Energy Technology List

Department for Energy Security & Net Zero

Product application checklist

Please complete in BLOCK CAPITALS

Gas Fired Condensing Water Heaters

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 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 conform to the requirements of the Pressure Equipment (Safety) Regulation 2016 in respect of its design, manufacture and testing procedures?** ☐ ☐

1.2 **Does the product have an appropriate Conformity Assessment mark?** ☐ ☐

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 (i.e. 'self-tested') ☐

b) 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') ☐

c) Tested in a laboratory either in house or on-site, witnessed by an independent body (i.e. 'witnessed testing') ☐

d) Tested by an independent laboratory (i.e. 'independent testing') ☐

e) Representative model/s used. ☐

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

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

.....

1. Product testing and certification (continued)

	No	Yes

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 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 independent laboratory?

.....

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

.....

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

a) A product with individual performance test data (Go to 2) ☐

b) A product with the same constructional design as other products where 'Representative models' have been tested and are listed on the ETL ☐

c) A product with the same constructional design as other products that are not yet on the ETL, and where performance test data is being submitted for 'Representative models' with this application ☐

1.9 **What are the 'Representative models':**

ETL Product ID number	Product model numbers
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Where applications are being made for gas fired condensing water heaters that are variants of the same constructional design and rated outputs up to and including 400 kW to be included on the Energy Technology Product List (ETPL), test data may be submitted for a representative selection of models. 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 the lowest quartile of predicted performance 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.

Where applications are being made for products of the same constructional design and rated outputs greater than 400 kW to be included on the ETPL, test data may be submitted for a single representative model provided that the maximum rated output of the products being applied for is not more than twice, or less than half, the maximum rated output of the product tested. Where the range of rated outputs exceeds these limits, products should be grouped into size ranges that comply with these rules, and test data submitted for one representative model for each group.

2. Product type (Please tick one)

	No	Yes

2.1 **What type of gas fired condensing water heater is your product?**

a) Storage type (Go to 3) ☐

b) Non-storage, circulator (or multi-pass) type (Go to 4) ☐

c) Non-storage – instantaneous type (Go to 5) ☐

3.	Product performance: Storage type, gas-fired condensing water heaters	No	Yes
3.1	**Is the product's heat input less than or equal to 150kW?**	☐	☐
3.2	**Is the product a condensing gas-fired water heater?**	☐	☐
3.3	**Does the Minimum gross water heating energy efficiency (ηwh) meet the requirements of Table 1.1 of the Energy Technology List requirements?**	☐	☐
3.4	**Did you record the NOx emissions (mg/kWh) when the measured efficiency value in conformity with Table 1.1 was recorded?**	☐	☐
3.5	**Has the product been built and tested in accordance with the procedures and test conditions set out in BS EN 13203-2:2015?**	☐	☐
3.6	**Does the product comply with the requirements of the Water Supply (Water Fittings) Regulations 1999, Water Byelaws 2000 Scotland and Water Regulations Northern Ireland (for example, by inclusion in the Water Regulations Advisory Scheme's Water Fittings and Materials Directory, or equivalent schemes, such as KIWA and NSF)?**	☐	☐

Proceed to section 6

4.	Product performance: Non-storage – circulator type, gas-fired condensing water heaters	No	Yes
4.1	**Has the product's gross thermal efficiency been tested in accordance with the procedures set out in** *(please tick one)***:**		
	a) BS EN 303-3:1999		☐
	b) BS EN 303-7:2006		☐
	c) BS EN 15502-1:2012+A1:2015 / BS EN 15502-2-1:2012+A1:2016		☐
	d) BS EN 26:2015		☐
	e) BS EN 89:2015		☐
	f) Other applicable British or European standards?		☐
	Please state which other standards have been used:		
	.....		
	.....		
	.....		
4.2	**Is the product's gross thermal efficiency at least 93.7% at 30% load (and at a return temperature of 30°C)?**	☐	☐
4.3	**Is the product a condensing gas-fired water heater?**	☐	☐
4.4	**Is the product's gross thermal efficiency at least 85.6% at 100% load (and at a flow temperature of 80°C and a return temperature of 60°C)?**	☐	☐
4.5	**Did you record the NOx emissions (mg/kWh) when the measured efficiency value in conformity with Table 1.2 was recorded?**	☐	☐
4.6	**Does the product comply with the requirements of the Water Supply (Water Fittings) Regulations 1999, Water Byelaws 2000 Scotland and Water Regulations Northern Ireland (for example, by inclusion in the Water Regulations Advisory Scheme's Water Fittings and Materials Directory, or equivalent schemes, such as KIWA and NSF)?**	☐	☐
4.7	**Does the product use a fully premixed burner or a forced draught burner (or burners)?**	☐	☐
4.8	**Does the product automatically respond to changes in hot water demand by modulating its output in a continuous manner across a minimum turndown ratio of 5:1 without initiating a purge cycle?**	☐	☐

4.9 **Does the product use burners that are listed on the ETL?** ☐ ☐

If yes, please provide details of the ETL burners below and proceed to section 6.

ETL Product ID number	Product model numbers

4.10 **Does the product have a thermal rating in excess of 400kW?** ☐ ☐

If no, proceed to section 6.

4.11 **Does the product use a microprocessor based burner control system?** ☐ ☐

4.12 **Is each forced draught fan operated by a variable speed motor controller (or variable speed drive)?** ☐ ☐

4.13 **Does the product use mechanical dampers to modulate air flow?** ☐ ☐

If no, proceed to 4.14.

4.14 **Are all mechanical air dampers operated by a precision servomotor that is controlled by a positional or flow based feedback mechanism that automatically adjusts its operation to correct for mechanical wear, valve stiction and hysteresis?** ☐ ☐

4.15 **Does the product use control valves to modulate fuel flow?** ☐ ☐

If no, proceed to section 6.

4.16 **Are all fuel control valves operated by a precision servomotor that is controlled by a positional or flow based feedback mechanism that automatically adjusts its operation to correct for mechanical wear, valve stiction and hysteresis?** ☐ ☐

This requirement is not applicable to pneumatically operated modulating gas valves.

5.	Product performance: Non-storage – instantaneous type, gas-fired condensing water heaters	No	Yes
5.1	**Is the product capable of providing 'instantaneous' domestic hot water?**	☐	☐
5.2	**Is the product a condensing gas-fired water heater?**	☐	☐
5.3	**Has the product been built and tested in accordance with the procedures and test conditions set out in BS EN 26:2015?**	☐	☐
5.4	**Is the product's heat input greater than 70kW?** *If yes, proceed to 5.5.*	☐	☐
5.5	**Is the product fitted with an integral, fully pre-mixed, modulating burner?**	☐	☐
5.6	**Is the product's gross thermal efficiency at least 93.7% at 30% load (and at a return temperature of 30°C)?**	☐	☐
5.7	**Is the product's gross thermal efficiency at least 85.6% at 100% load (and at a flow temperature of 80°C and a return temperature of 60°C)?**	☐	☐
5.8	**Did you record the NOx emissions (mg/kWh) when the measured efficiency value in conformity with Table 1.2 was recorded?**	☐	☐
5.9	**Does the product comply with the requirements of the Water Supply (Water Fittings) Regulations 1999, Water Byelaws 2000 Scotland and Water Regulations Northern Ireland (for example, by inclusion in the Water Regulations Advisory Scheme's Water Fittings and Materials Directory, or equivalent schemes, such as KIWA and NSF)?**	☐	☐

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 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) 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 complied with the minimum specifications outlined in the test standard, and the required test conditions where 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 type testing procedures were used to select representative models for testing, please provide a written explanation of the reasons why these models were chosen, and evidence that the products covered by the representative model(s) are variants of the same constructional 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 two detailed test reports have been submitted (or in the case of representative testing one detailed test report) 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 one of the following:

- i) An appropriate Conformity Assessment mark. ☐
- ii) The Pressure Equipment (Safety) Regulations 2016. ☐

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 Energy Technology List.
A copy of the terms and conditions can be found **here**.

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

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