

## ANNEX I

### **Common general framework for the calculation of energy performance of buildings(referred to in Article 3)**

1. The energy performance of a building shall be determined on the basis of the calculated or actual annual energy that is consumed in order to meet the different needs associated with its typical use and shall reflect the heating energy needs and cooling energy needs (energy needed to avoid overheating) to maintain the envisaged temperature conditions of the building, and domestic hot water needs.
2. The energy performance of a building shall be expressed in a transparent manner and shall include an energy performance indicator and a numeric indicator of primary energy use, based on primary energy factors per energy carrier, which may be based on national or regional annual weighted averages or a specific value for on-site production.

The methodology for calculating the energy performance of buildings should take into account European standards and shall be consistent with relevant Union legislation, including Directive 2009/28/EC.

3. The methodology shall be laid down taking into consideration at least the following aspects:
  - (a) the following actual thermal characteristics of the building including its internal partitions:
    - (i) thermal capacity;
    - (ii) insulation;
    - (iii) passive heating;
    - (iv) cooling elements; and
    - (v) thermal bridges;
  - (b) heating installation and hot water supply, including their insulation characteristics;
  - (c) air-conditioning installations;
  - (d) natural and mechanical ventilation which may include air-tightness;
  - (e) built-in lighting installation (mainly in the non-residential sector);
  - (f) the design, positioning and orientation of the building, including outdoor climate;
  - (g) passive solar systems and solar protection;
  - (h) indoor climatic conditions, including the designed indoor climate;
  - (i) internal loads.
4. The positive influence of the following aspects shall, where relevant in the calculation, be taken into account:
  - (a) local solar exposure conditions, active solar systems and other heating and electricity systems based on energy from renewable sources;
  - (b) electricity produced by cogeneration;

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- (c) district or block heating and cooling systems;
  - (d) natural lighting.
5. For the purpose of the calculation buildings should be adequately classified into the following categories:
- (a) single-family houses of different types;
  - (b) apartment blocks;
  - (c) offices;
  - (d) educational buildings;
  - (e) hospitals;
  - (f) hotels and restaurants;
  - (g) sports facilities;
  - (h) wholesale and retail trade services buildings;
  - (i) other types of energy-consuming buildings.