Energy Technology List
ECA SCHEME

CARBON TRUST

Product application checklist

Please complete in BLOCK CAPITALS

Refrigeration: Packaged chillers

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 certification	No	Yes
Where type testing has been applied to demonstrate product performance ensure that the information supplied is sufficient to demonstrate the performance of all the products for which applications are being made.			
1.1	**Is the product CE marked?**	☐	☐
1.2	**Has the product been tested in accordance with the test procedures and standard rating conditions in the following standards?**		
	BS EN 14511: 2018.		☐
	BS EN 14825: 2018.		☐
1.3	**How was the product(s) performance tested?** *(Please select one).*		
	a) Tested in-house by the manufacturer, in accordance with a registered Quality Management System (i.e. 'self-tested') AND a representative sample of the test data has been verified or cross-checked by an independent laboratory.		☐
	b) Tested 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 testing		☐
	Please refer to Section 2 of ECA Guidance Note 5 "ECA Testing Programme: Energy Technology List (ETL) Product Testing Framework" for details of the requirements that must be satisfied for each of these product testing options.		

1. Product certification (continued)

No | Yes

1.4 **Where the product was tested in the manufacturer's in-house laboratory:**

a) What is the registration number of the Quality Management System?

.....

b) What is the name of the independent body that has verified or cross-checked a sample of the test data?

.....

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

.....

1.6 **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)?

.....

1.7 **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 (e.g. are all water cooled comfort chillers).

1.8 **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 range of products.

2.	Product type	No	Yes
2.1	**What category of product are you applying for?** *(tick one).*		
	a) Air-cooled comfort chillers that provides cooling only.		☐
	b) Air-cooled, reverse cycle, comfort chillers that provides heating and cooling.		☐
	c) Water-cooled comfort chillers that provides cooling only.		☐
	d) Water-cooled, reverse cycle, comfort chillers that provides heating and cooling.		☐
	e) Air-cooled simultaneous heating and cooling comfort chillers		☐
	f) Air-cooled high temperature process chillers		☐
	g) Water-cooled high temperature process chillers		☐

3.	Product features (All products)	No	Yes
3.1	**Does the product incorporate:**		
	a) One or more electrically powered compressors?	☐	☐
	b) One or more air-cooled or water-cooled condensers?	☐	☐
	c) One or more evaporators?	☐	☐
	d) A control system that ensures the safe, reliable and efficient operation of the product?	☐	☐

4.	Product features (for air cooled packaged chillers that provide cooling only)	No	Yes
4.1	**Does the product have an integral free cooling mechanism?**	☐	☐
	If no, proceed to 5.1.		
4.2	**Is the free cooling mechanism:**		
	a) Fully integrated into the packaged chiller unit during product manufacturing?	☐	☐
	b) Directly controlled by the product's control system in a manner that maximises the use of free cooling for outside air, dry bulb temperatures between 2.0 and 15.0°C?	☐	☐
	c) Able to provide cooling capacity at an outside air, dry bulb temperature of 2.0°C and an outlet water temperature of 7.0°C that is at least (≥) 50% of the cooling capacity obtained at the standard rating condition specified in BS EN 14511-2:2018.	☐	☐

5.	Product performance	No	Yes
5.2	**Does the performance of the product meet the relevant performance thresholds set out in Table 1 below?**	☐	☐
	The ECA Scheme only covers products that fit into one of the specific categories listed in the table below, as defined by the product category and cooling capacity (in kW).		

5.	Product performance (continued)	No	Yes

Table 1 Performance thresholds for comfort chillers

Product Category			Rated Cooling Capacity (kW)	Performance thresholds	
				Cooling ηs,c (%)	Heating ηs,h (%)
1.	Air-cooled comfort chillers that provide cooling only	**Without** integral free cooling mechanism	< 400kW	≥ 175.0%	
			≥ 400 kW and ≤ 1500 kW	≥ 190.0%	
		With integral free cooling mechanism	< 400kW	≥ 168.0%	
			≥ 400 kW and ≤ 1500 kW	≥ 185.0%	
2.	Air-cooled, reverse cycle, comfort chillers that provide heating and cooling		< 400kW	≥ 168.0%	≥ 143.0%
			≥ 400 kW and ≤ 1500 kW	≥ 185.0%	≥ 143.0%
3.	Water-cooled comfort chillers that provide cooling only		< 400kW	≥ 230.0%	
			≥ 400 kW and < 1500 kW	≥ 310.0%	
			≥ 1500 kW and ≤ 2000 kW	≥ 320.0%	
4.	Water-cooled, reverse cycle, comfort chillers that provide heating and cooling		< 400kW	≥ 220.0%	≥ 212.0%
			≥ 400 kW and < 1500 kW	≥ 270.0%	≥ 284.0%
			≥ 1500 kW and ≤ 2000 kW	≥ 284.0%	≥ 290.0%
Product Category			**Rated Cooling Capacity (kW)**	**Performance thresholds**	
				Cooling EER	**Heating COP**
5.	Air-cooled, simultaneous heating and cooling comfort chillers that provide heating and cooling		up to 1500 kW	≥ 3.30	≥ 3.70
Product Category			**Rated Refrigeration Capacity (kW)**	**Cooling SEPR performance thresholds**	
6.	Air-cooled, high temperature process chillers		< 400kW	≥ 6.50	
			≥ 400 kW and ≤ 1500 kW	≥ 7.00	
7.	Water-cooled, high temperature process chillers		< 400kW	≥ 8.00	
			≥ 400 kW and < 1500 kW	≥ 9.00	
			≥ 1500 kW and ≤ 2000 kW	≥ 9.10	

"≥" means "greater than or equal to"

"<" means "less than"

For the avoidance of doubt test data should be presented to one decimal places. As an example, a water-cooled, reverse cycle, comfort chiller with a cooling capacity of 100kW, and a seasonal space cooling energy efficiency of 219.9%, or a seasonal space heating energy efficiency of 211.9%, would be deemed to not meet the performance requirements.

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 at https://etl.beis.gov.uk/engetl/fox/live/ETL_PUBLIC_PRODUCT_SEARCH.

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 ECA Scheme). If the model names contain any 'wildcards' in respect of cosmetic variations please check with ECA 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 Energy Technology Product List (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) Test reports showing product performance at the standard rating/test conditions. ☐
- ii) Details of the test procedures/standards used to determine product performance. ☐
- iii) 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. ☐
- iv) Where the test reports have not been prepared by an independent body, evidence that the accuracy of product performance data has been independently verified or cross-checked by an independent body. ☐
- v) 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 refer to Section 4 of ECA Guidance Note 5 "ECA Testing Programme: Energy Technology List (ETL) Product Testing Framework" for further guidance on the submission of test results, and minimum information requirements.

d. A Declaration of Conformity with EU Directives on product safety, including:

- i) CE Marking Directives. ☐

e. Evidence that a quality assurance system/procedures is/are in place to:

- i) 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 Enhanced Capital Allowance Energy Technology List (ETL).
A copy of the terms and conditions can be found at https://www.gov.uk/guidance/energy-technology-list

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

For more information:

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