted using a validated mathematical model. As a minimum, at least one model must be tested in each group of products.

A report documenting performed model calculations, showing all significant calculation steps, shall be submitted with the application.

2.	Product type	No	Yes
2.1	**What type of heat pump is your product?** *(Please select one).*		
	a) Low temperature air to water heat pump (specifically designed for low temperature application and unable to deliver heating water with an outlet temperature of 52ºC at an inlet dry (wet) bulb temperature of -7ºC (-8ºC) in the reference conditions for average climate, (with rated output not greater than 45kW).		☐
	b) Medium and high temperature heat pumps (that are capable of delivering water with an outlet temperature of 52°C or greater at an inlet dry (wet) bulb temperature of -7°C (-8°C) in the reference conditions for average climate, with rated output not greater than 45kW).		☐
2.2	**What application is your product designed for?**		
	a) Space heating only?		☐
	b) Primarily space heating but capable of providing domestic hot water?		☐
	c) Space cooling using a water loop by reversing the product's refrigeration cycle		☐
	Note an air to water heat pump which provides heating only must be a 'space heater' as defined by Commission Regulation (EU) No 813/2013 and one which provides space heating and domestic hot water must be a 'combination heater' as defined by Commission Regulation (EU) No 813/2013.		

3.	Product features	No	Yes
3.1	**Does the product Incorporate an electrically driven refrigeration system that uses a refrigerant which has a Global Warming Potential (GWP) ≤ 750?**	☐	☐
3.2	**Does the product consist of a single factory assembled (packaged) unit?** *If yes proceed to 3.4*	☐	☐
3.3	**Does the product consist of an 'outdoor' unit and an indoor unit that are:**		
	a) Factory built sub-assemblies	☐	☐
	b) Supplied as a matched pair of units	☐	☐
	c) Designed to be connected together during installation?	☐	☐
3.4	**Is the product designed for, and include fittings for, permanent installation?**	☐	☐
3.5	**Rated heating capacity of the product (kW)**		
	.....		
3.6	**Rated cooling capacity of the product (kW) (if the product provides cooling)**		
	.....		

4.	Information requirements	No	Yes
4.1	**Does the product incorporate 'smart features' (specifically this includes the capability to provide information on whether the products are smart ready without the replacement or addition of any hardware) such as:**		
	a) Demand Side Response Ready	☐	☐
	b) Data Collection Ready	☐	☐
4.2	**Please provide the Seasonal Coefficient of Performance (SCOP) of the product:**		
	.....		
4.3	**Please provide the Seasonal Space Cooling Energy Efficiency ($\eta_{s,c}$) of the product:** (only answer if product provides cooling)		
	.....		

5. Product performance

		No	Yes
5.1	**Is the Seasonal Space Heating Energy Efficiency (ηs,h) of your product equal to or greater than the thresholds for the product category (as set out in Table 1 below) in heating mode?**	☐	☐

Performance data must be determined and the ηs,h calculated, following the requirements of Commission Regulation (EU) No 813/2013 Annex III, by dividing the SCOP by the correction factor 2.5 (to allow for generation efficiency), corrected by contributions accounting for temperature controls.

5.2 Please state your products Seasonal Space heating Energy Efficiency ($\eta_{s,h}$) at following temperatures:

a) When water outlet temperature is at 35°C

.....

b) When water outlet temperature is at 55°C

.....

5.3	**Is the product designed to provide cooling?**	☐	☐
5.4	**Is the Seasonal Energy Efficiency Ratio (SEER) of your product greater than the performance thresholds for the product category (as set out in Table 1 below)?** (only answer if your product provides cooling)	☐	☐

Products should be tested in accordance with BS EN 14825:2018 at the conditions given in Table 1, part load condition A, cooling floor application.

***Table 1** Performance thresholds for air to water heat pumps*

		Heating mode ($\eta_{s,h}$)		
	Product Category	**Water at 35°C**	**Water at 55°C**	**Cooling mode (SEER)**
1	Low temperature heat pumps	≥ 130%	N/A	≥ 4.20
2	Medium and high temperature heat pumps	≥ 150%	≥ 130%	≥ 4.30

'≥' means 'greater than or equal to'

For the avoidance of doubt, test data should be presented to three significant figures. As an example a low temperature heat pump with a heating mode ηs,h of 149.4% or a cooling mode SEER of 4.494 would be deemed a fail.

5.6 Please state your products Seasonal Space Cooling Energy Efficiency ($\eta_{s,c}$)

.....

5.5	**Are seasonal energy efficiency metrics measured for the 'Average' heating season, as defined by Ecodesign Commission Regulation (EU) 813/2013 and the harmonised standard BS EN 14825:2022**	☐	☐

6. Summary of documents to be included

No	Yes

Please send ONE copy of each of the following documents:

If the relevant information in support of the questions above is contained within a larger document, please indicate the location of the relevant information. Note that all documentation submitted must directly refer to the model numbers for which you are making this application. Documentation should be added to your online application.

a) A technical sales brochure or leaflet for the product clearly summarising:

- i) The key features of the product (ideally including photographs of the product's exterior). ☐
- ii) The product's operation (i.e. in-built functionality) and intended applications (i.e. usage). ☐
- iii) Any product selection options (including optional extras, alternative configurations etc.). ☐

This documentation should contain sufficient detail to enable the assessor to confirm that the proposed entry on the Energy Technology Product List (ETPL) is correct, and uniquely represents a single product of fixed design (as defined by the rules of the ETL). If the model names contain any 'wildcards' in respect of cosmetic variations please check with ETL Questions that this is permitted before submitting your application.

b) A technical specification for the product, including:

- i) Details of the model numbers covered (including individual features of each model). ☐
- ii) The product's design ratings (electrical, mechanical, thermal, flow rates, energy use etc.). ☐
- iii) A description of how to install the product including connection/wiring diagrams. Where the product must be assembled, configured and/or commissioned on site before use, please include instructions. ☐

This documentation should contain sufficient detail to enable the assessor to confirm that each product entry on the ETPL has the design features specified in the eligibility criteria for that category of product. Please indicate on the checklist where information on specific design features is located in the documentation.

c) Evidence that the product meets the performance criteria, including:

- i) The technical product fiche for the product as specified in Commission Regulation (EU) No 813/2013 Annex II, section 5, Table 2 (measured/calculated in accordance with Annex III). This should be in the tabular format shown in Table 2. ☐
- ii) The detailed calculation used to determine the SCOP and SSHEE – for example a copy of the completed MCS 026 SCOP and SSHEE calculator for the product if it is an MCS certified product. ☐
- iii) A heating mode test report and a cooling mode test report as specified in Table 1.2 of the ETL criteria for Air to water heat pumps. The testing should be carried out in accordance with the procedures in BS EN 14825:2018 for cooling and Commission Regulation (EU) No 813/2013 for heating mode. ☐
- iv) Details of the test procedures/standards used to determine product performance. ☐
- v) A declaration certifying the accuracy of the test reports and confirming that:
  - The test facilities used comply with the minimum specifications outlined in the test standard, and the required test conditions were applied during testing. ☐
  - All measurement equipment used in testing was calibrated by an accredited laboratory, or its calibration is otherwise traceable back to national standards. ☐
  - Appropriate quality assurance procedures have been used to verify or cross-check the accuracy and repeatability of the test procedures and test results. ☐
- vi) Where representative testing has been used, please include details of selection method used and evidence that the products covered by the representative model(s) are variants of the same basic design. ☐

Please note that summary test reports will only be accepted where the accuracy of the test reports has been certified by a recognised independent body, or where one detailed test report has been submitted per product range.

Please refer to the ETL Testing Framework for further guidance on the submission of test results, and minimum information requirements.

d) A Declaration of Conformity with UK/EU Directives on product safety, including:

- i) An appropriate Conformity Assessment mark. ☐

e) Evidence that a quality assurance system/procedures is/are in place to control the specification, design, manufacturing and testing of the products. ☐

f) Signed application checklist. ☐

Please note that all product documentation provided must be written in, or translated into, English.

7. Declaration

I confirm that the information given above is correct to the best of my knowledge and that I have read and agree to the terms and conditions governing the management of the Energy Technology List.
A copy of the terms and conditions can be found **here**.

Signature: ..... Date: .....

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