

Understanding Energy Performance Certificates

Presented by

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Agenda

- Setting the scene
- The legislation (England, Wales & Scotland)
- Case Studies
- What does this mean to me?

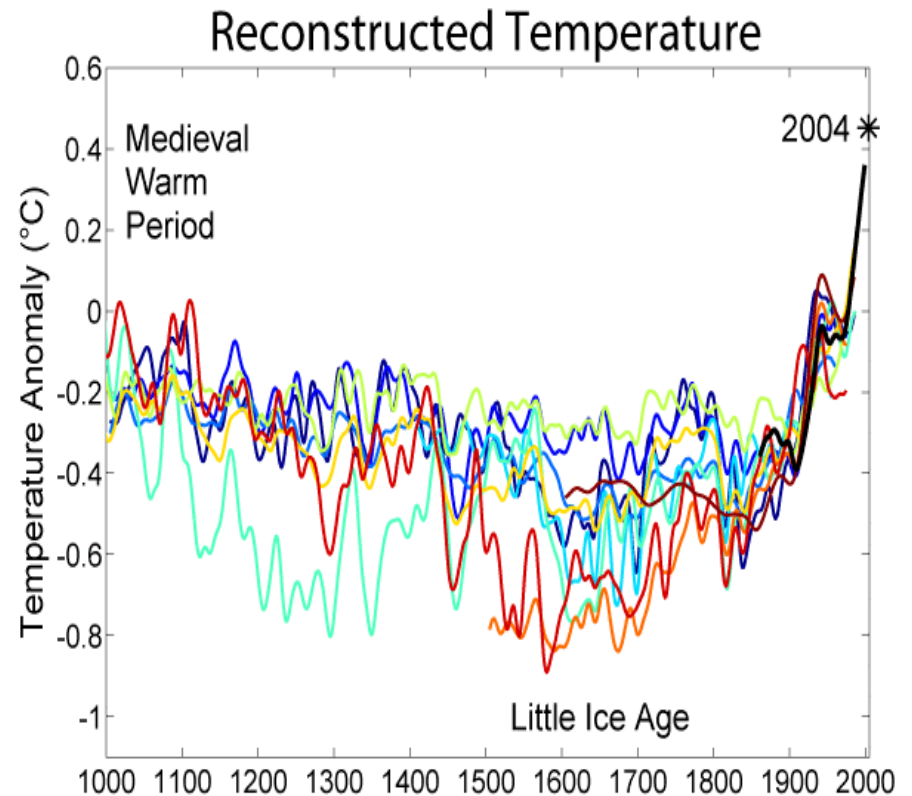


Setting the scene



Climate Change

- Climate change is real, is now and is of great global concern
- Ten hottest summers on record have occurred since beginning of the 1990's
- Models predict average global temp will rise by up to 6 deg over the next 100 years
- See "An inconvenient truth"
www.uip.co.uk/aitemail



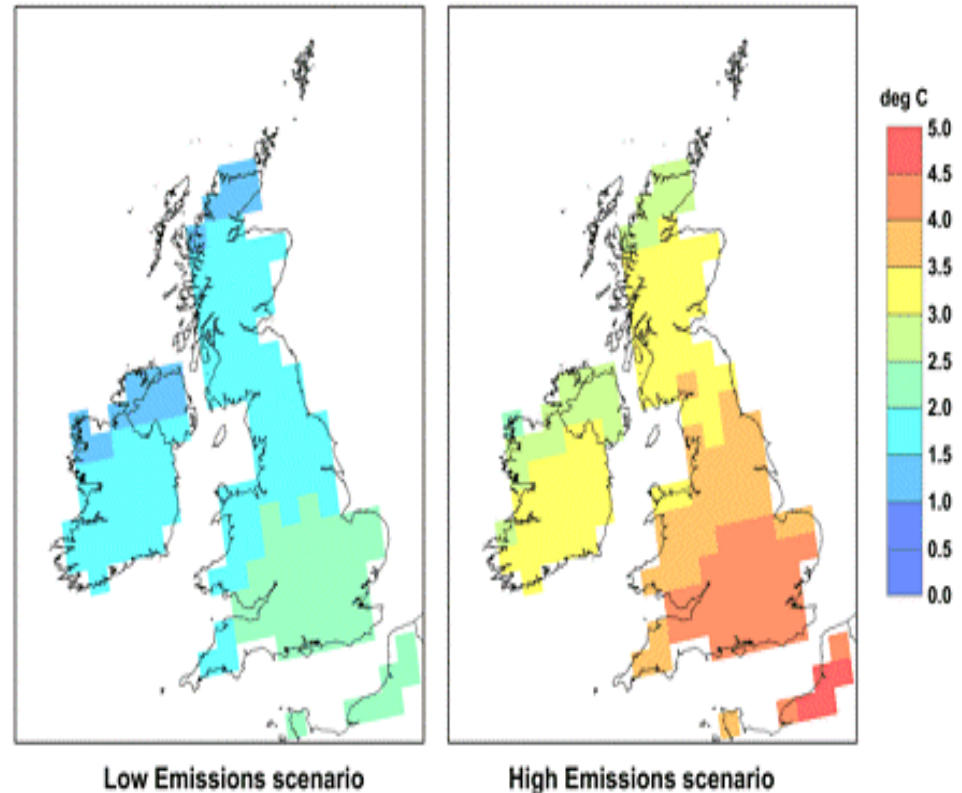
Climate Change

For the UK this means:-

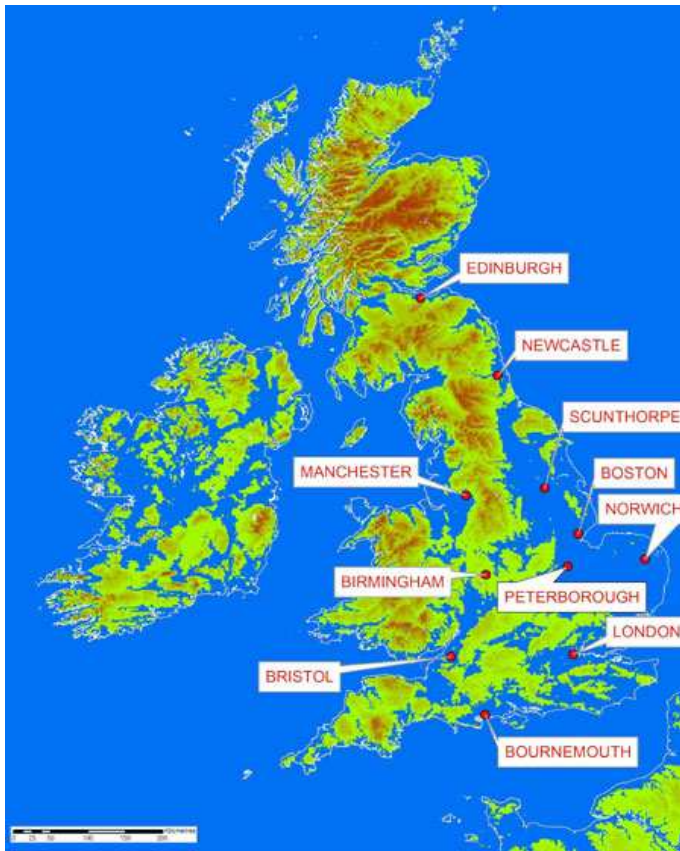
- Warmer temperatures
- More extreme weather
- Higher sea levels

The result of this is the greater demand for energy and it is up to us to reverse this damage

Change in annual average daily temperature -2080s



Climate Change



- Flood mapping of UK subject to 6 degree rise
- Permanent loss of land, east coast
- Norwich heavily affected
- Massive effect on industry
- Potential insurance ramifications



The Legislation

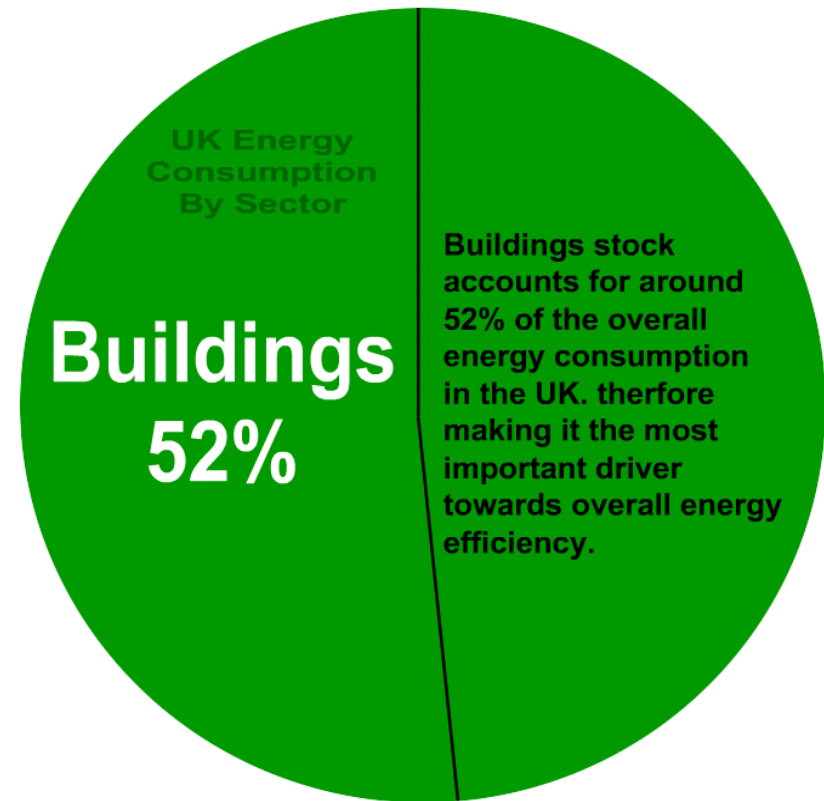
“European Union Directive 2002/91/EC”



The Legislation

Directive 2002/91/EC

- The energy performance of buildings



Drivers for the directive include:

- Climate control
- Reduced CO₂ emissions
- Increased efficient energy usage



EPBD: the implementation in England and Wales



➤ **Article 7**

From the 6th April 2008 in England and Wales You will not be able to construct, sell or lease a commercial building over 10,000m². From July 2008 this reduces to 2500m² leading to inclusion of all commercial buildings over 50m² in October 2008.

➤ Regulations will also affect public authorities and public institutions occupying buildings with a usable floor area over 1000m², from the 1st October 2008 they will be obliged to show a Display Energy Certificate in an area clearly visible to the general public.

➤ **Article 9**

From the 4th January 2009 the deadline for possession of a valid report following the first inspection of all existing air-conditioning systems with an output of more than 250kW

➤ **Article 10**

Requires the use of qualified and/or accredited energy assessors to carry out this work independently



EPBD: the implementation in Scotland

➤ **Article 7**

From the 1st May 2007 buildings should be designed and constructed in such a way that:
An energy performance certificate for the building is affixed to the building indicating the approximate annual carbon dioxide emissions and usage of the building

From the 4th January 2009 you cannot sell or lease a commercial building over 1000m² in Scotland without providing an Energy Performance Certificate

Regulations will also affect public authorities and public institutions occupying buildings with a usable floor area over 1000m², they will be obliged to show an Energy Performance Certificate in an area clearly visible to the general public.

➤ **Article 9**

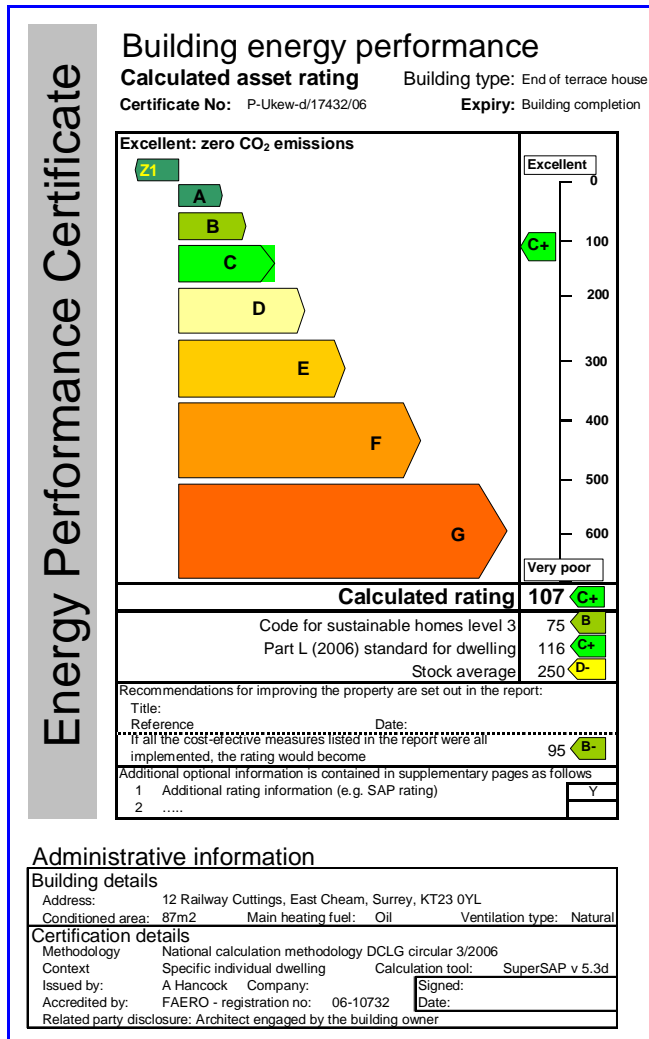
From the 4th January 2009 the deadline for possession of a valid report following the first inspection of all existing air-conditioning systems with an output of more than 250kW

➤ **Article 10**

Requires the use of qualified and/or accredited energy assessors to carry out this work independently (Cibse- Protocol)

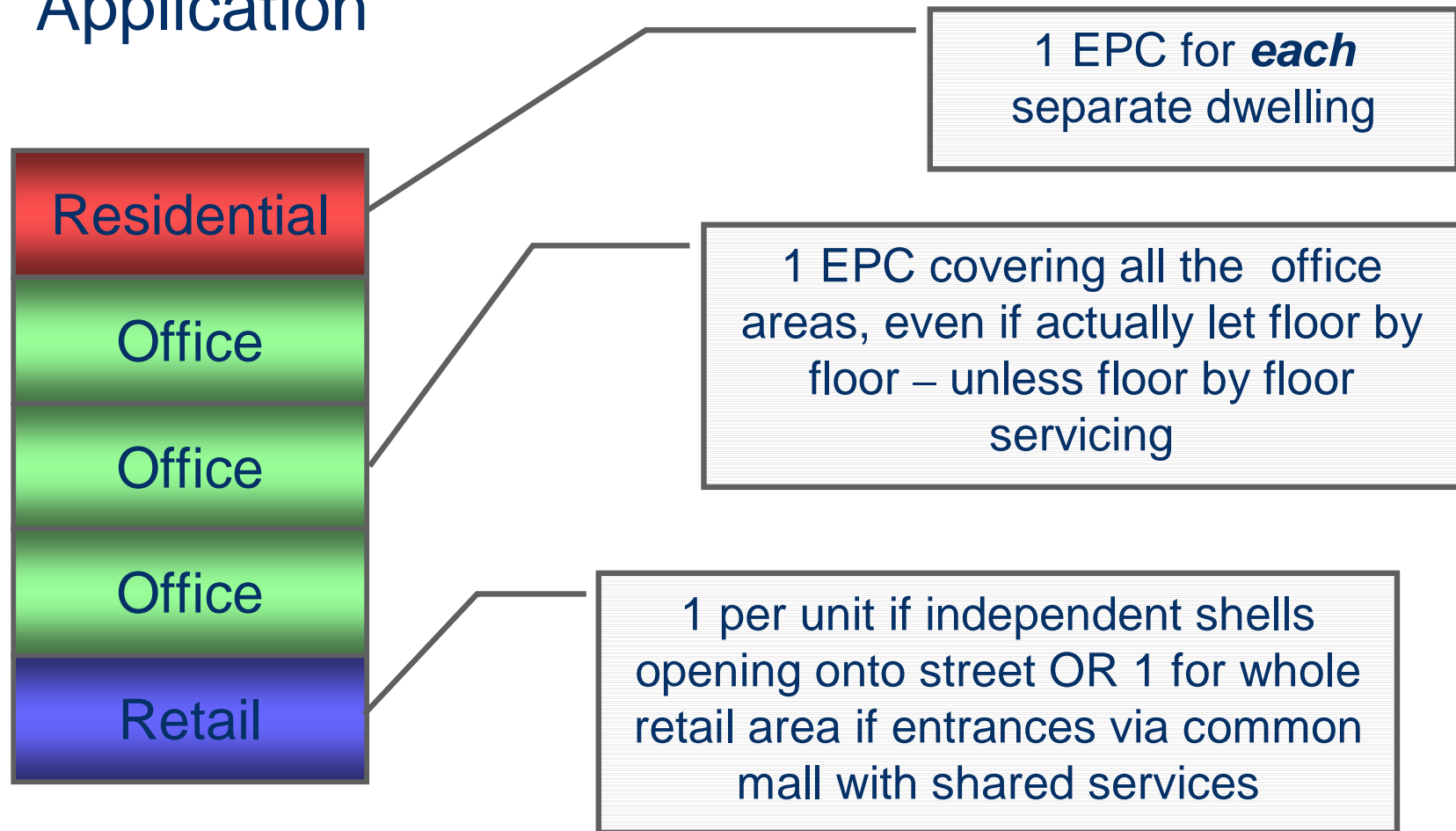


Energy Performance Certificate. England, Wales & Scotland



- An Energy Performance Certificate is an assessment of the energy efficiency of the fabric of your building i.e windows, air conditioning etc
- Energy Performance Certificates last no longer than 10 years unless you modify your building for separate use
- You do not have to achieve your benchmark grade
- Could have more than one EPC per building
- Owners or landlords responsibility
- Completed by a competent accredited assessor

Application



Display Energy Certificate. England & Wales



Energy Certificate

<p>Certificate type: Operational (Measured) energy rating Certificate method: EPLabel v1.2d Beta Building Sector: Shopping centres Building Sub-type: 1 Department stores Whole or part of building: Whole building</p>	<p>Measured in use</p>
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<p>Building carbon dioxide emissions</p> <p>Very energy efficient</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; font-size: 8px;">Less than 54</td> <td style="width: 80%; text-align: center; background-color: #4CAF50; color: white; font-weight: bold; font-size: 24px;">A</td> <td style="width: 10%;"></td> </tr> <tr> <td style="font-size: 8px;">54 to 107</td> <td style="text-align: center; background-color: #8BC34A; color: white; font-weight: bold; font-size: 24px;">B</td> <td></td> </tr> <tr> <td style="font-size: 8px;">107 to 161</td> <td style="text-align: center; background-color: #C8E6C9; color: white; font-weight: bold; font-size: 24px;">C</td> <td></td> </tr> <tr> <td style="font-size: 8px;">161 to 215</td> <td style="text-align: center; background-color: #FFEB3B; color: white; font-weight: bold; font-size: 24px;">D</td> <td style="text-align: center; background-color: #FFEB3B; color: black; font-weight: bold; font-size: 24px;">D</td> </tr> <tr> <td style="font-size: 8px;">215 to 268</td> <td style="text-align: center; background-color: #FF9800; color: white; font-weight: bold; font-size: 24px;">E</td> <td></td> </tr> <tr> <td style="font-size: 8px;">268 to 322</td> <td style="text-align: center; background-color: #FF5722; color: white; font-weight: bold; font-size: 24px;">F</td> <td></td> </tr> <tr> <td style="font-size: 8px;">322 to 376</td> <td style="text-align: center; background-color: #C0392B; color: white; font-weight: bold; font-size: 24px;">G</td> <td></td> </tr> <tr> <td style="font-size: 8px;">Over 376</td> <td></td> <td></td> </tr> </table> <p>Not energy efficient</p>	Less than 54	A		54 to 107	B		107 to 161	C		161 to 215	D	D	215 to 268	E		268 to 322	F		322 to 376	G		Over 376			<p>Energy performance of this building 192</p> <p style="font-size: 8px;">assessed as Carbon dioxide emissions (kg CO₂ per m² floor area)</p> <p>Building thermal energy efficiency grade ABCDEF</p> <p>Building electrical energy efficiency grade ABCDEF</p> <p>Overall building energy efficiency grade ABCDEF</p> <p>Indoor comfort conditions No assessment</p>
Less than 54	A																								
54 to 107	B																								
107 to 161	C																								
161 to 215	D	D																							
215 to 268	E																								
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322 to 376	G																								
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Data source: Not approved

Certificate date: 12 April 2007 United Kingdom Directive 2002/91/EC

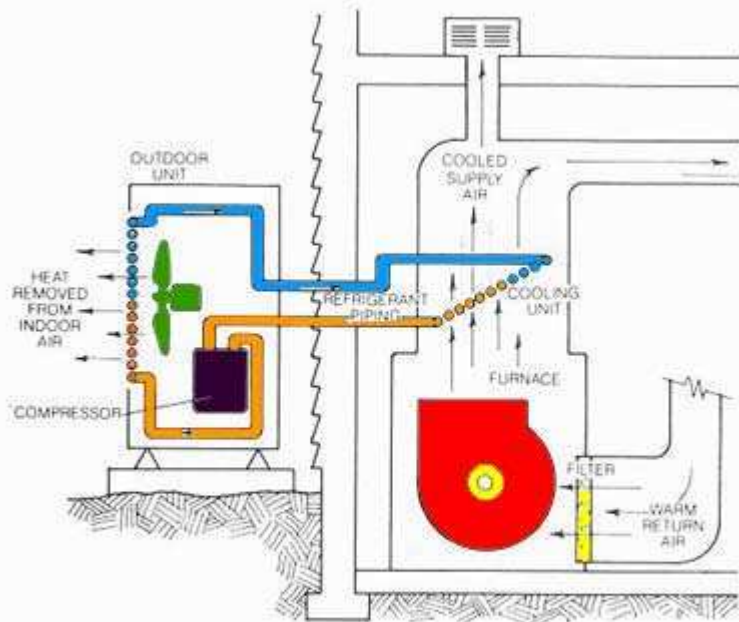
Gross internal floor area (m ²): 13,692 Number of storeys: 2 Year originally constructed: 1992 Year of last major refurbishment: Period of energy assessment: 2005-06 Certificate expiry date: 25/6/2007 Licensee: A C Reed	ASSET RATING PUBLISHED: Yes Asset Rating method: ESBEM Year of calculation: 2006 Asset Grade: C Asset Rating: 112%
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Not an official certificate. EPLabel project reference: 3456 8789

Certifying organisation Street address PO Box Post code Contact Assessor identifier Tel Email	ABC certifiers Up Street WC2J 0JW A-Session 123 V 456 020 777 7777 a.assessor@abc.co.uk	Building name Occupier Street address Post code Building reference Contact Tel Email Building owner Managing agent	Dockside Outlet Various retail Chatham, Kent EC11 1EQ Retail F Drake 020 888 8888 jpp@webmail.com Mavis
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- A Display Energy Certificate calculates how efficiently your building is being operated
- Only government institutions over 1000m² have to display these certificates at present
- You do not have to achieve your benchmark grade
- The responsibility is with the person who has operational control of the system
- Display Energy Certificates have to be renewed on an annual basis





Central Air-Conditioning & Heating System

Graphic courtesy: Air-Conditioning & Refrigeration Institute

- Systems over 250KW collective capacity
- Inspected at intervals not exceeding 5 years
- Accredited energy assessor
- Written inspection report, advice on how to improve the system
- The responsibility is with the person who has operational control of the system



Potential Penalties For Non Compliance



England & Wales

- If you don't provide an Energy Performance Certificate to a prospective tenant or purchaser it would result in failure to complete conveyancing or possible action by trading standards officers which could incorporate fines up to £5,000
- If you don't provide a Display Energy Certificate you will be fined £500
- If you don't complete energy efficiency inspections of air-conditioning systems you will be fined a fixed penalty of £300

➤ Scotland

Governed by the SBSA Local Authority article 25 & 27 Building Scotland Act 2003. The authority may carry out such work as is necessary to make the building comply with the provision of building regulations specified in the notice and may recover from the owner any expenses reasonably incurred by it in doing so.



Case Studies



Case Studies- Energy Performance Certificates

Building trials-

- Shopping Centre -28,000 m2 EPC ,£9000 plus VAT
- Office Block- 6500 m2 , £2500 plus VAT
- Pub- 762m2 £1,311 plus VAT

Issue's

- No cad drawings additional cost
- Site survey required additional cost's
- Multiple EPC's required for shopping centre's
- Domestic EPC required for the PUB
- Additional time to complete EPC's due to lack of planning and lack of information
- Rating below expectations



What does this mean to me?



What does this mean to me?

- As a property owner / Manager you will not be able to construct sell or lease any commercial building over 50m² by Oct 08
- Potential purchasers and tenants will use the energy grade as a bargaining tool
- Non compliance will lead into potential prosecution and financial penalties
- A large amount of detailed information is required to complete EPC's
- Resource will be at a premium
- More than one EPC could be required for multiple use buildings
- EPC's cost, BUDGET for them, make a plan.



Questions and Answers



CE

