Energy Statement and what it should contain

4.96 Core Strategy Policy CS5: Encouraging Renewable Energy Schemes requires that an Energy Statement is produced for developments of more than 10 dwellings or 1,000 square metres of non-residential floor space. This section sets out in more detail the steps which need to be gone through in order to comply with this policy requirement.

What is the purpose of an Energy Statement?

4.97 The purpose of an Energy Statement is to demonstrate that energy use mitigation measures have been taken into account in a schemes design and evolution, and that they are appropriate in the context of the development.

When is an Energy Statement required?

4.98 A number of studies have shown that planning for renewable and low carbon energy is most effective at the design stage. It is therefore important that it is considered at the earliest opportunity and where relevant as part of the planning application process. Applicants should consider the advice in this SPD at Pre-Application stages as well as set out below.

Table 4: When an Energy Statement is required

Development Type	Energy Statement Required	
	Outline	Full or Reserved Matters
Residential development – of more than 10 dwellings – including conversions, subdivisions and changes of use.	Need to show how the proposed development will achieve the requirements of Policy CS5 of the Core Strategy. At the outline application stage, best estimates of energy use will be acceptable.	Yes – detailed Energy Statement required.
Non-residential development[35] – of 1000m^2 or greater – only new buildings and not extensions to existing buildings.	Need to show how the proposed development will achieve the requirements of Policy CS5 of the Core Strategy. Best estimates of energy use at outline application stage will be acceptable.	Yes – detailed Energy Statement required.

[35] This applies to all developments outside use class C3 i.e. it includes nursing homes and residential institutions.

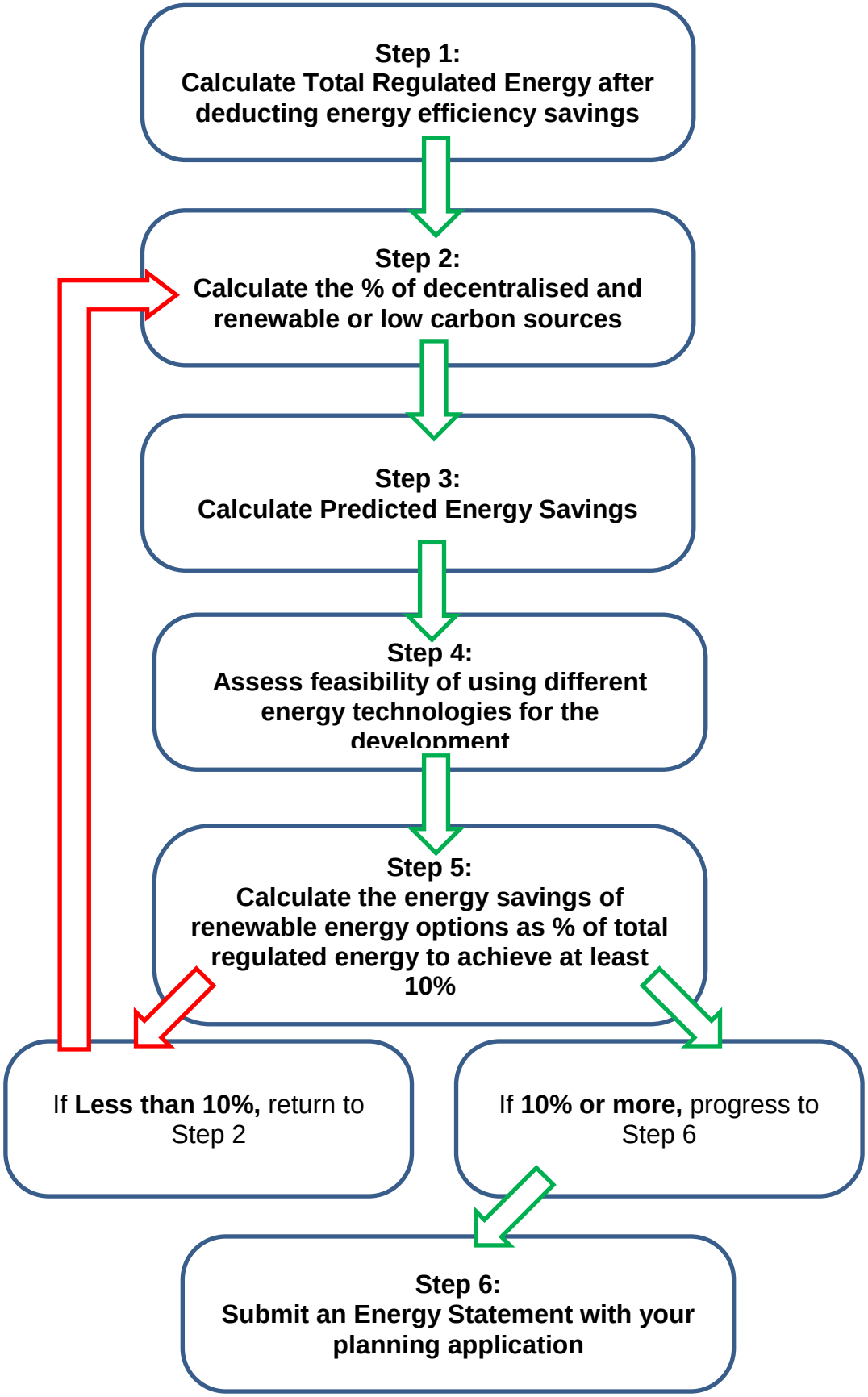
Householder extensions	No	No – although an energy report is produced for Building Control.
Other Applications*	No	No

* Including applications for Listed Building Consent, Certificate of Lawfulness (Proposed and Existing uses), and advertisement consent. Although an energy statement is not required for planning application purposes, applicants are encouraged to consider energy use which could be assisted by undertaking an Energy Statement.

What should the Statement include?

4.99 Figure 5 shows the methodology that should be followed when carrying out an energy statement.

Figure 5: Energy Statement Methodology



Step 1 Calculate total regulated energy demand for the development

The total regulated energy demand for the development (baseline) figure is equal to the predicted total energy consumption of the site after allowances have been made for energy efficiency measures. It should take account of predicted annual energy demand for space heating, hot water and internal lighting.

Design layout and other issues will also need to take account of other material Development Plan considerations such as effect on amenity of nearby users, protection of trees, impact on the street scene etc. The objective should be to minimise energy demand from the development and maximise renewable energy production within the constraints and opportunities of the site.

Step 2 Calculate the Percentage of decentralised and renewable or low carbon sources

Energy efficiency measures aimed at reducing energy consumption (such as those set out on p.23 of this SPD) cannot count towards achieving the 'at least 10%' amount required by this policy but can reduce energy use.

The calculation should be undertaken as follows:

Total estimated regulated energy use 'minus' allowances for energy efficient measures = Baseline energy

The 10% is a rolling target i.e. 10% over any updated Building Regulation standard/ or new standard coming out of the Housing Review Consultation[36].

The 10% requirement for decentralised, renewable or low carbon technology can be calculated by using the following:

Baseline x 0.1 = 10% requirement for renewable technology.

Step 3 Calculate Predicted Energy Savings

The purpose of incorporating decentralised, renewable or low carbon technology into a building is so that it uses significantly less energy and emits less carbon than current industry benchmarks. It is therefore important to calculate the predicted CO_2 emissions from a building.

The energy use of new buildings is assessed using a Standard Assessment Procedure (SAP) for housing and simplified Building Energy Model (SBEM) for

[36] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/230250/1-_Housing_Standards_Review_-_Consultation_Document.pdf

non-domestic buildings. These are standard methods of calculating the design energy use of a building, approved by the Government.

Example of Micro Wind and Solar Power Technology (Photo by BRE Global)

Step 4 Assess the feasibility of using different energy technologies for the development and calculate the energy generation saving potential of so doing.

The minimum 10% requirement should have been calculated in Stage 2 you need to decide which decentralised, renewable or low carbon technology is suitable for the site (see pages 20 - 24 for advice).

This can either be one or a range of different renewable technologies. For residential purposes, the website www.systemdesigner.co.uk can help to create a low carbon/ renewable energy system design and explains how it could work.

In deciding which types of technology should be used, the following factors should be borne in mind:

- The ability to provide at least 10% of a sites energy demand after energy efficiency measures have been incorporated.

- The ability to be integrated satisfactorily into the development taking into account Development Plan requirements including design, amenity, conservation etc.
- The cost effectiveness of the technologies taking into account development life time costs.

The types of renewable technologies which can be incorporated into a scheme in order to meet the 10% target are not prescriptive. The type of information that will be required as part of the planning application for each technology selected is set out in table in Appendix 1 of this SPD.

Step 5 Check the energy savings of renewable energy options as a percentage of predicted regulated energy to achieve at least 10%

$$= \frac{\text{Total energy from technology (Step 4)}}{\text{Total energy demand of development (Baseline predicted in Step 2)}} \times 100$$

The above calculation needs to be **at least 10%** in order to meet the requirements of Policy CS5:

If the figure is **less than 10%** than **return to Step 2** and incorporate additional renewable or low carbon technologies and work through the other stages again.

If the figure is **10% or more, progress to Step 6**.

Step 6 Submit an Energy Statement with your planning application

The Energy Statement needs to set out the information outlined in steps 1- 5 above and be submitted with a planning application, as set out above, in order to demonstrate how the scheme complies with policy CS5: Encouraging Renewable Energy Schemes.

The Energy Statement should also include detailed information on the selected technology e.g. layout plan, floor plans, elevations, visual impact etc. further detail is set out in the Table 7 in Appendix 1.

References

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http://www.biffa.co.uk/waste-processing/energy-from-waste/about-energy-from-waste.html
Building Regulations: Part L – Conservation of Fuel and Power
http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partl/

Carbon Trust, Renewable Energy Sources: Opportunities for businesses

http://www.carbontrust.com/media/7379/ctv010_-_renewable_energy_sources.pdf

Construction Carbon Calculator, Environment Agency
Helps to identify carbon savings during the design and construction of your development.
http://www.environment-agency.gov.uk/static/documents/Business/Copy_of_Carbon_calculator_v3_2.xls

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The English Heritage website sets out information with regard to energy efficiency in relation to historic buildings and also gives advice on generating energy in older houses

http://www.english-heritage.org.uk/professional/advice/advice-by-topic/climate-change/energy-efficiency/

http://www.english-heritage.org.uk/your-home/saving-energy/generating-energy

London Renewables Toolkit
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http://www.hpa.org.uk/ProductsServices/ChemicalsPoisons/IntegratedPollutionPreventionControlIPPC/ippcIncineration/

Trees and Design Action Group 2010
http://www.tdag.org.uk/uploads/4/2/8/0/4280686/no_trees_no_future.pdf