

# [Energy performance of buildings directive (epbd)](https://assignbuster.com/energy-performance-of-buildings-directive-epbd/)

Energy Labelling of Buildings and The Implementation of The Energy Performance of Buildings Directive (EPBD).

### 1. 0: Introduction

Energy Efficiency has become a critical element in the growth of the developed economies in the west. This is mainly because of the fact that the energy consumed by the developed countries is comparatively higher to those of their developing counterparts that are equally industrialised. Since the efficiency of the energy consumption is the critical element that attributes to the performance, the need for energy efficiency of civil structures especially buildings (public and industrial) is imperative. Mei ren et al (2003) argues that the energy performance has become a performance measure for the extent to which the developed nations are utilizing the energy efficiently. This makes it clear that a critical analysis on the energy performance of the civil structures (i. e.) buildings is essential in order to justify the validity of the energy performance bill that is expected be passed as legislation in2006. The research conducted through this dissertation is aimed to accomplish whether or not the energy labelling of buildings is viable and the extent to which it can support the implementation of the Energy performance of Buildings Directive (EPBD).

The energy consumption in the UK is not only identified as the primary element for the implementation of the Energy performance of Buildings Directive but also to address the requirements of the KYOTO protocol. The treaty signed by the member nations of the United Nations has increased the need for the energy efficiency as well as reduce the emission of CHG or greenhouse gases into the atmosphere. Since the treaty measures the reduction in emission as a percentage reduction to the original set emission level, it is necessary to implement a legislative act that can provide energy efficiency as well as meet the demands of the KYOTO protocol.

In this report a comprehensive analysis on the energy efficiency in buildings both domestic and non-domestics presented to the reader and the implications of enforcing the Energy performance of Buildings Directive in 2006. The dissertation also aims to provide a comprehensive analysis on the potential in achieving the energy efficiency within the buildings of the European Union member states and identify the course of addressing the KYOTO protocol.

### 2. 0: Aim and Objectives

2. 1: Aim

The aim of this report is to critically analyse whether the Energy Labelling of buildings in the UK is a viable option for measuring their energy performance in order to implement Energy Performance of Buildings Directive (EPBD).

2. 2: Objectives

The aim of this report is accomplished through embracing the research upon the following objectives

To conduct a literature review on the need for energy efficiency and role of developed nations in the implementation of Energy Performance of Buildings Directive.

To analyse the stand of European Union on the implementation of the EPBD.

To conduct secondary research through case study analysis on the energy efficiency of domestic and on-domestic buildings in the UK.

To critically analyse the suitability of the Energy performance of Buildings Directive implementation based upon the results derived from the case study analysis.

To comment upon the Energy performance of Buildings Directive actualisation as a legislative act based upon the results and discussions conducted in the research.

### 3: 0 Justifications for the choice of research

Energy efficiency is increasingly demanded in order to meet the rising demand for energy resources. The fact that the energy resources are depleting rapidly makes it critical for the member states of the European Union to efficiently utilise the energy in order to gain sustainable growth in the economy.

It was identified that one of the major consumers of energy in the European Union member states are the buildings. This is mainly because of the increase in the globalization and the population explosion due to the immigration of foreign nationals to European countries. This has increased the number of buildings drastically in the European Union member states thus increasing the energy consumption as well. Hence it is essential to sketch out a method of accomplishing energy efficiency so as to reduce the energy consumption as well as the emission of CHG into the atmosphere causing greenhouse effect. This initiative of the European Union is the major reason for focusing on energy performance measurement in buildings rather than other sectors like the industries or the transportation.

The fact that the reduction of the pollutants emitted into the atmosphere by the buildings when controlled can meet the target for the KYOTO protocol as well as accomplish energy savings is another justification for the choice of the research topic.

Apart from the aforementioned, another interesting feature demonstrated by the buildings that the energy consumption is predominantly due to the improper temperature management has further created the room for investigation into the flaws of the construction design (or plan) which can be fixed to accomplish energy efficiency.

The fact that the energy savings and the energy efficiency in the domestic and non-domestic buildings will reduce the energy prices thus benefiting the consumers in the general public is one of the major elements for the choice of the research topic.

### 4: Research methodology

The research method adopted in this project is secondary research methodology where the research is based upon the information gathered from white papers and journals. The research is accomplished through the use market reports and journals on the construction industry and energy performance journals. Some of the popular resources of information for the research are listed below:

Chartered institute of building services Engineers

Key Note Ltd

Data monitor Inc

Journal of facilities management

Facilities journal

Building Services Engineering Research & Technology

Journals and white papers from various other resources are also utilised in the research process to accomplish qualitative research in the form of case study analysis.

The research comprises of two separate case study one focusing on each domestic buildings and non-domestic buildings. The case studies are presented separately in order to establish the subtle differences between the two categories of the buildings in the European Union that fall under the jurisdiction of Energy performance of Buildings Directive.

### 5: Justification for secondary research

Primary research in this topic involves fieldwork for a long period of time up to several months. This requires investment of both time and money for securing the accurate measurements of the emission, level of energy consumption and the air temperature management level. Since the project is conducted on an academic basis the research is performed using the secondary research information rather than conducting primary research.

Furthermore, the fact that the energy performance measurement for the emission and civil measurements of the buildings involve legal requirements to be satisfied prior to presenting in the report, the research is confined to the secondary information which can be referenced whilst conducting the research.

### 6: Scope of the research

The scope of this research is confined with the energy performance of the buildings in the Europe. The literature review presents the overview on the buildings across Europe whilst the research in the case study is confined only the UK buildings. This is mainly because of the lack of resources on buildings in other nations and the lack of time to analyse any information if gathered.

### 7: Summary

Energy labelling of the buildings was considered as a critical factor in the energy performance of the buildings and the overall nation among the developed countries since the late years of the twentieth century. The fact that the energy efficiency programs can reduce the energy consumption in the developed nations that are consuming more energy as stated before has made it imperative to accomplish the energy labelling procedure. G. J. Levermore (2002)has stated that the energy labelling of the buildings in developed nations will not only help reduce the energy consumption but also pave the path for achieving an energy efficient economy.

It is also interesting to note that the promotion of the energy labelling policies not only involves one country but also requires critical information on the energy consumption and the labelling methods adhered by other developed nations. In order to maintain a standard in the European Union the EPBD bill is put forth that lays a common standard to be adopted throughout the European Union.

The research in this report focuses upon the benefits of accomplishing the energy efficiency in order to meet the targets for the KYOTO protocol and the Energy performance of Buildings Directive. The report provides a comprehensive analysis on the energy efficiency of the domestic and non-domestic buildings thus accomplishing a totality in the research.

Furthermore, in this report a critical overview of the standards proposed and their implementation in the existing buildings is analysed qualitatively and constructive recommendations are provided to assist the decision makers. The discussion on the Energy performance of Buildings Directive and the recommendations are aimed to provide key issues identified in the research to the decision makers in order to effectively implement the Energy performance of Buildings Directive.