



# BER IRELAND

BUILDING ENERGY CONSULTANTS

## Building Regulations 2007. Technical Guidance Document L. Conservation of Fuel and Energy – New Dwellings.

Applies to new dwellings, where the work commences or takes place, on or after *1 July 2008*. Exempted from this regulation are dwellings where the work commences before July 2008, or where planning permission has been applied for before June 30, 2008 and substantial work has been completed by July 1 2009.

### Guidelines

1. **Primary Energy Consumption and Related CO<sub>2</sub> emissions.** Limits now set for Maximum Permitted Energy Performance Coefficient, and Maximum Permitted Carbon Performance Coefficient. The DEAP software will be modified to perform these calculations.
2. **Renewable Technology** - Each dwelling should have a minimum of 10 kWhr/m<sup>2</sup>/annum supplied from renewable technologies.
3. **Building Fabric** –
  - *Fabric Insulation* - Acceptable levels of thermal insulation for each of the plane elements of the building are now defined. Where the combined area of external door, window and rooflight openings exceed 25% of the floor area than the U vales are adjusted upwards.
  - *Thermal Bridging* – Heat loss associated with thermal bridges is now taken into account in calculating energy use and CO<sub>2</sub> emissions using the DEAP methodology..
  - *Building Envelope Air Permeability* – to be measured by means of pressure testing of a building prior to completion. A performance level of 10m<sup>3</sup>/(hr.m<sup>2</sup>) represents a reasonable upper limit for air permeability.
4. **Building Services** –
  - *Boiler efficiency* to be not less than 86%.
  - *Space Heating and Hot Water Supply System Controls* – a) Automatic control of space heating on basis of room temperature, b) automatic control of heat input to stored hot water on basis of stored water temperature, c) separate and independent automatic time control of space heating and hot water, d) shut down of boiler or other heat source when there is no demand for either space or water heating from that source.
  - *Insulation of Hot Water Storage Vessels, Pipes and Ducts*
  - *Mechanical Ventilation Systems* – Minimum performance levels set.
  - *Fixed Lighting* – Internal and External Lighting will need to meet new limits that can be considered to be energy efficient.

The regulations contain several Appendices covering Calculation of U-Values, Fabric Insulation Guidance for Common Construction, Reference Values for calculation of Energy Performance Coefficient (EPC) and Carbon Performance Coefficient (CPC), and Achieving Compliance with respect to EPC and CPC.

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