

Planning Guidance Note – Renewable Energy



Introduction

The purpose of this guidance note is to provide further information about how to meet the Council's requirements for the provision of renewable energy in new development. These requirements are part of a range of measures to secure sustainable development.

Planning Policy Context

The Council's Core Strategy and Policies Development Plan Document (February 2009) has a specific policy on: Renewable Energy, Energy Conservation and Sustainable Construction – Policy CC1.

Policy CC1 states:

“The Council will support the provision of renewable energy, energy efficiency and promote sustainable development generally by:

- a) *requiring residential development of one or more dwellings and other development involving new building or extensions exceeding 100m² to:
 - i. optimise design, layout and orientation of development to minimise energy use
 - ii. include measures to provide at least 10% of the development's energy demand from on-site renewable energy sources unless it can be shown that it would seriously threaten the viability of the development*
- b) *encouraging the installation of the renewable energy equipment to supply existing buildings*
- c) *encouraging appropriate freestanding renewable energy schemes*
- d) *encouraging high standards of sustainable construction including the use of recycled construction material*
- e) *encouraging developments to attain high energy efficiency and minimum impact on the environment to at least Code for Sustainable Homes – 3 star or BREEAM 'very good' standard.”*

The design and positioning of renewable energy equipment needs to take into account any potential adverse impact on the design of a property or character of an area. Such matters are covered by other policies in the Core Strategy and Policies DPD - in particular Policies EN1 Design of New Development, EN5 dealing with Listed and locally listed buildings and EN6 dealing with conservation areas. The Council also has a Supplementary Planning Document on the Design of Residential Extensions and New Residential Development which further explains the requirements of Policy EN1 and is helpful in getting the most appropriate design of renewable energy equipment.

How to meet the renewable energy requirements of the policy

The Council will require a clear written explanation submitted with a planning application demonstrating how the renewable energy requirement in Policy CC1 will be met. This must be in the form of a Renewable Energy Statement.

All new residential and other developments will be encouraged to provide an interim Code Certificate or a letter from a BREEAM assessor showing that the proposed development has met the required level 3 standard of sustainable construction¹.

The designer must first decide what renewable energy technologies will be used to meet the required 10% level. Options will need to be carefully considered taking into account their effectiveness for the particular development and any wider planning implications. The following may be considered: solar hot water, solar electricity, biomass boilers, wind turbines, heat pumps – air source and ground source. The [Energy Saving Trust](#) can provide further information. They have a useful [Home Energy Generation Selector](#) tool.

Combined Heat and Power schemes should be considered for larger developments. More information on micro-CHP schemes can be found at the [EST dedicated page](#) and the Carbon Trusts website.

The following information should be set out in the Renewable Energy Statement which should also include the following summary table.

Percentage of energy demand generated through the provision of renewable energy technologies.

a) Baseline energy consumption of development	
b) Reduction due to energy efficiency measures	
c) Reduced energy consumption of development	
d) Quantity to be generated by renewable element (10% of c.)	

Notes

- a) Calculate the baseline energy consumption (a). This is the energy (electrical and heating) that would be consumed by the development over the course of a year when occupied, and if built to minimum Building Regulation requirements.
- b) Describe and calculate the impact of energy efficiency measures (b) that have been incorporated into the design to make improvements over and above Part L 2006 Building Regulations. This may include, for example, thicker cavity walls and an increased level of insulation in the roof space. It should be noted that the greater the energy efficiency, the lower the energy usage and associated carbon emission. This will reduce the target level of renewable energy that will need to be generated within the development.
- c) Calculate the 'actual' predicted energy demand for the development (c). This is the predicted energy consumption of the entire development, taking into account additional energy efficiency measures (measured in kWh/yr for the entire development).
- d) Calculate the amount of renewable energy to be generated to meet the required 10% (d).

¹ For more information on BREEAM and Code for Sustainable Homes please go to www.breeam.org

Points to consider when assessing energy efficiency and renewable energy in new development:

Consider at the outset of the design process how the renewable energy requirements will be addressed: Factors such as site layout, building design and orientation all impact on energy efficiency and generating renewable energy. If these are addressed early on, there will be a wider range of options that are viable and the solution is likely to be more cost effective. For example, solar thermal units are most effective on south facing roof slopes.

Aim to achieve the highest possible standards of energy efficiency. The greater the energy efficiency of the building, the lower its energy consumption will be. This will reduce the target level of renewable energy that will need to be generated within the development.

One size does not fit all. Every scheme will have its own circumstances. For example, the solar resource (amount of sunlight available to generate renewable energy) will differ from site to site depending on overshadowing by other buildings and trees.

Seek advice from energy experts. Modelling the energy consumption of a development and selection of design approaches to achieve high energy efficiency and integrated renewable energy generation requires particular skills. Early involvement of the right expertise can help to achieve a successful solution and avoid delays during the planning process. Advice for house builders is provided by the [Energy Saving Trust](#) and for commercial development by the [Carbon Trust](#).

Energy efficient development can be achieved within a wide range of architectural building styles. Energy efficiency and renewable energy generation does not need to be at the expense of quality architecture. Many measures (such as wide cavities, insulation, ground source heat pumps) have no visual impact. New products such as solar tiles are also becoming available that have very low visual impact.

Do not always assume energy efficiency and renewable energy are costly. Not all energy efficiency measures carry a net cost, for example, designing to capture passive solar energy. The growth in the market for high specification materials and micro renewable energy and higher volumes of production means increasingly competitive prices. In addition, as energy prices rise and environmental awareness increases, consumer demand for energy efficient homes can be reflected in the marketing of new development.

For more information and to calculate you own CO2 emissions please look at the Act on CO2 website.