

Component Based AMT Systems

Date added to ETL 2003 (Revised 2008).

1. Definition of Technology

Automatic Monitoring & Targeting (AMT) Equipment helps to save energy by identifying energy wastage and ensuring the long-term effectiveness of other energy saving investment measures.

2. Technology Description

A component AMT system allows energy use information to be automatically gathered so that users can gain an understanding of energy consumption. It consists of components that measure, record, transmit, analyse, report and communicate the energy management information that a business needs to manage its energy use and to highlight unusual patterns of energy consumption.

A component based AMT system consists of the following components:

- Meter(s) (component A): Meter and transducers to confirm energy consumption and the 'key factors' that influence that consumption.
- Automatic Meter Reading (component B): Some means of capturing, retrieving & storing the data electronically.
- Analytical Software (component C): Analysis, production & communication of 'consumption' management reports.

All three components (A+B+C) must be present to create a complete component based AMT system.

Investments in component based automatic monitoring and targeting (AMT) systems can only qualify for Enhanced Capital Allowances, if the Department for Environment Food and Rural Affairs (DEFRA) has issued a 'certificate of compliance' with the eligibility criteria as set out below. This certificate can be issued at the design stage, but subsequent design changes need to be confirmed by DEFRA.

Information on how to apply for a certificate is available from ECAQuestions@carbontrust.co.uk.

The individual products purchased do not need to be named on the Energy Technology Product List.

3. Eligibility Criteria

A - Requirements for Component A -Meter(s)

a) Electricity Meters:

Electricity meters must meet the Class 2 accuracy requirements of one of the following standards:

- BS EN 61036:1997, "Alternating current static watt-hour meters for active energy (classes 1 and 2)".
- BS EN62053-21:2003, "Electricity metering equipment (a.c.) - Particular requirements - Part 21:Static meters for active energy (classes 1 and 2)".
- DD 8431:2005, "Electrical static metering for secondary or sub-metering - Specification" (BSI, ISBN 0 580 451178).

b) Gas meters:

Gas meters must meet the accuracy requirements of one of the following standards:

- BS EN12261:2002, "Gas Meters - Turbine gas meters".
 - BS EN12480:2002, "Gas Meters - Rotary displacement gas meters".
 - BS EN1359:1999, "Gas Meters - Diaphragm gas meter".
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c) Heat Meters:

Heat meters must conform to the requirements of:

- BS EN 1434-1:1997 or 2007, "Heat meters- Part 1: General requirements".

B - Requirements for Component B - Automatic Meter Reading (AMR)

Automatic Meter Reading must include the following attributes as a minimum:

- The Automatic Meter Reading component (B) must collate raw data from a combination of meters, sensors and other field devices (A) solely for the purpose of AMT.
- Automatic collection of metered data from a utility device(s) at regular intervals and transmission of data to the AMT software for processing.
- Collection intervals should be user adjustable to match the different types of meter and application requirements.
- Automatic identification of data collection failures, missing data and the failure of communication to any meter or other sensing device (this function may be carried out within the AMT software for some installations).
- Delivery of data in standard format for use in other applications (such as ASCII files or common formats for standard office applications).
- For pulse outputs from meters, the accuracy of integration and transmission should be within 0.5% of the total variable measured.
- Data other than pulse outputs shall be transmitted to the AMT software with no loss of accuracy.

C - Requirements for Component C - Analytical Software (i.e. AMT Software)

The Analytical Software (i.e. AMT software) should have the following minimum capability:

- Real-time or scheduled transfer of data into the user's AMT database.
- Store and process interval meter readings to at least a minimum of 30-minute intervals.
- Present data in both a graphical and tabular format i.e. histograms, line plots, etc. Selectable time bases with periods of 30 minutes, 1 day, 1 week, 4 weeks, 1 calendar month, and 1 year.
- Ability to select datasets and manipulate them by combining, comparing and calculating in order to analyse, identify and evaluate instances of energy waste.
- Regression analysis on data streams using two variables in whatever frequency the dataset obtained. Display in graphical form with correlation coefficient.
- Automatic exception reporting where period consumption is outside a selected variance from a standard or selected data set.

4. Scope of Claim

A complete component based AMT system comprises meter(s), a meter reading system and analytical software (i.e. components A, B and C). All three components must be present and comply with the eligibility criteria in order to claim an Enhanced Capital Allowance (ECA). However, in some instances, only part of the component based AMT system may be eligible for an ECA where:

- The means of capturing, retrieving & storing data electronically is not solely used to monitor energy use for energy management purposes (e.g. the AMT component B is integrated within a BEMS, an IT network or the internet), then an ECA cannot be claimed on component B. Whilst this type of component B is not eligible for an ECA, it can be used to complete a component based AMT system installation (i.e. components A, B and C are in place).
 - Analysis, production & communication of 'consumption' management reports is provided by an internet-based service provider, then an ECA cannot be claimed on component C. Whilst this type of component C is not eligible for an ECA, it can be used to complete a component based AMT system installation (i.e. components A, B and C are in place).
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- New components are added to pre-existing, but otherwise qualifying components (i.e. components installed in a previous tax year) to create a component AMT system then only those newly installed components will be eligible for ECAs.

Expenditure on the provision of plant and machinery can include not only the actual costs of buying the equipment, but other direct costs such as the transport of the equipment to site, and the direct costs of installation. Clarity on the eligibility of direct costs is available from [HMRC](#).