

Background to legislation and methodology

The requirement for public buildings to put energy certificates on display arises from the EU Directive on the Energy Performance of Buildings (EPBD).

Except in Scotland, the UK is using two complementary procedures to quantify the energy efficiency of a non-residential building:

1. Energy Performance Certificates (EPCs), reflecting the intrinsic efficiency of a building assuming standard use (the Asset Rating). EPCs are required when a building is constructed, sold or let.
2. Display Energy Certificates (DECs), based on the actual amount of energy used by a building over a year (the 'Measured' or 'Operational' Rating). DECs must have been displayed prominently by all 'Public Buildings' over 1,000 m² from 1 October 2008.

Buildings needing a DEC

A DEC is required by any building visited by the public and occupied by a public authority or by an institution providing a public service. A building with multiple occupiers may need several DECs; each is considered separately.

Certificate content and layout

A DEC is valid for a period of 12 months. An example of a DEC is illustrated. It provides four main results:

1. The headline grade, i.e. a letter from A to G as commonly used for other energy labels, combined with an index called the operational rating, which provides greater resolution. The index is calculated from the actual CO₂ emissions as a percentage of the benchmark emissions typical for the building being assessed. The linear A to G scale ranks a typical building, with an index of 100, at the D/E boundary. If mixed-use, the area of each type of use must be measured separately in order to calculate a composite benchmark for the total space.
2. The total carbon footprint of the building in tonnes of CO₂ per year, for the last three years. (The CO₂ saved by the use of renewable energy sources is shown below the axis.)
3. The operational rating index for the last three years.
4. The electricity and fuel/heat delivered to the building, and their respective separate benchmarks.

Quality assurance

Only a trained and accredited public building energy assessor (PBEA) can produce an official DEC. The PBEA must retain suitable evidence to satisfy quality control checks by their Accreditation Scheme.