

ASTCEA02

Establish the asset ratings of commercial buildings



Overview

This standard is about establishing the asset rating of existing buildings in line with the Energy Performance of Building Directive.

It covers the gathering and interpretation of a wide range of information about the structure and use of the building as well as on-site inspections and reviews of asset energy efficiency as a precursor to establishing its actual energy performance.

This standard is for professionals in energy management and advice.

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Performance criteria

You must be able to:

- P1 evaluate the relevance of building characteristics and their effect on the potential energy performance of the property
- P2 use tools to identify appropriate models for the building
- P3 identify factors not deemed to effect energy performance including assumptions made in relation to these factors
- P4 establish the site layout, type of building, dimensions, geometry, zoning, geographical location, orientation and the nearby urban structures and natural environment affecting the exposure of the building from inspection, drawings and specifications
- P5 identify actions to be taken when accurate data is not available
- P6 identify the air tightness of the building from specifications and/or tests
- P7 identify the ventilation strategy and characteristics of the building from specifications and/or tests
- P8 identify the heating, cooling and hot water systems being used from drawings, tests, specifications and observations
- P9 identify the nature of artificial lighting controls and systems being used from drawings, specifications and observations
- P10 identify the types of fabric and building elements from drawings, specifications and observations on site
- P11 determine the thermal transmittances (u values) of opaque elements in accordance with the relevant technical standards for the types of construction
- P12 determine the Target Emission Rate (TER) and Buildings Emission Rate (BER) and other relevant ratings
- P13 take into account elements and processes excluded from the asset rating

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Knowledge and understanding

You need to know and understand:

- K1 the design intent of the building and the systems within it, and the impact of any changes in building usage over time
- K2 relevant aspects of legislation and regulations
- K3 the activities, products, systems and processes of the organisation and their impact on energy and carbon consumption
- K4 detailed assessment requirements that apply to the property as defined by the approved tool
- K5 the definitions and conventions embodied within the approved tool
- K6 the principles of building structure, elements, fabric, services and overall design philosophy
- K7 the use of energy performance rating calculations
- K8 how to recognise the various types of building construction and materials from inspection, drawings, specifications and services
- K9 how to evaluate the ventilation strategy and characteristics
- K10 how to establish the level of air tightness in a building
- K11 the requirements and application of current relevant Building Regulations that apply to the energy performance of buildings
- K12 the various emission rates and how to calculate them
- K13 the requirements and application of other technical standards relevant to energy performance
- K14 the assumptions made in determining energy performance
- K15 the factors not deemed to affect energy performance
- K16 how to collate the information required to assess energy performance
- K17 the Target Emission Rate (TER) and Buildings Emission Rate (BER) and how to calculate each
- K18 the prescribed format and content of an Energy Performance Certificate
- K19 approved tools to produce Energy Performance Certificates
- K20 the principles underpinning the approved tool for calculating energy ratings

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