

Engineering

Allianz Engineering Energy Services



Presentation Content

Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007

- Legislation, Timetable and Impact
- Legislation Requirements
- Possible Future Developments
- Allianz Engineering Energy Services

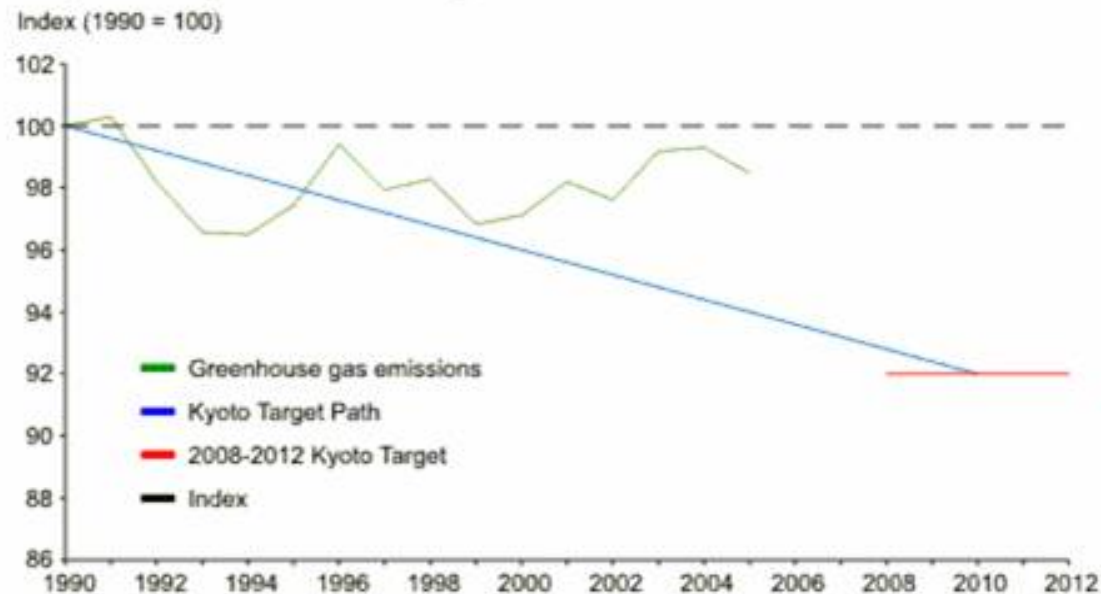


Climate Change, Kyoto and the future....

European Directive for the Energy Performance of Buildings, 2002

The Objective - To promote the improvement of the energy performance of buildings taking into account cost-effectiveness and local conditions

EU15 emissions of greenhouse gases compared to Kyoto Protocol target: 1990-2012



Source: European Environment Agency



Why Focus on Buildings...?

50% of the UK's energy consumption arises from the way in which its 25 million buildings are lit, heated and used

European Commission research suggests that by improving energy efficiency, carbon emissions from buildings could be reduced by 22%

Equivalent to 70.5 million people driving around the earth



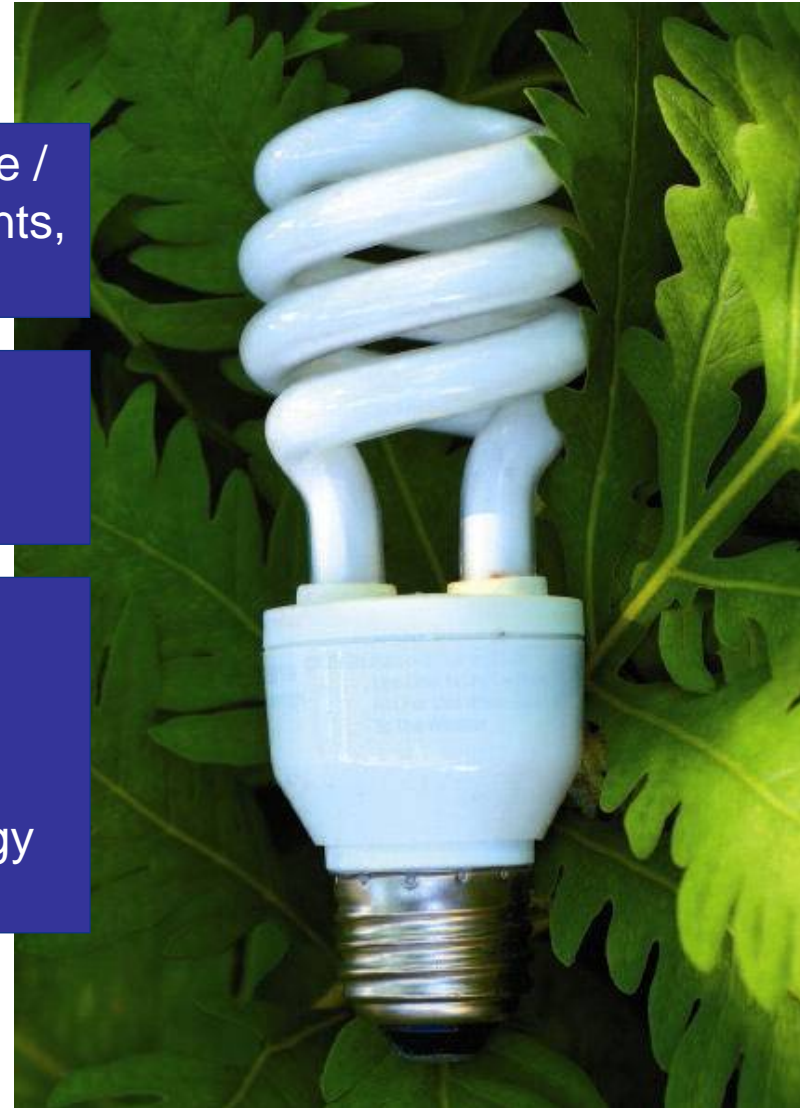
The introduction of this legislation will ensure ...

Easy comparison of energy performance / building operating costs by buyers/tenants, leading to informed choices

Each and every air conditioning system assessed with regard to its efficiency at least every five years

A higher demand for energy efficient buildings – which could command a premium price

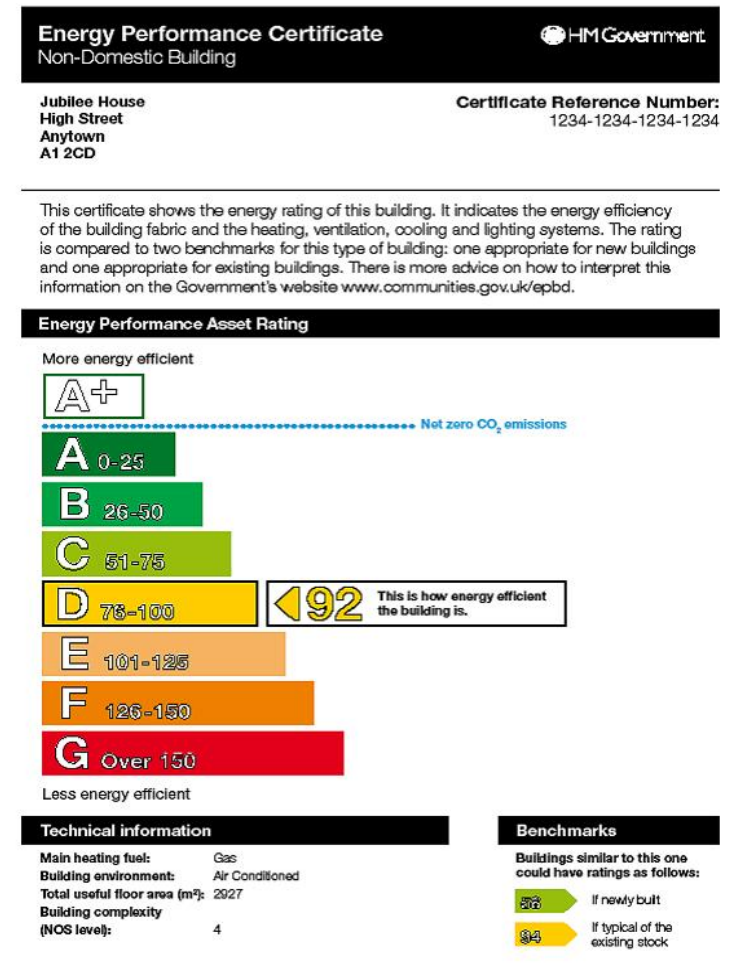
Commercial pressures to improve energy efficiency



UK Energy Certification - Energy Performance Certificates

Energy Performance Certificate (EPC)- Displays Asset Rating - Required for all buildings whenever they are constructed, sold or leased

- Records how energy efficient the fabric of the property is – walls, windows, roof, internal energy usage etc..
- Provides a rating of energy efficiency and carbon emissions from A to G
- Valid for 10 years
- Produced using standard methods SBEM, DSM– properties can be easily compared
- Accompanied by recommendation report – lists measures to improve the energy rating



UK Energy Certification – Display Energy Certificates

Display Energy Certificate
HM Government

How efficiently is this building being used?

A Government Dept
12th & 13th Floor
Jubilee House
High Street
Anytown
A1 2CD

Certificate Reference Number:
1234-1234-1234-1234

This certificate indicates how much energy is being used to operate this building. The operational rating is based on meter readings of all the energy actually used in the building. It is compared to a benchmark that represents performance indicative of all buildings of this type. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

More energy efficient

A 0-25

B 26-50

C 51-75

D 76-100

100 would be typical

E 101-125

F 126-150

G Over 150

Less energy efficient

Total CO₂ Emissions

This tells you how much carbon dioxide the building emits. It shows tonnes per year of CO₂.

Period	Electricity	Heating	Renewables
Mar 2006	~150	~150	~0
Apr 2006	~100	~100	~0
Apr 2007	~80	~80	~0

Previous Operational Ratings

This tells you how efficiently energy has been used in this building over the last three accounting periods

Period	Rating
Apr 2007	108
Apr 2006	133
Mar 2006	153

Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual readings.

Main heating fuel: Gas
Building Environment: Air Conditioned
Total useful floor area (m²): 2027
Asset Rating: 02

	Heating	Electrical
Annual Energy Use (kWh/m ² /year)	120	120
Typical Energy Use (kWh/m ² /year)	120	95
Energy from renewables	0%	20%

Administrative information

This is a Display Energy Certificate as defined in SI2007:901 as amended.

Assessment Software: OR v1
Property Reference: 801123776612
Assessor Name: John Smith
Assessor Number: ABC12345
Accreditation Scheme: ABC Accreditation Ltd
Employer/Trading Name: EnergyWatch Ltd
Employer/Trading Address: Alpha House, New Way, Birmingham, B2 1AA
Issue Date: 12 May 2007
Nominated Date: 01 Apr 2007
Valid Until: 31 Mar 2008

Related Party Disclosure: EnergyWatch are contracted as energy managers
Recommendations for improving the energy efficiency of the building are contained in Report Reference Number 1234-1234-1234-1234

Display Energy Certificates (DEC) - Displays Operational Rating

- Buildings occupied by public authorities or institutions providing a public service to a large number of persons
- Total useful area greater than 1000m²
- Shows the actual energy use of a building
- Help the public see the energy efficiency – must be displayed in a prominent place
- Accompanied by an ‘advisory report’
- DEC valid for 12 months, AR valid for 7 years
- A rented public building will also require an EPC

Part 4 Inspection of Air Conditioning Systems (Article 9 of the EU Directive)

Systems with total cooling capacity of more than 250 kW starting Jan 2009 and more than 12kW by Jan 2011

Assessment of efficiency, a review of their sizing and advice on improvements, replacements and alternative solutions



Approved UK accreditation scheme

Report is kept by the 'relevant person'

Validity of inspection report is normally 5 years

Inspection of boilers (Article 8 of the EU Directive)

European Directive gives two options:

- (a) Regular inspections
- (b) Provide advice - the overall impact should be equivalent to (a)

The UK has decided to opt for option (b) – to be reviewed every two years.

Therefore there is no reference to boiler inspections in these regulations

Currently efficiency assessment is advised but not mandatory

EPBR 2 is coming –
Boiler inspections will be mandatory



Current requirements - England and Wales

Currently

- EPC required on construction, sale or rent of all dwellings
- EPC required on construction for the construction, sale or rent of all buildings other than dwellings
- DEC required for all public buildings over 1,000m²
- First inspection of all existing air-conditioning systems over 250kW

4 January 2011

- First inspection of all remaining air-conditioning systems over 12kW must have occurred by this date

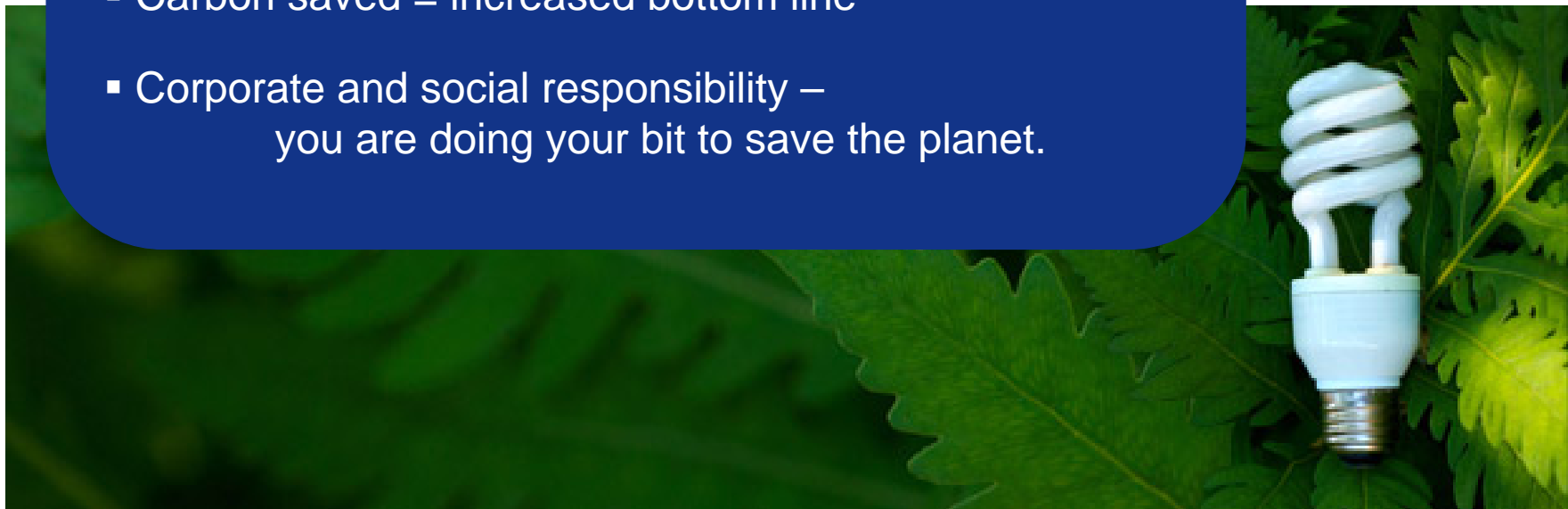
The Impact on the Property Market

- Energy efficient buildings will probably command a higher rent and sale price
- If a property does not have an EPC at point of exchange, it could hold up the closure of the sale or lease
- What the future may hold –
 - DEC will become more wide spread, lower thresholds – pubs, clubs, hotels, retail units, leisure, banking, etc..
 - Possibility to compare the theoretical and actual (EPC v DEC) for all buildings
 - Large scale renovation projects, to improve efficiency of existing building stock



Benefits for the Property Owner

- Compliance – court cases can be costly
- Increased awareness of the performance of buildings
- A method of differentiator
- Sustainable investments – Green is good
- Carbon saved = increased bottom line
- Corporate and social responsibility –
you are doing your bit to save the planet.



Introducing -

Allianz Engineering Energy Services

.... powered by Allianz Engineering.

An suite of energy services designed to meet the needs of our customers in an emerging market of globally influenced business change

- Energy Performance Certification
 - Non-domestic, Domestic and Public buildings
 - Energy Inspections for Heating & Cooling Systems

Allianz Engineering Energy Services

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Supplementary to the regulations –

- Energy Audit & Report, automatic Monitoring & Targeting (aM&T)
- Access to design, advice, consultancy and project management, further information and advice on renewables, carbon foot-printing and carbon offsetting
- The majority of our suppliers were directly involved in developing the government methodologies for energy assessment under the regulations
- The Allianz Head Office in Guildford was the first commercial building in the country to be compliant under the new legislation (Air conditioning)

Engineering

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