

# Module 15

## Country Specific Legislation

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- On completion of this module learners will be able to:
  - List the main pieces of legislation and standards which affect the energy performance of buildings in their country
  - Identify the main elements of the standards and legislation
  - Discuss how the main elements have been implemented and how compliance is checked

# Climate Change Act 2008

## The target for 2050

- (1) It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline.

# UK Building Regulations



# Main UK building regulations affecting energy:

- **Part L** – Conservation of Fuel and Power
- **Part F** – Means of Ventilation
- **Part G** – Cold water supply and water efficiency

# Module 15.1

## Part L

# Conservation of Fuel and Power

# Part L1A – New Build - Dwellings

**Table 2 Limiting fabric parameters**

Roof	0.20 W/m <sup>2</sup> .K
Wall	0.30 W/m <sup>2</sup> .K
Floor	0.25 W/m <sup>2</sup> .K
Party wall	0.20 W/m <sup>2</sup> .K
Windows, roof windows, glazed rooflights, curtain walling and pedestrian doors	2.00 W/m <sup>2</sup> .K
Air permeability	10.00 m <sup>3</sup> /h.m <sup>2</sup> at 50 Pa

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# Part L1B – Existing Buildings - Dwellings

Table 3 Upgrading retained thermal elements		
Element <sup>1</sup>	(a) Threshold U-value W/m <sup>2</sup> ·K	(b) Improved U-value W/m <sup>2</sup> ·K
Wall – cavity insulation <sup>2</sup>	0.70	0.55
Wall – external or internal insulation <sup>2</sup>	0.70	0.30
Floor <sup>4,5</sup>	0.70	0.25
Pitched roof – insulation at ceiling level	0.35	0.18
Pitched roof – insulation between rafters <sup>6</sup>	0.35	0.18
Flat roof or roof with integral insulation <sup>7</sup>	0.35	0.18

1. Threshold U-values for walls and roofs of dwellings and for floors of dwellings and for roofs of dwellings (excluding dwellings with integral insulation)

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# Part L2A – New Build – Non Domestic

**Table 4 Limiting fabric parameters**

Roof	0.25 W/m <sup>2</sup> .K
Wall	0.35 W/m <sup>2</sup> .K
Floor	0.25 W/m <sup>2</sup> .K
Windows, roof windows, rooflights <sup>2</sup> , curtain walling and pedestrian doors <sup>1,2</sup>	2.2 W/m <sup>2</sup> .K
Vehicle access and similar large doors	1.5 W/m <sup>2</sup> .K
High-usage entrance doors	3.5 W/m <sup>2</sup> .K
Roof ventilators (inc. smoke vents)	3.5 W/m <sup>2</sup> .K
Air permeability	10.0 m <sup>3</sup> /h.m <sup>2</sup> at 50 Pa

Minimum

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# Part L2B – Existing Buildings – Non Domestic

**Table 5 Upgrading retained thermal elements**

Element <sup>1</sup>	U-value W/m <sup>2</sup> .K	
	(a) Threshold	(b) Threshold
Wall – cavity insulation	0.70	0.55 <sup>2</sup>
Wall – external or internal insulation	0.70	0.30 <sup>2</sup>
Floors <sup>4,5</sup>	0.70	0.25
Pitched roof – insulation at ceiling level	0.35	0.16
Pitched roof – insulation at rafter level <sup>6</sup>	0.35	0.16
Flat roof or roof with integral insulation <sup>7</sup>	0.35	0.18/0.20

Notes:

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# Module 15.2

## Part F

# Means of Ventilation

# Examples of Part F - Means of Ventilation

## NEW DWELLINGS

**Table 5.2b System 2 – Passive stack ventilation (PSV) (for additional information see Table 5.3 and worked examples C2 and C6 in Appendix C)**

...ion of system 2

**Table 5.1b Whole dwelling ventilation rates**

	Number of bedrooms in dwelling				
	1	2	3	4	5
Whole dwelling ventilation rate <sup>a,b</sup> (l/s)	13	17	21	25	29

**Notes:**

- a. In addition, the minimum ventilation rate should be not less than 0.3 l/s per m<sup>2</sup> of internal floor area. (This includes all floors, e.g. for a two-storey building add the ground and first floor areas.)
- b. This is based on two occupants in the main bedroom and a single occupant in all other bedrooms. This should be used as the default value. If a greater level of occupancy is expected add 4 l/s per occupant.

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# Module 15.3

## Part G

including

Cold water supply and water  
efficiency

## Part G including Cold water supply and water efficiency

...Hot water supply to a bath should be a maximum of 48°C...

...Where solar water heating systems are used, there should be an additional form of water heating..

...and many more!

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# Recent developments

- The EST provides grants and advice to the public to help them reduce energy use in the home.
- The government has slashed by half its funding of the Energy Saving Trust (EST), the Guardian has learned.
- Speaking to the Confederation of British Industry in November, Huhne said: "Energy saving is the cheapest way of closing the gap between demand and supply."
- Days after becoming prime minister, David Cameron told Decc officials that he wanted his administration to be the "greenest government ever."

Source: The Guardian Online

# Carbon Reduction Commitment (CRC) Energy Efficiency Scheme

The CRC Energy Efficiency Scheme is a new, mandatory, energy-saving and carbon emissions-reduction scheme for the UK.

It will see big companies compete against one another to cut their energy bills fastest, in a bid to rank highest in a league table where the leaders will be financially rewarded.

Source: The Guardian Online

# CRC II

All public and private sector organisations that used at least one half-hourly electricity meter during 2008 qualify for CRC and will have to register for the scheme. It will involve approximately 20,000 large organisations.

These organisations will also appear in an annual performance league table, ranked on the energy cuts they make over time.

Source: The Guardian Online

# CRC III

Once fully operational, participants will be required to monitor their emissions and purchase allowances for each tonne of CO<sub>2</sub> they emit at the beginning of each reporting year. The first main sale of allowances happens in April 2011, covering projected CO<sub>2</sub> emissions for April 2011 to March 2012.

The Environment Agency is the lead UK administrator for the scheme and will run the CRC registry.

Source: The Guardian Online

The end!