



# Energy Technology List

## Product application checklist

Please complete in BLOCK CAPITALS

### Automatic Monitoring and Targeting (aM&T) Sub-Metering Systems

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
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Where type testing has been used to demonstrate product performance please ensure that the information supplied is sufficient to demonstrate the performance of all products for which applications are being made.

**1.1 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')

*Please refer to Section 2 of ETL Guidance Note 5 "ETL 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.*

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

.....

**1.3 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. Product Testing and Certification (continued)	No	Yes
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**1.4** Where product testing has been witnessed by an independent body, what was the name of the witness?  
(Please include contact details).

**1.5** 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)?

2.1 Product type	No	Yes
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**2.1** What is your product category? (please tick one)

a) aM&T sub-metering software (please skip question 2.3)

b) aM&T sub-meters and sensors (please skip question 2.2)

c) aM&T sub-metering systems (please answer all questions in section 2.2, 2.3 and 2.4)

2.2 aM&T sub-metering software	No	Yes
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**2.2.1** Does the product meet the following requirements: (Tick all that apply)

a) Has some means of automatically capturing, retrieving & storing energy metering data electronically.

b) Enables the analysis of energy metering data with reference to and the key factors that influence energy use by means of visualising energy performance data.

c) Able to present the user/consumer with collected data via graph or data table provided as both 'on-line' visualisation or system extraction process to enable results to be used outside the system or transferred to alternative software; the data itself may be configurable for single meter or aggregation of meters where appropriate.

d) Be interoperable by using published communication protocols.

**2.2.2** Does the product: (Tick all that apply)

a) Automatically capture data from meters or sensors at regular intervals in order to provide energy performance indicators. The collection intervals may be user definable or configured for particular meter types.

b) Store and process meter readings made on a half hourly basis i.e twice an hour (as a minimum). The metering data may be transferred into the data store in real-time or at scheduled times.

c) Automatically identify and report data collection failures, missing metering data and the failure of communications with meters, transducers, and any other system components.

d) Present energy consumption data in graphical reporting formats (for example, histograms, line plots, etc.), and in user selectable time intervals / divisions / bases.

e) Export the collected energy data in a standard format for use in other applications (for example, ASCII files or other formats commonly used by standard office applications).

f) Retain a minimum of 2 complete years of metering data without loss of data resolution or accuracy, in a date/time stamped format, suitable for analysis of trends and patterns.

**2.2.3 Does the product provide facilities to enable the user to: (Tick all that apply)**

- a) Select datasets from individual meters and manipulate them by combining, comparing, and calculating in order to analyse, identify and evaluate instances of energy waste.
- b) Undertake regression analysis using two variables in whatever frequency the dataset was obtained, and to display the results in graphical form with a correlation coefficient.
- c) Set up automatic exception reporting functions that are capable of basing exception reports on the raw data profile; the frequency capability of notifications should be high with minimum gaps between notifications.
- d) Set up standard management reports that enable total energy consumption to be benchmarked against performance standards during a user selectable period.
- e) In addition to the functionality described in d, the product allows the user to compare energy consumption with the corresponding period in the previous year, including an analysis of energy use by meter, fuel type or energy accounting centre.

**2.3 aM&T sub-meters and sensors****No****Yes****2.3.1 Does the product use one or more meters that measure energy use for metering purposes and has communication capability?****2.3.2 What energy use does the product measure:**

- a) Electricity
- b) Gas
- c) Heat

**2.3.3 Does your product incorporate any of the sub metering equipment and sensors, as part of a suite of aM&T sub-meters and sensors that directly measure at least one of the three parameters described in question 2.3.2?**

- a) Oil fuel flow meters
- b) Compressed air flow meters
- c) Steam meters

2.3 aM&T sub-meters and sensors (continued)		No	Yes
<p><b>2.3.4</b> Where new meters (where applicable) are being installed, does the product conform to the following: (Tick all that apply)</p> <p><i>For full description see section 1.3.2 Functionality Requirements in the ETL criteria.</i></p> <p><b>Electricity meters</b></p> <ul style="list-style-type: none"> <li>a) Shall have, as a minimum, the capability of displaying the measured active energy and reactive energy.</li> <li>b) Be able to measure simultaneous values for voltage and current for each phase.</li> <li>c) Be able to measure instantaneous values for voltage, current, active power, reactive power, apparent power, and power factor.</li> <li>d) Be able to measure cumulative values for active energy, reactive energy, and apparent energy.</li> </ul> <p><b>Gas meters</b></p> <ul style="list-style-type: none"> <li>a) The volume of the gas should be corrected to standard reference conditions of 15°C and 1.01325 bar(a).</li> </ul> <p><b>Oil fuel flow meters</b></p> <ul style="list-style-type: none"> <li>a) Possess a minimum flow rate range of 4:1, where the flow rate range is defined as the range between the minimum flow rate (<math>Q_{min}</math>) and the maximum flow rate (<math>Q_{max}</math>).</li> </ul> <p><b>Compressed air flow meters</b></p> <ul style="list-style-type: none"> <li>a) The volume of the compressed air should be corrected to standard reference conditions of 15°C and 1.01325 bar(a).</li> </ul> <p><b>Steam meters</b></p> <ul style="list-style-type: none"> <li>a) Be capable of displaying the measured steam pressure and temperature, and the current mass flow rate and cumulative mass of steam.</li> <li>b) Shall have, as a minimum, the following components continuously measuring the steam properties and calculating the cumulative steam energy that has passed through the measuring system:                             <ul style="list-style-type: none"> <li>i) A flow meter – which determines how much fluid (steam) has passed through a pipe over a given time period.</li> <li>ii) A pressure sensor – to measure the pressure of steam flowing through the pipe.</li> <li>iii) A temperature sensor – to measure the temperature of steam flowing through the pipe.</li> <li>iv) A calculator/digital integrator – which uses the information provided by the flow meter, and pressure sensors to calculate the cumulative heat energy transferred through the pipe.</li> </ul> </li> </ul>			
2.4 aM&T sub-metering systems		No	Yes
<p><b>2.4.1</b> If the product is a aM&amp;T sub-metering system, then does the product meet all of the functionality requirements set out above referenced in sections 2.2 and 2.3, under the product categories aM&amp;T sub-metering software and aM&amp;T sub-meters and sensors?</p>			

3. Product performance		No	Yes
<b>3.1</b>	<b>If the product is a aM&amp;T sub-metering software sold as a Software as a Service (SaaS), then does it comply with the requirements from ISO 27001 on data security?</b>		
<b>3.2</b>	<p><b>If the product is a aM&amp;T sub-meter and sensor, then does the product meet the following requirements:</b> (Tick all that apply)</p> <p><i>Meters offering equivalent or better levels of accuracy to those specified above will be accepted, provided they meet the accuracy requirements of applicable British Standards. Please note that this includes all electricity, gas and heat meters conforming to the specific accuracy requirements of The Measuring Instruments Regulations 2016.</i></p> <p><b>Electricity meters</b></p> <ul style="list-style-type: none"> <li>a) BS EN 62053-21:2021</li> <li>b) BS EN 62053-22:2021</li> <li>c) BS EN 50470-1:2006+A1:2018</li> <li>d) BS EN 50470-3:2006+A1:2018</li> <li>e) BS 8431:2010</li> </ul> <p><b>Gas meters</b></p> <ul style="list-style-type: none"> <li>a) BS EN 12261:2018</li> <li>b) BS EN 12480:2018</li> <li>c) BS EN 1359:2017</li> </ul> <p><b>Heat meters</b></p> <ul style="list-style-type: none"> <li>a) BS EN 1434-1: 2018</li> <li>b) BS EN 1434-4: 2018</li> <li>c) BS EN 1434-5: 2019</li> </ul> <p><b>Where instrument transformers are used to measure energy use for metering purposes, does the product conform to the Class 1 accuracy requirements as per:</b></p> <ul style="list-style-type: none"> <li>a) BS EN 61869-2:2012</li> <li>b) BS EN 61869-3:2011</li> </ul> <p><b>Oil fuel flow meters</b></p> <ul style="list-style-type: none"> <li>a) The Measuring Instruments Regulations 2016 (Schedule 1, Section 7)</li> <li>b) The accuracy classification and Maximum Permissible Error (MPE) as defined within the Measuring Instruments Regulations 2016 (Schedule 1, Section 7)</li> </ul> <p><b>Compressed air flow meters</b></p> <ul style="list-style-type: none"> <li>a) The Measuring Instruments Regulations 2016 (Schedule 1, Section 7)</li> </ul> <p><b>Steam meters</b></p> <ul style="list-style-type: none"> <li>a) Conformity with the requirements of the appropriate BS EN ISO 5167 series of standards, if relevant for the steam meter</li> </ul>		
<b>3.3</b>	<b>If the product is a aM&amp;T sub-metering system, then does the product meet the performance requirements referenced above (question 3.1 and 3.2), under the product categories aM&amp;T sub-metering software and aM&amp;T sub-meters and sensors?</b>		

**4. 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\\_LOGIN/login](https://etl.beis.gov.uk/engetl/fox/live/ETL_LOGIN/login)

- 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 products 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 the test reports have not been prepared by an independent body, evidence that the accuracy of product performance data has been independently verified and cross-checked by an independent body

*Please refer to "ETL Guidance Note 5: 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 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:
- 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.*

## 5. 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 at [www.gov.uk/guidance/energy-technology-list](http://www.gov.uk/guidance/energy-technology-list).

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

### For more information:

**Web:**

<https://etl.beis.gov.uk/>

**Phone:**

+44 20 3096 4800

**Email:**

[info@etl.beis.gov.uk](mailto:info@etl.beis.gov.uk)

**Post:**

Energy Technology List Coordinator  
ICF  
Riverscape  
3rd Floor 10 Queens Street Place  
London  
EC4R 1BE

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