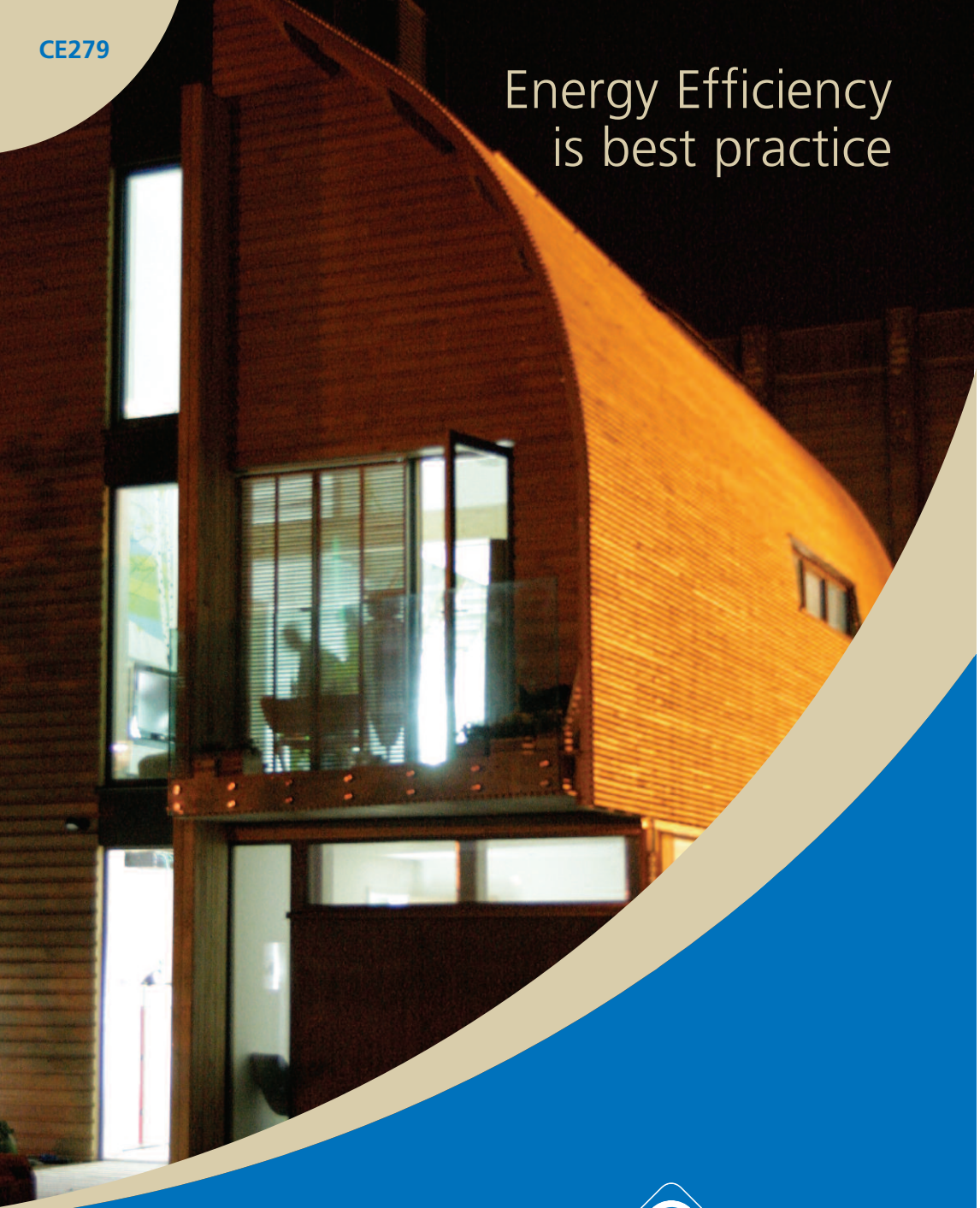
CE279

Energy Efficiency is best practice



energy saving trust®

About domestic housing and climate change

Climate change is real and happening. Scientists, politicians and businesses overwhelmingly agree that man-made climate change exists.

Over the last 10 years, warmer, wetter winters and hotter, drier summers have come and gone, and now 80 per cent of people in the United Kingdom believe that climate change is having an impact on the UK[1].

Here in Britain, home energy use alone accounts for over 25 per cent of all carbon dioxide (CO_2) emissions that contribute to climate change.

Homebuyers, homeowners, tenants, landlords and housing developers are all becoming increasingly concerned with the condition of the environment and are looking for ways to reduce the environmental impact of their own homes or developments.

Whether through commissioning or buying a newbuild property or refurbishing an existing property, there is a lot that can be done to shrink that 25 per cent.

Acknowledgement
Cover: The Kingspan LightHouse, BRE Innovation Park, the first house to meet Level 6 of the Code for Sustainable Homes

1 Green Barometer (CO135a), Energy Saving Trust, April 2007

What's being done about it?

The UK Government has set a target to reduce carbon emissions by 60 per cent by 2050. In order to help meet this target, the Government's Code for Sustainable Homes sets minimum standards for energy efficiency for all publicly funded housing. Additionally the Code sets standards for energy efficiency in new build homes and plans are underway to ensure that all new housing built beyond 2016 is zero carbon.

The Energy Saving Trust has developed guidance to help meet the energy efficiency requirements of level 3 of the Code for Sustainable Homes, with guidance for levels 4–6 in development.

How does this affect you?

As a professional in the construction industry, you can take an active role in reducing the lifetime energy use of your projects and developments.

- Think carefully about how to integrate the most energy efficient solutions into your blueprints.
- Talk to us – receive free expert advice and information that can help you achieve low-energy designs.
- Build to a more energy efficient standard.

A development built using the Energy Saving Trust's guidance will result in a very well-insulated, airtight construction with appropriate and efficient building services.

It will also have a higher Standard Assessment Procedure (SAP) rating and is likely to be more marketable to prospective homebuyers.

How can the Energy Saving Trust help?

The Energy Saving Trust recommends integrating low-energy design into your project, right from the blueprint.

To help you, free technical solutions and advice are available through our guides, dedicated helpline and website.

Following our guidance can assist you, your colleagues and organisation in keeping a step ahead of any changes in legislation and help save energy, money and the environment.

Website and online tools

Visit our website – www.energysavingtrust.org.uk/housing – for access to our free library of technical guides, details of upcoming events and a range of interactive tools to help you implement energy saving solutions. Gain access to energy calculators, an innovative 'interactive' house and much more....

Helpline

Our Technical Helpline offers you access to some of the UK's leading experts in energy efficiency and renewable technology in housing. If you are looking for advice on a technical issue, call 0845 120 7799.

Details of your query will then be taken by one of our agents, before being passed on to an expert consultant who will contact you directly with information, advice and solutions.

Events and seminars

We run a variety of events and training seminars throughout the year and across the UK, to help develop knowledge and understanding of key energy efficiency, renewable and sustainable energy solutions within the industry. All events are listed on our site.

Technical guides

Our extensive library of downloadable technical guides provides advice that covers all areas of newbuild and refurbishment. A full list of our guides and who can they help, is detailed in the next section. All our guides are free and downloadable from our website or you can call our Helpline.

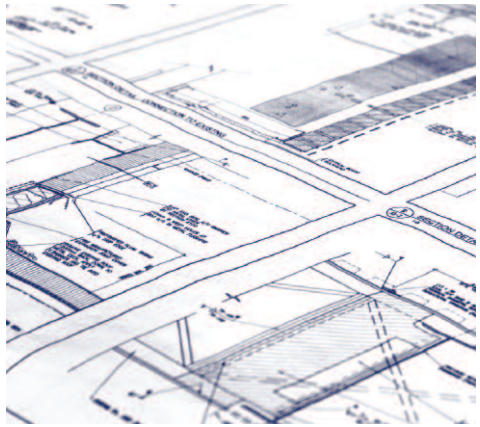
Benefits

With all this free support, building energy efficiency into your projects needn't be challenging. By adopting our solutions and guidance, high levels of energy efficiency are achievable and the benefits to the environment far outweigh the challenges. Applying our solutions can help:

- Equip your business with the information and knowledge required to satisfy growing demand for energy efficiency.
- Ensure your business develops projects that exceed energy efficiency requirements of Building Regulations.
- Reduce the energy requirements of your completed projects – helping save money and the environment.

What next?

Get in touch with us, come along to an event or simply check out some of our guidance. You can visit us at www.energysavingtrust.org.uk/housing or call us on 0845 120 7799.



Technical guides

Over the next few pages you will find a list of our free technical guides arranged by subject area. We provide guidance for:

Developers – those who design and project-manage medium to large-scale domestic newbuild and refurbishment housing projects.

Installers – those who work in the heating, insulation, lighting and glazing sectors, as well as builders.

Policy makers – includes all those who influence policy in Local Authorities and Housing Associations.

Specifiers – includes architects as well as housing managers in Local Authorities and Housing Associations.

Finding the guidance you need

Our guidance is arranged alphabetically under relevant subject areas. We also list a range of informative case studies.

● contains essential guidance for this audience

○ contains useful guidance for this audience

Each publication has a unique stock code (e.g. CE101), which is listed under the publication title. Search on our website using the publication code for the quickest response. Hard copy publications are available from our Helpline – 0845 120 7799 – although stocks are limited. Our agents can also email you any of our publications

Community heating

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Benefits of best practice: community heating (2003 edition) **CE13**	UK wide		●		●	●
Community heating – a guide (2004 edition) **CE55**	England		○		○	●
Community heating – Aberdeen City Council case study (2004 edition) **CE65**	England	●	○		○	○
Community heating serves luxury private apartments (2004 editions) **CE103/GPCS400**	England	●	○		○	○
Pimlico District heating undertaking – a case study of community heating (2005 edition) **CE125**	England	●	○		○	○
Rural biomass community heating case study (2004 edition) **CE91**	England	●	○		○	○

General advice

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Benefits of best practice: heating and insulation (2005 edition) **CE11**	England		○	○	○	●
Domestic energy efficiency primer (2006 edition) **CE101/GPG171**	UK wide		●	●	●	●
Energy efficiency – frequently asked questions (2005 edition) **CE126**	England		○	●	○	●
Energy efficient refurbishment of existing housing (2004 edition) **CE83/GPG155**	UK wide		●	●		●
Newark and Sherwood District Council case study (2004 edition) **CE96**	England	●	○		○	○
Providing energy advice to householders – a guide for local authority and housing association landlords (1996 edition) **GPG208**	UK wide		○		○	●

General advice cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Selling the benefits – fact sheet for builders and specialist trades people (2006 edition) **CE197**	UK wide		○	●		
Selling the benefits – fact sheet for sales negotiators (2006 edition) **CE196**	England		○	○	●	○
Using wholelife costing as a basis for investments in energy efficiency – guidance (2005 edition) **CE119**	England		○		●	●
Building Research Establishment Domestic Energy Model (BREDEM) (1996 edition) **GIL31**	UK wide		●		○	●

Heating system

Benefits of best practice: heating and insulation (2005 edition) **CE11**	England		○	○	●	●
Central Heating Systems Specifications (CHeSS) (2008 edition) **CE51/GIL59**	UK wide		●	●		●
Domestic condensing boilers – 'The benefits and the myths' (2003 edition) **CE52/GIL74**	England		○	●	●	●
Domestic ground source heat pumps: design and installation of closed-loop systems (2004 edition) **CE82/GPG339**	England		○	○	○	●
Domestic heating by electricity (2006 edition) **CE185/GPG345**	England		●	●	○	●
Domestic heating by gas: boiler systems (2005 edition) **CE30**	England		●	●	○	●
Domestic heating by oil: boiler systems (2005 edition) **CE29**	England		●	●	○	●
Domestic heating by solid fuel: boiler systems (2005 edition) **CE47**	England		○	●	○	●

Heating system cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Selling the benefits – fact sheet for heating engineers (2006 edition) **CE198**	England		○	○		●
Whole house boiler sizing method for houses and flats (2003 edition) **CE54**	England		●	●		●

Insulation & ventilation

Achieving airtightness in new dwellings: case studies (2007 edition) **CE248**	England	●	●	○	○	●
Advanced insulation in housing refurbishment (2005 edition) **CE97**	England	●	●	●	○	●
Benefits of best practice: heating and insulation (2005 edition) **CE11**	England		○	○	●	●
Cavity wall insulation: unlocking potential in existing dwellings (2007 edition) **CE252**	England		○	○	○	●
Effective use of insulation in dwellings (2003 edition) **CE23**	England		○	●	○	●
Energy efficient ventilation in housing. A guide for specifiers on requirements and options for ventilation (2006 edition) **CE124/GPG268**	England		○	●	○	●
External insulation systems for walls of dwellings (2003 edition) **CE118/GPG293**	England		○	○	○	●
External wall insulation of mobile homes (2000 edition) **GPCS389**	England	●		○		
Improving airtightness in existing homes (2005 edition) **CE137/GPG224**	UK wide		○	●	○	●
Insulation materials chart – thermal properties and environmental ratings (2004 edition) **CE71**	England		○	○	○	●

Insulation & ventilation cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Internal wall insulation in existing housing (2003 edition) **CE17/GPG138**	England		○	●	○	●
Northern Ireland: assessing U-values of existing housing (2005 edition) **CE127**	Northern Ireland		○	●	○	●
Practical refurbishment of solid-walled houses (2006 edition) **CE184**	UK wide		○	●	○	
Scotland: assessing U-values of existing housing (2004 edition) **CE84**	Scotland		○	●	○	●

Lighting

Daylighting in urban areas: a guide for designers (2007 edition) **CE257**	England		●	●	○	○
Cost benefit of lighting (2005 edition) **CE56**	England		●	○	●	●
Domestic lighting innovations (2004 edition) **CE80/ADH001**	England	●	○	○	○	●
Energy efficient lighting – guidance for installers and specifiers (2006 edition) **CE61**	England		○	●	○	○
Low energy domestic lighting (2006 edition) **GIL20/CE188**	England		●	●		●
Low energy lighting – looking good for less (2004 edition) **CE81/GPCS441**	England	●	○	○	○	○

Multi residential & tower blocks

Refurbishment of high rise dwellings – a strategic guide for local authority managers (2006 edition) **CE187/GPG80**	England				○	●

Renewable energy systems

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
BedZED – Beddington Zero Energy Development, Sutton (2002 edition) **GIR89**	England	●	○			○
Building a sustainable future – homes for an autonomous community (1998 edition) **GIR53**	England		○			●
Domestic ground source heat pumps: design and installation of closed loop systems (2004 edition) **CE82/GPG339**	England	●	●	●		●
Heat pumps in the UK – a monitoring report (2000 edition) **GIR72**	England		○	●		●
The Hockerton Housing Project – case study (2003 edition) **CE15/NPP119**	England	●	○			○
Installing small wind-powered electricity generating systems (2004 edition) **CE72**	England		○	●		○
Intergrating renewable energy into exising housing – case studies (2006 edition) **CE191**	UK wide	●	○	●		●
Meeting the 10 per cent target for renewable energy in housing (2006 edition) **CE190**	England		●		●	●
New and renewable energy technologies for existing housing (2005 edition) **CE102**	UK wide		○	○	●	●
Passive solar house designs – The Farrans study (1997 edition) **GIL25**	England	●	○			●
Passive solar estate layout (1997 edition) **GIR27**	UK wide		○			●
Renewable energy in housing – case studies (2003 edition) **CE28**	UK wide	●	○	○		
Renewable energy sources for homes in urban environments (2005 edition) **CE69**	UK wide		○	○		●

Renewable energy systems cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Renewable energy sources for homes in rural environments (2004 edition) **CE70**	UK wide		○	○		●
Rural biomass community heating case study (2004 edition) **CE91**	England	●	○			
Solar water heating systems – guidance for professionals, conventional indirect models (2006 edition) **CE131**	England		○	●		●
Solar hot water systems in new housing – a monitoring report (2001 edition) **GIR88**	England	●	○			○
Thamesmead Ecopark – case study of Gallions Housing Association (2005 edition) **CE130**	England	●	○			○

Whole house new build

Energy efficiency and the Code for Sustainable Homes: Level 3 (2008 edition) **CE290**	England		●		○	●
Energy Efficiency and the Code for Sustainable Homes: Level 4 (2008 edition) **CE291**	England		●		○	●
Energy Efficiency and the Code for Sustainable Homes: Levels 5 & 6 (2008 edition) **CE292**	England		●		○	●
BedZED – Beddington Zero Energy Development, Sutton (2002 edition) **GIR89**	England	●	○		○	○
Benefits of best practice: heating and insulation (2005 edition) **CE11**	England		○	○	●	●
Best practice in new housing – a practical guide (2005 edition) **CE95**	England		○		○	●
Building a sustainable future – homes for an autonomous community (1998 edition) **GIR53**	England		○		○	●

Whole house new build cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Building energy efficient buildings using modern methods of construction (2005 edition) **CE139**	UK wide	●	○		○	●
Building your own energy efficient house (2005 edition) **CE123/GPG194**	UK wide		○			○
Creating a sustainable urban extension – case study, Upton Northhampton (2006 edition) **CE195**	England	●		○		
Energy efficient domestic extensions (2005 edition) **CE122**	England			●		●
Energy efficient housing association schemes (1998 edition) **GPCS378**	England	●	○		○	○
Energy efficiency in new housing – summary of specifications for Northern Ireland (2003 edition) **CE24**	Northern Ireland		●		○	○
The Hockerton Housing Project – case study (2003 edition) **CE15/NPP119**	England	●	○		○	○
Innovative social housing (case study: Alpine Close, Maidenhead, Berkshire) (2003 edition) **CE37**	England	●	○		○	○
Passive solar estate layout (2000 edition) **GIR27**	UK wide		●		○	●
Passive solar house designs – The Farrans study (1997 edition) **GIL25**	England	●	○		○	●
Post-construction testing – a professionals guide to testing housing for energy efficiency (2005 edition) **CE128/GIR64**	UK wide		○	●	○	○
Reducing overheating – a designer's guide (2005 edition) **CE129**	England		○		○	●
Thamesmead Ecopark – case study of Gallions Housing Association (2005 edition) **CE130**	England	●	○		○	○

Whole house refurbishment

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Benefits of best practice: heating and insulation (2005 edition) **CE11**	England			○	●	
Cavity wall insulation in existing dwellings: A guide for specifiers and advisors (2007 edition) **CE252**	England			○	○	●
The effect of Building Regulations (Part L1 2006) on existing dwellings (2006 edition) **CE53/GIL70**	England		●	●	○	●
Energy efficient domestic extensions (2005 edition) **CE122**	England			●		●
Energy efficient garage conversions (2005 edition) **CE121**	England			●		●
Energy efficient historic homes – case studies (2005 edition) **CE138**	England	●		○	○	○
Energy efficient loft extensions (2005 edition) **CE120**	England			●		●
Energy efficient refurbishment of existing housing (2004 edition) **CE83/GPG155**	UK wide		●	●	●	●
Energy efficient refurbishment of existing housing – case studies (2003 edition) **CE104/GPCS418**	England	●	○	○	○	○
Hard to treat homes & fuel poverty (2003 edition) **CE21**	England, Northern Ireland, Wales				●	●
Improving airtightness in existing homes (2005 edition) **CE137/GPG224**	UK wide			●	○	●
Making private rented housing energy efficient – flagship home case study (2006 edition) **CE192**	England	●			○	●
Newark and Sherwood District Council case study (2004 edition) **CE96**	England	●			○	○

Whole house refurbishment cont…

	Region	Case studies	Developers	Installers	Policy makers	Specifiers
Practical refurbishment of solid-walled houses (2006 edition) **CE184**	UK wide		●	●	○	●
Refurbishing dwellings – a summary of best practice (2006 edition) **CE189**	UK wide		○	●	○	●
Whole house boiler sizing method for houses and flats (2003 edition) **CE54**	England			●	○	○

Windows

Benefits of best practice: windows (2006 edition) **CE14**	UK wide		●	●	○	●
Windows for new and exisiting housing (2006 edition) **CE66**	England		●	●	○	●

About the Energy Saving Trust

The Energy Saving Trust seeks to reduce the effect of climate change by decreasing the amount of CO_2 produced by the use of energy in housing in the UK, and acts as a leading authority on energy efficiency – providing free technical guidance and solutions that meet high levels of energy efficiency in the design, construction and refurbishment of homes across the UK.

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