
Glossary of terms

Air Infiltration: The uncontrolled entry of fresh air into a building through air leakage paths, e.g. gaps at junctions between external building elements and around openings, unsealed penetrations of the building envelope..

Building Envelope: The building envelope is the line of separation between the inside and outside environments of a building.

Building Physics: The science of heat and moisture in buildings along with acoustical and light-related properties. Basic considerations include requirements for heating, sound, and lighting as well as comfort, air quality and general health of the internal environment.

Cost-optimal Level: The energy performance level which leads to the lowest cost during the estimated economic lifecycle.

Deep Retrofit: An investment in energy efficiency which saves 40% or more on energy bills. This typically involves a combination of two or more of the following: roof and wall insulation, renewable energy products, highly efficient heating system and heating controls.

Energy Audit: An assessment of the existing energy consumption of a building or service to identify and quantify cost-effective energy savings opportunities, and report the findings.

Energy Consumption: The amount of energy used excluding electrical generation and distribution losses.

Energy Performance Certificate: A certificate stating the energy performance of a building calculated using the national methodology as per European law. For domestic buildings, this is the Building Energy Rating (BER).

Energy Performance of a Building: The amount of energy measured or estimated to meet the different needs associated with the use of the building, which may include among other things: heating, cooling, hot water heating, insulation, ventilation and lighting, but also design and positioning in relation to climate and access to useful sunlight and influence of neighbouring structures, own-energy generation and other factors, including indoor climate, that influence the energy demand.

Nearly Zero Energy Building: A building that has very high energy performance, as determined in accordance with Annex I of the EPBD recast. The nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby [EPBD recast, 2010/31/EC].

Payback time/period: The length of time required to recover the cost of an investment.

Primary Energy: Energy from renewable and non-renewable sources which has not undergone any conversion or transformation process.

Renewable Energy Solutions: These are products that can produce energy from renewable sources such as sun, wind, water or air such as solar panels, wind turbines, wave turbines or heat pumps. Exclusively wood burning fires or boilers may also be considered 'renewable' as we can grow more trees.

Thermal Bridging: A fundamental of heat transfer that occurs in building envelopes when materials with high thermal conductivity (also called non-insulating material), such as steel, timber and concrete create pathways for heat loss that bypass thermal insulation.

Thermal Conductivity: The property of a material to conduct heat.

U-Value: U-value is the measure of the rate of heat loss through a material. It represents the amount of heat lost through one square meter of the material for every degree difference in temperature either side of the material. It is indicated in units of Watts per meter Squared per Degree Kelvin or W/m^2K .

Ventilation: Ventilation is the controlled supply of outside fresh air to a building by natural and/or mechanical systems.