

Part L: onwards and upwards

Enhancements continue to be made to Part L, which addresses energy efficiency directly as well as providing the legal framework for change, writes Dr Haithan Askar of the National Energy Foundation (NEF)



There is a danger that regulations based on labels, whether applied to white goods or buildings, tend to produce designs that are just adequate to meet a threshold.

Market forces motivate designers to provide solutions that settle in the midrange; in other words, if buildings are rated between A and G, designs focus on ratings of C and D. Over time, regulation can remove designs that perform badly and the market will drive building design

improvement.

Part L is the main statutory framework that controls energy efficiency in buildings in England and Wales. This covers both dwellings and non-domestic properties at the new build stage as well as controlled works on existing properties. The equivalent is Part J in Scotland.

The regulations have seen many changes and progressive improvements up to the latest version (2006). The main changes in the way threshold compliance is assessed is through:

“MARKET FORCES MOTIVATE DESIGNERS TO PROVIDE SOLUTIONS THAT SETTLE IN THE MIDRANGE”

- Meeting a CO₂ emission performance target expressed in kg/m²year – currently around 20% lower than 2002 Part L regulations
- Meeting minimum standards for fabric and building services efficiency; this also ensures linkage to other parts of the regulations eg. Part F, which deals with ventilation
- Passive control features to limit overheating
- Demonstrate that actual performance is consistent



- with design predictions
- Limits on some design features such as for mechanical cooling and fixed lighting.
- Relevant information must be provided to building users showing that a building is compliant with design specifications, ie its Building CO₂ Emission Rate (BER) and Target CO₂ Emission Rate (TER) are met

The performance and compliance is addressed by the DCLG through two accredited national calculation methods, which cover the energy models for estimating energy use and CO₂ emissions – currently SAP 2005 for dwellings and SBEM in the non-dwelling sector.

However, a review is already underway and consultations started on what will be a new version of Part L in 2010.

The Code for Sustainable Homes is also set to impact on domestic Building Regulations, as set out by Margaret Beckett, the Housing Minister, on December 17 2007.¹

Part L of the Building

Regulations for the non-domestic sector, and in particular the National Calculation Method, are also due for renewal.

It is likely that there will be a phased reduction of CO₂ emissions by non-domestic buildings similar to the Code for Sustainable Homes, with all such buildings to become carbon neutral by 2019 (possibly earlier in Wales).

The revision process started in June 2008, and results from the Steering Group (on which the NEF is represented) have been sent to local authorities and regulatory bodies for consultation.

Suggested changes include updates on certain technologies, self certification and notifiable work as well as referencing in the Approved Document, ie. the description of the thermal performance of building elements.

Currently, the TER is calculated on the basis of building use classification (e.g. office, retail – with several sub-classifications) and using the floor area. The TER covers electrical demand (assumed to cover fans, pumps, general lighting, cooling and other

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defined equipment) and fossil fuel demand for heating (space and water heating).

The recommendations are set to further reduce emissions through tightening the thermal performance of the building fabric, fittings and services. This may extend to the currently unregulated part of the service load, such as lifts, decorative and security lighting and air curtains which represent a significant part of the total energy load for many non-domestic buildings.

Meanwhile, as an organisation, the NEF tries to

