

Guidance for developers to meet requirements for a Renewable Energy Feasibility Assessment

Changes to Part L of the building regulations will be implemented from 6th April 2014 to incorporate a new requirement to provide an analysis of the technical, environmental and economic feasibility of using renewable and low carbon energy generation equipment (Regulation 25A). The updated document applicable to new dwellings can be viewed at;

http://www.planningportal.gov.uk/uploads/br/BR_PDF_AD_L1A_2013.pdf The relevant text can be found on page 12.

The updated document applicable to new buildings other than dwellings can be viewed at;

http://www.planningportal.gov.uk/uploads/br/BR_PDF_AD_L2A_2013.pdf The relevant text can be found on page 9.

Regulation 25A details the expectation that the person constructing a new building will – not later than the day before construction starts – provide an analysis of the feasibility of using decentralised renewable energy (electricity and heat) supply systems. This would usually be one or more of solar photovoltaic, solar thermal or wood heat systems; but could also be wind turbines, hydropower, biogas, heat pumps or cogeneration. A copy of the analysis must be made available to an officer of the local authority for inspection at any time after construction has started. It may be carried out for individual buildings, groups of similar buildings or for common typologies of buildings in the same area.

Although the new regulations enforce provision of a renewable energy generating equipment feasibility document rather the installation of such equipment, it is considered that developers – once they have assessed the potential benefits of installing renewables – are very likely to proceed with installation. The purpose of an Energy Document is to demonstrate that renewable energy generation is integral to the scheme's design and appropriate to the context of the development.

For the planning application, the council does not require a Renewable Energy Statement. However, as this will be required for Building Control prior to construction starting, developers may consider it in their best interests to submit the document at the same time as their planning application. This will enable the planning application to progress more quickly and avoid the need for variations or even a further application at a later date to meet the building regulations from the outset. i.e. changes to site layout to facilitate solar energy. Mention could be made within the Design and Access Statement and some technologies could be detailed in the drawings.

Photovoltaic arrays, solar thermal panels or tubes and development scale district wood heat (from a single boiler) are considered the easiest of technologies for developers to deploy in South Somerset due to their effectiveness in this district and their relative cost. The merits of each technology are detailed below.

Photovoltaic arrays

These attract a feed in tariff (FIT) ^{*1} for the occupant, enabling the building to be sold or rented at a premium. Roof integrated or rectangular surface mounted arrays are aesthetically more pleasing than irregular shaped arrays. 2-4 kW arrays are suitable for residences with costs of £3,000 - £7,000 (Dec 2013 prices)

Wood heat

Individual buildings may have pellet, chip or log boilers installed but district heat at the development scale can be significantly more cost effective for the developer. The renewable heat incentive (RHI)^{*2} is payable to the owner of a wood heat boiler. As with FITs, the RHI provides an income

stream for 20 years based on a unit value per kWh dependent on the technology deployed. This could be to the occupant (enabling the building to be sold at a premium) or to an energy supply company that had installed a district heat system at their cost, retained ownership of the system and who bills consumers for the metered heat they use. In the latter case, the developer avoids the cost of installing heating systems. A district wood heat system requires a central boiler house and wood chip store approximately the size of a small dwelling. The location and appearance should be detailed in the planning application to avoid a requirement for a further planning application.

Solar Thermal Panels or Tubes

These attract the RHI for the owner; can provide all hot water requirements during the summer and up to 60% of annual hot water demand. They are not suitable for space heating but can work well in tandem with wood heat, which would supply mainly winter warmth.

Air source heat pumps

These have the appearance of small ground mounted air conditioning units. They can provide for hot water and a low temperature wet radiator or under floor heating system provided the building is exceptionally well insulated. They provide 3.2 kW of heat for 1 kW of electricity and could be considered as very efficient electrical heater rather than renewable energy generation equipment. However, they do attract the RHI for the owner.

Less commonly used renewables

Wind turbines are less likely to be deployed with new residential developments because they are not of a scale that would usually be grid connected to a single dwelling. They can be suitable for commercial or agricultural developments provided there is space to accommodate a fall over distance + 10% (Planning practice guidance for renewable and low carbon energy July 2013) and a wind resource. Hydropower is location specific and usually a retrofit to an existing structure. Ground source heat is comparatively expensive to install but can be suitable for an exceptionally well insulated and air tight building.

*1. A renewable electricity generating installation can be registered with an electricity supply company and a quarterly payment made to the owner based on a reading from the generation meter.

*2. A renewable heat generating installation can be registered with Ofgem who will make quarterly payment to the owner based on readings from a heat meter

These financial incentives described were correct at the time of writing. You are encouraged to check current incentives when you submit your planning application. SSDC accepts no liability in this regard.

For further information contact the Climate Change Officer
Keith.wheaton-green@southsomerset.gov.uk

Tel 01935 462651