



Decentralised Renewable and Low-Carbon Energy Provision on Large Developments

Interim Guidance Note – February 2009

This guidance provides clarification on the requirement for developers to provide decentralised energy as part of large developments.

This guidance has been produced as an interim measure prior to the introduction of a detailed policy implementation guide from the Yorkshire & Humber Assembly later this year.

POLICY ENV5 OF THE YORKSHIRE AND HUMBER PLAN: REGIONAL SPATIAL STRATEGY TO 2026: -

...ALL RESIDENTIAL DEVELOPMENTS OF 10 OR MORE DWELLINGS AND NON-RESIDENTIAL DEVELOPMENTS WITH 1000M² OR MORE OF FLOORSPACE SHOULD PROVIDE 10% OF THEIR ENERGY FROM DECENTRALISED AND RENEWABLE OR LOW-CARBON SOURCES.

Why 10% Decentralised Energy Provision in Craven?

The requirement to provide 10% of the energy to be used in major applications from decentralised sources has been introduced by the Yorkshire and Humber Plan: Regional Spatial Strategy to 2026, approved in May 2008. Regional Spatial Strategy Policy ENV5 introduces the requirement (the relevant extract from the policy is included below).

When making decisions on planning applications the policies in the Regional Spatial Strategy have the same importance or 'weight' as Craven's local planning policies and the Council has to make planning decisions which conform to the Strategy's policies.

Extract from Policy ENV5 of the Yorkshire and Humber Plan: Regional Spatial Strategy to 2026

ENV5: Energy:

"3. Promoting and securing greater use of decentralised and renewable or low-carbon energy in new development, including through Development Plan Documents setting ambitious but viable proportions of the energy supply for new development to be required to come from such sources. *In advance of local targets being set in DPDs, new developments of more than 10 dwellings or 1000m² of non-residential floorspace should secure at least 10% of their energy from decentralised and renewable or low-carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable.*"

As indicated above a detailed guide is being produced by the Yorkshire & Humber Assembly to clarify how the policy should be implemented and will be released later this year.

KEY DEFINITIONS: -

Decentralised Energy – Energy supplies which are not grid connected and are situated on, or close to, a development site

Major Planning Application – An application for 10 or more dwellings or for a development which includes 1000m² or more of non-residential floorspace.

Renewable Energy – Energy produced from energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass.

Low-Carbon Energy Sources – Low-carbon energy sources include renewable energy sources but are not limited to these sources. They also include technologies such as domestic fuel cells which don't use renewable energy flows, but reduce the carbon generated in creating energy when compared against other methods such as traditional power stations.

How will Craven Calculate the 10% Decentralised Energy Requirement?

In advance of an implementation guide being introduced by the Yorkshire and Humber Assembly, to clarify how the 10% decentralised energy requirement should be calculated, Craven District Council will require any major planning applications submitted to include detailed information indicating how the 10% decentralised energy requirement will be met.

The information should be submitted through a **Predicted Energy Assessment** (together with a copy of the calculations on which the Assessment is based). Predicted Energy Assessments are required for most new developments as part of the Building Regulations. The submission of a Predicted Energy Assessment with relevant calculations will allow the Council to ensure that 10% decentralised energy provision is made.

The onus is on the developer to provide detailed information regarding the decentralised technologies to be used and their implementation and maintenance.

Raw Energy Usage vs Carbon Emissions Calculation

Policy ENV5 states that 10% decentralised energy should be provided on-site for major applications however, this 10% figure could be calculated in a number of different ways. A 10% reduction could principally be calculated in terms of either raw energy usage or in terms of carbon emissions. Craven will calculate the 10% decentralised energy requirement based on the predicted CO₂ emissions from the building(s) to be created.

CO₂ emissions calculations are used by a number of planning authorities across the country to calculate 10% decentralised energy provision. The reason for this is that common energy sources such as gas, electricity and LPG have different CO₂ emissions associated with their production and transportation. The following calculation shows that the production of electrical energy creates far greater carbon emissions when compared to the production of gas energy: -

Energy/Carbon calculation methodology: Determined by current Building Regulations.

Electric energy - 1 kWhpa = **0.568** kilograms of CO₂ per annum

Gas energy - 1 kWhpa = **0.19** kilograms of CO₂ per annum

The use of CO₂ emissions as a method with which developments can meet policy ENV5 ensures that the true environmental impact of providing energy to these developments is minimised. The use of the CO₂ emissions calculations can discourage developers from installing electric heating, which creates a higher level of carbon emissions, as well as increasing the energy costs for end users of developments, when compared to the use of gas.

The justification in the Regional Spatial Strategy for policy ENV5 indicates that the reason for decentralised energy requirements is to cut carbon emissions, and provides support for the use of a 10% reduction in CO₂ emissions to ensure developments are in compliance with the policy: -

10.32 In order to meet the Government's carbon-cutting ambitions, both higher levels of energy efficiency and much greater use of renewable energy is required.

While the Council strongly encourages the use of a CO₂ emissions based calculation, in cases where developers are to use information which calculates decentralised energy provision information relating to raw energy usage, as opposed to CO₂ emissions, the Council retains the right to require a higher percentage than 10% in developments. This reflects the fact that using a calculation based upon raw energy usage rather than CO₂ emissions does not have the same positive impact on the environment, in terms of climate change and mitigation. A flexible approach to the percentage of decentralised energy provided on major developments is justified by policy ENV5's reference to "at least 10%" of decentralised energy being provided as part of major applications.

Feasibility and Viability

If a developer considers that it is not feasible or viable to produce decentralised and renewable or low-carbon sources on or adjacent to development sites, Craven will expect very detailed information, indicating why this is the case, to be submitted with the planning application.

If, due to feasibility or viability reasons, it can be proven that a development is unable to provide 10% of its energy from renewable or low-carbon sources the developer should indicate what percentage of decentralised energy **can** be provided with the development.

In cases where it is not feasible or viable to provide decentralised energy as part of major applications Craven may require other sustainable features to be incorporated in the development as a 'trade-off', for example energy efficiency measures above and beyond the minimum standards, increased financial contributions towards cycle paths etc.

Frequently Asked Questions

The development I am involved with includes a high level of energy efficiency. Does this mean that I do not have to provide 10% the energy used in the development from decentralised and renewable or low-carbon sources?

No. Policy ENV5 and its justification in the Yorkshire and Humber Plan make it clear that both energy efficiency measures and decentralised renewable or low-carbon energy provision are required on all developments falling within the prescribed size, unless not feasible or viable.

A decentralised energy supply contributes to creating a secure and affordable supply of energy, in addition to helping to mitigate the impact of a development on the environment.

I am submitting an outline application. Do I have to submit detailed information regarding the provision of decentralised energy with the planning application?

In the case of outline applications, detailed information on decentralised energy provision will not need to be provided, however a planning condition will be attached to any planning permission granted and this detailed information will be required at the Reserved Matters application stage.

I am submitting an application for an agricultural building which has a floor area greater than 1000m². Do I have to incorporate decentralised energy into the development?

Decentralised energy should be provided as part of agricultural buildings greater than 1000m² unless, as with other developments, it can be proven that the provision of this type of energy is not feasible or viable. The only exception will be in the case of “non-residential agricultural buildings with low energy demand” where the Council may take a more flexible approach. Non-residential agricultural buildings with low energy demand are defined by government as follows: “buildings with low energy demand include buildings, or parts of buildings designed to be used separately, that are heated for a few days each year to enable plants to germinate but are otherwise unheated.”

Will the requirement to provide 10% decentralised energy provision apply to change of uses?

Yes, decentralised energy provision will be required for developments of 10 dwellings or involving 1000m² or more of non-residential floorspace. In cases of change of use, where the amended use is similar to the original one, in terms of the nature of the operation and energy usage, a pragmatic approach may be taken.

Is decentralised energy provision required on developments which involve listed buildings and Conservation Areas?

While the special historic character and interest of listed buildings and conservation areas needs to be maintained, decentralised energy provision can often be made without affecting these special qualities. Please refer to the English Heritage publication referred to in the 'Further Sources of Information' section on the following page for further details.

The development I am involved in narrowly falls below the 10 dwellings / 1000m² of non-residential floorspace threshold. Does this mean that I do not need to adopt any decentralised energy technologies?

Planning policy requires that all developments have regard to sustainability considerations. Developers should be able to clearly justify, as part of their Design & Access Statement how their scheme minimises the use of energy in its design and, particularly for larger developments, that the use of decentralised renewable or low carbon energy has been considered and incorporated where appropriate.

In particular, regional policy ENV5 requires that greenhouse gas emissions are reduced, energy efficiency is improved and that power sources are used efficiently through:

Requiring the orientation and layout of development to maximise passive solar heating,

and, in addition;

3. Maximising the use of combined heat and power, particularly for developments with energy demands over 2MW, and incorporating renewable sources of energy where possible.

In addition to relevant regional planning policy, national planning policy, particularly Planning Policy Statements 1 (Delivering Sustainable Development) and 22 (Renewable Energy), highlights the importance of reducing the environmental impact of development. Dependent on the type, scale and design of development proposed Craven District Council may require the provision of decentralised renewable or low-carbon energy sources on developments which are not 'major applications'.

What is the best way in which to meet the 10% requirement?

This will depend on a number of factors including the type of development and its location. However, it is recommended that incorporating energy efficiency measures into the relevant development will reduce its overall energy usage and therefore the amount of decentralised energy technologies required to meet the 10% requirement.

Case Study: Low Demesne, Ingleton

Planning permission has been granted for this development of 24 affordable dwellings within Craven. The development meets the requirement for 10% decentralised energy through the provision of solar thermal panels (for heating hot water) on the roofs of the houses. The images below are of the approved scheme and include elevations of the houses with solar thermal panels on the roofs.



Further Sources of Information

- 'Meeting the ten percent target for renewable energy in housing – a guide for developers and planners' - Energy Saving Trust
- 'Integrating Renewable Energy into New Developments: Toolkit for Planners, Developers and Consultants' (London Energy Partnership, 2004)
- Renewable Energy Association - www.r-e-a.net
- Low Carbon Buildings Programme – Microgeneration Technologies – www.lowcarbonbuildings.org.uk/micro/
- 'Microgeneration in the Historic Environment' – English Heritage - www.helm.org.uk/upload/pdf/Microgeneration.pdf
- themertonrule.org.uk
- Energy Saving Trust – www.energysavingtrust.org.uk

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