Building Energy Rating (BER) for Non Domestic Buildings

Chris Hughes
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Presentation Outline

- Transposition of EPBD Requirements
- Role of SEAI
- Building Energy Rating (BER)
- Demonstrating compliance with specific aspects of Part L of the Building Regulations
- Consideration of alternative energy systems for new buildings over 1,000m²
- BER Statistics
- Implications for Building Control
Energy Performance of Buildings Directive (EPBD)
Main EPBD Requirements

- Energy Performance Certificate / Building Energy Rating (BER) certificate required when buildings are constructed, sold or rented
- Display Energy Certificates required for buildings over 1,000m² occupied by public authorities
- Consideration of alternative energy systems for new buildings over 1,000m²
  - Decentralised energy supply systems based on renewable energy
  - Combined Heat and Power (CHP)
  - District or block heating or cooling, if available
  - Heat pumps
- Inspection of boilers
- Inspection of air conditioning systems
Transposition of EPBD Requirements

- S.I. No. 666 of 2006
  - Building Energy Rating
  - Alternative Energy Systems
  - Display Energy certificates
- S.I. No. 229 of 2008
  - Building Energy Rating
- S.I. No. 259 of 2008
  - Building Energy Rating
- S.I. No. 591 of 2008
  - Display Energy Certificates
Role of SEAI

- SEAI is the designated Issuing Authority
- Provision of methodologies and calculation software
- Defining rules for competence and conduct
- Administering National BER Scheme:
  - Registering BER assessors
  - Processing BER assessments
  - Hosting BER registers
  - Quality Assurance and auditing
  - Helpline
- Promoting awareness of BER
- Advice and support to Government Departments
Building Energy Rating (BER)

- Seller provides BER Certificate and Advisory Report to prospective buyers or tenants when a building is:
  - Constructed
  - Sold or
  - Rented

- Provisional BER Certificate and Advisory Report if selling off plans
Exemptions

- a national monument for the purposes of the National Monuments Acts 1930 to 2004, including a recorded monument under the provisions of Section 12 of the National Monuments (Amendment) Act 1994 or a registered historic monument under the provisions of the Section 5 of the National Monuments (Amendment) Act 1987
- a protected structure or proposed protected structure within the meaning of the Planning and Development Acts 2000 to 2006
- a building used as a place of worship or for the religious activities of any religion
- a temporary building as defined in Classes 10 to 13 of the Third Schedule to the Building Regulations 1997 (S.I. No 497 of 1997)
- an industrial building not intended for human occupancy over extended periods and where the installed heating capacity does not exceed 10 W/m$^2$
- a non-residential agricultural building where the installed heating capacity does not exceed 10 W/m$^2$
- a stand alone building with a total useful floor area of less than 50m$^2$

NOTE: Short term lettings are NOT exempt
Introduction of BER for Non Domestic Buildings

- July 2008 - New Non Domestic Buildings*
- January 2009 - Existing Non Domestic Buildings

* Transitional exemption for new non domestic buildings that applied for planning permission before 1 July 2008 and substantially complete by 1 July 2010
Non Domestic BER Certificate

- Calculated using official method
- Aligned with pr EN 15217
- Principal scale based on ratio of primary energy kWh/m²/year relative to notional building
- Secondary scale based on ratio of CO2/m²/year relative to notional building
- Must be produced by registered BER assessor
- Valid 10 years unless changes are made to building
Non Domestic Energy Assessment Procedure (NEAP)

- Methodology for demonstrating compliance with specific aspects of Part L of the Building Regulations.

- Generates Building Energy Rating and advisory report

- Energy consumption is expressed in kWh/m²/yr and the CO2 emissions expressed in kg CO2/m²/yr.

- NEAP permits use of approved software or default calculation tool, Simplified Building Energy Model.

- SBEM, based on CEN standards, was developed by BRE on behalf of the UK Department of Communities and Local Government.
Demonstrating compliance with specific aspects of Part L of the Building Regulations

- Building complies with specific aspects of Part L of the Building Regulations
- Carbon performance Coefficient (CPC) 0.78 less than or equal to Maximum Permitted Carbon Performance Coefficient (MPCPC) 1.0
- Energy performance Coefficient (EPC) 0.76 less than or equal to Maximum Permitted Energy Performance Coefficient (MPEPC) 1.0
- U-values satisfy those specified in the overall heat loss method in the Building Regulations (Ireland) Part L
Consideration of Alternative Energy Systems for New buildings over 1,000m²

• Applies to the design of any large building for which a planning application is made, or a planning notice is published, on or after 1 January 2007

• Consideration of alternative energy systems for new buildings over 1,000m²
  – Decentralised energy supply systems based on renewable energy
  – Combined Heat and Power (CHP)
  – District or block heating or cooling, if available
  – Heat pumps

• The results of the consideration of the feasibility of alternative energy systems … shall be incorporated in a report on the design of the relevant large building and shall be retained by the person who commissioned that building for a period of 5 years from the date of completion of the building and shall be produced, on demand, to the building control authority ….

• Proceedings for an offence under this Part may be brought and prosecuted by the building control authority ….
Enforcement

• Building Control Authorities primarily responsible for enforcement
• Penalties apply to a person offering a building for sale or rent or any agent acting on their behalf
• Penalties include:
  – a fine of up to €5,000 or
  – up to three months in prison or both
BER Statistics

- Non Domestic BERs published: 3,659
- Registered Non Domestic BER assessors: 434
- Certified Assessors (including registered assessors): 530
- Number of Active Assessors (with published ratings): 298
Non Domestic BER Grades
Implications for Building Control

- Energy Performance of Buildings Regulations (S.I. No. 666 of 2006) and subsequent amendments
- Building Energy Rating
- Alternative Energy Systems assessment
Further Information

- Building Energy Rating (BER) helpline
  - 1890 734 237
  - info@ber.seai.ie
  - www.seai.ie/ber
Energy Show 2010 - RDS Dublin 14th and 15th April
Thank you