1. Introduction

This report provides information about the implementation of the Energy Performance of Buildings Directive (Directives 2002/91/EC and 2010/31/EU – EPBD) in Wales. It updates the previous UK-wide reports published in 2010 and 2012. The implementation of the EPBD in the other three UK jurisdictions (England, Scotland and Northern Ireland) is addressed in separate reports.

From 31 December 2011, Wales became responsible for its own Building Regulations. Prior to this date, EPBD requirements were implemented across England and Wales with no distinction. Therefore, the implementation of the EPBD in Wales is today shared between the Welsh Government (WG) responsible for Building Regulations and Approved Inspectors, and the UK Department for Communities and Local Government (DCLG) responsible for the Energy Performance of Buildings in England and Wales.

Implementation is achieved through amendments to the England and Wales Regulations (see England report for details). These amendments include:

- the Building (Amendment) (Wales) Regulations 2014 SI* 2014/110 (W. 10);
- the Building (Amendment) (Wales) Regulations 2014 SI* 2013/747 (W. 89).

2. Current status of Implementation of the EPBD

I. ENERGY PERFORMANCE REQUIREMENTS

I.1. Progress and current status

Figures 1 and 2 show the simplified historical Building Regulations improvements in Wales for new residential and new non-residential buildings. The graphs are based on 2006 Building Regulations (the reference year), historical improvements for 2010 and 2014, and Government announcements on the 2016 review and 2020 zero carbon target.

Note: the 2006 and 2010 Building Regulations applied across England and Wales, while the 2014 Regulations apply to Wales only following the devolution of new powers and functions to Wales in 2011.
The new 2014 amendments to the Building Regulations set energy performance requirements for new and existing buildings (residential and non-residential buildings) and came into effect in July 2014. The new Regulations were strengthened to deliver improved CO₂ savings over the previous 2010 Regulations of:

> 8% across the new residential building mix;
> 20% across the new non-residential building mix.

Changes to the requirements for existing residential and non-residential buildings were also introduced in 2014.

Further changes to the Building Regulations will be required to achieve the Government’s zero carbon commitment for all new buildings by 2020. As shown in Figures 1 and 2, a review of the Building Regulations' energy performance requirements (“Part L”) for new and existing buildings is scheduled for 2016.

**I.ii. Format of national transposition and implementation of existing regulations**

Wales adopted a similar approach to England, i.e., four “Approved Documents” which provide a route to comply with Building Regulations. An elemental approach is available for existing buildings, and five criteria are set for new residential units and non-residential buildings:

1. Ensure that the calculated Building CO₂ Emission Rate is no greater than the target and, for non-residential buildings only, that the Building Primary Energy Consumption is not greater than the target.
2. Meet limits on design flexibility (including minimum fabric standards and building services efficiencies).
3. Ensure appropriate passive control measures to limit the effects of summer heat gains, including the effect of shading devices and comfort assessment.
4. Ensure the “as built” building performance (including fabric and fixed building services) is consistent with design calculations.
5. Provide information for energy-efficient operation of the building.
As for England, these requirements are included in the National Calculation Methodology (NCM) and compliance is demonstrated by using Government-approved software tools. For more details see the England report and visit www.ncm.bre.co.uk. The Welsh Approved Documents (ADs) also allow the use of Accredited Construction Details (ACDs) to demonstrate compliance, and Wales adopted the English ACDs available at www.planningportal.gov.uk. Figure 3 gives an example. The compliance checking process is also similar to England, using Building Control Bodies (BCBs) and “Competent Persons”. See England report for details.

I.iii. Cost-optimal procedure for setting energy performance requirements

A UK-wide cost-optimal report, which addresses Wales, was published in May 2013. Please refer to the England report for details.

I.iv. Action plan for progression towards Nearly Zero-Energy Buildings (NZEBs)

National application of the NZEB definition

The UK national plan titled “Increasing the number of Nearly Zero-Energy Buildings” covers all four jurisdictions: England, Wales, Northern Ireland and Scotland. Please refer to the England report for details.

Nearly Zero Energy Buildings (NZEBs) statistics are not maintained in Wales. Figure 4 shows historical records of Energy Performance Certificates (EPCs) A and A+ (non-residential buildings only) for new buildings. The graph shows a steady increase from 2008 to 2012/2013 and a notable drop in 2013/2014. Note that new building construction rates will also affect these data.


The Department of Energy & Climate Change (DECC) is responsible for the transposition of the Energy Efficiency Directive (EED) which will mostly be implemented on a UK-wide basis. In a number of areas, where the Devolved Administrations in Northern Ireland, Wales and Scotland have responsibility for implementation, they have opted to pursue a UK-wide approach (see England report for details). In some areas, implementation will be undertaken by the Devolved Administrations. The UK National Energy Efficiency Action Plan (NEEAP) was published in April 2014. It includes a Building Renovation Strategy in compliance with Article 4 of the EED. The Welsh policies and programmes to deliver this strategy include:

> the National Energy Efficiency and Savings Plan (2011);
> the Fuel Poverty Strategy (2010);
> “Nest”, a fuel poverty programme that provides energy efficiency advice and income maximisation advice, alongside installation of ‘whole house’ measures, for qualifying properties;
> “Arbed” a whole house retrofit programme;
> the availability of an additional funding to leverage investment from the Energy Company Obligation (ECO);
> Building Regulations updates which include consequential improvements for all existing residential and non-residential buildings when extension or renovation work is undertaken.
The UK decided to implement the alternative approach allowed for by Article 5(6) and notified the Commission of the alternative measures that will be adopted to achieve an equivalent improvement in the energy performance of the buildings within the Central Government estate, which includes Central Government buildings in England, and buildings for UK-wide Government departments and in the Devolved Administrations. Alternative measures include behavioural change, facilities management, estate management, installing energy efficient Information Technology (IT) hardware, and installing energy efficient technology. The Welsh Government’s Climate Change Strategy aims to cut emissions from the Welsh Government administrative estate by at least 30% in 2019/2020 from a 2010/2011 baseline. The Welsh Government estimates that the Strategy will save 3.4 GWh of energy which will contribute towards the UK equivalence target of 163.6 GWh savings.

II. REQUIREMENTS FOR TECHNICAL BUILDING SYSTEMS (TBS)

Wales adopted the same approach as England, where the Domestic and Non-domestic Building Services Compliance Guides set out recommended minimum energy efficiency standards. See England report for details.

The commissioning of technical building systems is also addressed in the Approved Documents and the Building Services Compliance Guides. They require commissioning to be done in accordance with relevant industry guidance for example CIBSE Commissioning Code M: Commissioning management (for non-residential buildings).
III. ENERGY PERFORMANCE CERTIFICATES (EPCs) REQUIREMENTS

Wales adopted the same approach as England. The Energy Performance Regulations apply to both England and Wales. See England report for details.

Tables 1-2 and Figures 5-6 provide Wales-specific data.

III.i. Progress and current status on public and large buildings visited by the public

Wales adopted the same approach as England. See England report for details.

Display Energy Certificates (DECs) data from 2008 to July 2014 is included in Table 3 and Figure 7.

III.ii. Implementation of mandatory advertising requirement

Wales adopted the same approach as England. See England report for details.

III.iii. Information campaigns

Wales adopted the same approach as England. See England report for details.

III.iv. Coverage of the national building stock


The number of EPCs recorded in 2013, for new and existing buildings in Wales totalled 612,473 residential EPCs, 24,136 non-residential EPCs and 11,558 DECs.

Wales has about 1.3 million homes across a wide range of housing types, including a significant proportion of older buildings. Figure 8 shows the distribution of about 0.6 million residential EPCs in Wales (Table 1). Buildings with no EPCs are not represented in Figure 8.

There are over 1.8 million non-residential premises in the UK, which are responsible for around 17% of total UK energy consumption. Specific data for the energy efficiency rating by building type in Wales is not available.

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<th>B</th>
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IV. INSPECTION REQUIREMENTS – HEATING AND AIR-CONDITIONING (AC) SYSTEMS

The UK (England, Wales, Scotland and Northern Ireland) adopted alternative measures for heating systems and inspections for Air-Conditioning (AC) systems. Wales-specific programmes include “Nest” and “Arbed” which aim to address fuel poverty. Nest also provides access to advice and support. Please refer to the England report for further details.

3. Conclusions, future plans

The UK is divided into four jurisdictions. Historically, England and Wales shared the same Building Regulations. In 2011, Wales became responsible for its own Building Regulations, and the new Welsh Regulations came into force in 2014.

Overall the new Building Regulations in Wales will improve new residential units performance by 8% and non-residential buildings by 20% over the previous standards, a significant difference compared to England (where the improvements were between 6 and 9%). A Primary Energy Consumption target for new non-residential buildings and improved minimum fabric standards for new residential units have been introduced with an emphasis on reducing energy demand. A review of the energy performance requirements within the Building Regulations is scheduled for 2016, and it will consider the next step in the Welsh commitment to Nearly Zero-Energy Buildings (NZEBs) by 2018/2020. Regulations for the Energy Performance of Buildings cover both England and Wales.