
Briefing on Energy Performance of Building's Directive

This provides a legally binding path towards very low energy buildings: from the end of 2020, all new buildings must have "nearly zero energy" demand. This is the key driver for the 2010 revision of Building Regulations Part L. The deadline for public buildings is the end of 2018. The recast introduces for the first time a European-wide definition of nearly zero energy buildings [NZEB]. This definition requires a decreased energy use in buildings but also entails a renewable energy requirement:

"The nearly zero or very low amount of energy required should to a very significant extent be covered by energy from renewable source, including renewable energy produced on-site or nearby"

Key implications in outline

- Building elements when being replaced must be to cost-optimal standards of energy efficiency.
- When buildings undergo major refurbishment, "alternative" technical systems to be evaluated.
- Minimum performance requirements to be set for replacement technical systems in existing buildings.
- Regular inspections of HVAC systems [or "advice" which achieves the equivalent], accompanied by report with recommendations.
- The 1000m² threshold for major renovations was removed thus ensuring that all major refurbishment works will lead to compliance with minimum efficiency requirements for buildings of all sizes.
- Near Zero Energy (new) Buildings by 2018/2020, with radical implications for building envelope standards such as roofs and cladding

The key articles

Article 1 Subject Matter

(c) the application of minimum requirements on the energy performance of existing buildings, building units and building elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope when they are retrofitted or replaced and on technical building systems whenever a new one is installed or when one is replaced or upgraded.

Article 4 Setting of minimum energy performance requirements

- Member States shall take the necessary measures to ensure that minimum energy performance requirements are set for elements that form part of the building envelope and that have a significant impact on the energy performance of the building envelope, when they are replaced or retrofitted, with a view to achieving cost optimal levels.

- “Cost optimal level” means the energy performance level which leads to the lowest cost during the economic life cycle. (Article 2.10)
- The Commission shall establish by 30 June 2011 a comparative methodology framework for calculating cost optimal levels of minimum energy performance requirements for buildings and building elements... (Article 5.1)

Article 7 Existing buildings

- Member States shall in addition take the necessary measures to ensure that when a building element that forms part of the building envelope and has a significant impact on the energy performance of the building envelope, when it is retrofitted or replaced, the energy performance of the building element meets minimum energy performance requirements insofar as this is technically, functionally and economically feasible.
- Member States shall encourage, in relation to buildings undergoing major renovation, that high efficiency alternative systems* are considered and taken into account insofar as this is technically, functionally and economically feasible.

Article 8 Technical building systems

- Member States shall, for the purpose of optimising the energy use of the technical building system, set system requirements in respect of the overall energy performance, the proper installation, and the appropriate dimensioning, adjustment and control of the technical building systems which are installed in existing buildings. Member States may apply these system requirements also to new buildings.
- Member States shall encourage the introduction of intelligent metering systems whenever a building is constructed or undergoes major renovation.....

Article 9 Near zero energy buildings

- NZEB is one in which has zero or very low energy demand, which is met to a very significant extent from renewables (Article 2.1a)
- By December 2020, all new buildings to be NZEB.
- After December 2018, all public authority new buildings to be NZEB.
- Member States to draw up national plans for moving towards NZEB (to include targets for 2015).

Article 13 Inspection of heating systems

- Boilers > 20 kW “regular inspections”
- Non-gas boilers > 100 kW “at least every two years”
- Gas boilers > 100 kW; at least every four years
- Alternatively Member States can adopt the “advice” option, provided it is to the satisfaction of the Commission.

Article 14 Inspection of air conditioning systems

- Systems > 12 kW “regular inspections”
- Alternatively Member States can adopt the “advice” option, provided it is to the satisfaction of the Commission.

Article 15 Reports on the inspection of heating and air conditioning systems

- Report to be issued after each inspection, to include recommendations for the “cost-effective improvement of the energy performance of the inspected system.”
- The recommendations may be based on a comparison with best available practice.
- The report shall be handed over to the owner or tenant of the building.