Energy performance of buildings. Recast

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In accordance with Article 5(4) and Article 23 of Directive 2010/31/EU on the energy performance of buildings, this report reviews progress achieved by Member States in **reaching cost-optimal levels of minimum energy performance requirements for new and existing buildings**, and also for building elements.

The Commission recalled that buildings are central to the EU's energy efficiency policy. Nearly **40 %** of final energy consumption and **36 %** of greenhouse gas emissions is due to houses, offices, shops and other buildings.

Cost-optimality: this term is defined in the Directive. It is the energy performance (measured in kWh/m2 of primary energy) that **leads to the lowest cost during the estimated building life cycle** (30 years for residential buildings and 20 years for non-residential buildings).

The cost calculations (expressed in net present value) include investment costs in energy efficiency and renewable energy measures, maintenance and operating costs, energy costs, earnings from energy produced and disposal costs (costs for deconstruction at the end of a building's life).

The EU legislators decided to establish under the Directive a **benchmarking mechanism** to calculate the cost-optimal level of energy performance requirements for new and existing buildings, both residential and non-residential.

This benchmarking mechanism indicates where Member States are setting performance requirements that are below cost-optimal levels, meaning that there is an untapped cost-efficient energy-saving potential in national building stocks.

The benchmarking mechanism is drawn up based on a **framework methodology** that enables the comparison of energy efficiency measures, measures incorporating renewable energy sources and various combinations of these measures. This framework enables the Commission to measure Member States' progress in reaching cost-optimal levels of minimum performance requirements.

The use of the cost-optimal framework methodology contributes to **setting minimum performance requirements for new and existing buildings** and building elements (e.g. walls, roof, windows, etc.) in line with the technical and economic energy-saving potential and specific national and regional conditions. Furthermore, it enables the definition of efficiency levels that are cost-efficient for households and investors.

Detailed provisions on minimum performance requirements with a view to achieving cost optimal levels are laid out in Commission Delegated Regulation (EU) No 244/2012.

Main conclusions of the report: the report noted that all Member States, **except Greece, have submitted cost-optimal calculations**. In most cases, **requirements were met** for both the Directive on the energy performance of buildings and the Delegated Regulation on the framework methodology. The other cases are being followed up by the Commission as appropriate.

The report stressed that:

- **the objective of the cost-optimal framework methodology was achieved**, because it informed decision-making on setting minimum energy performance requirements at national and regional levels at the 'right' (i.e. cost-effective) level;
- the cost-optimal calculations have shown that there is **still a significant potential for cost-effective energy savings** that can be achieved by bridging the gap between the current minimum requirements and cost-optimal levels.

The report noted that for the first time, a benchmarking framework based on the cost-optimal methodology proposed in the Directive and the Regulation was used. This enabled the comparison and combination of various energy efficiency and renewable energy technologies. This work supported national authorities in their task of setting realistic minimum energy performance requirements for buildings and in preparing the ground for meeting the targets for nearly zero- energy buildings.

However, the potential of **different types of renewable energy** could have been better explored in the calculations and **better statistical information** on national building stocks could be sought.

The Commission will fully use its powers under the Treaty to **ensure that the Directive on the energy performance of buildings is correctly implemented**. This includes achieving the cost-optimal levels of minimum energy performance requirements, within the indicated timeline, to ensure that the EU's longer-term energy and climate objectives, and the contribution of the building sector to meeting those objectives are fulfilled.