REVISION 2020

PROPOSED REGIONAL SPATIAL STRATEGY RENEWABLE ENERGY POLICIES

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On Behalf of Government Office for the South West and the South West Regional Assembly

PROPOSED RENEWABLE ENERGY POLICIES

1 REGIONAL AND SUB-REGIONAL RENEWABLE ENERGY TARGETS

1.1 Renewable Electricity Targets

1.1.1 Electricity from Onshore Renewables

Achieving the commitments set nationally within the 2003 Energy White Paper will require at least 40% of electricity to be generated from renewable sources by 2050. In the shorter term the Government is committed to the achievement of 10% renewable electricity by 2010 and is aiming for 20% by 2020.

Although the South West has made a good start and has a range of renewable energy installations using the wind, hydro, solar and biomass resources, in 2005 only about 3% of the region's electricity demand is met by these indigenous renewables.

Policy E1 Renewable Electricity Targets

Local Development Documents will include policies and development proposals which contribute to the achievement of the following targets:

a) By 2010 a minimum target of 509-611 MWe installed generating capacity, from a range of onshore renewable electricity technologies;

b) By 2020 a minimum target of 847[1] MWe installed generating capacity from a range of onshore renewable electricity technologies. This onshore target, together with offshore renewable electricity capacity, will help to provide at least 20% of the Region's electricity demand by 2020.

The RSS policy framework, complemented by Local Development Documents, will facilitate the achievement of the minimum sub-regional targets by 2010 outlined in table 1:

Table 1: 2010 Onshore Renewable Electricity Targets

Sub-region	Installed Electricity Generating Capacity (MWe)
Former Avon	35-52
Gloucestershire	40-50
Wiltshire	65-85
Somerset	61-81
Devon	151
Dorset	64-84
Cornwall	93-108[2]
Total	509-611

[1] The renewable electricity capacity approved through the planning process will be monitored through the local planning authorities' annual monitoring review. Capacity installed will be monitored by the Regen SW annual survey

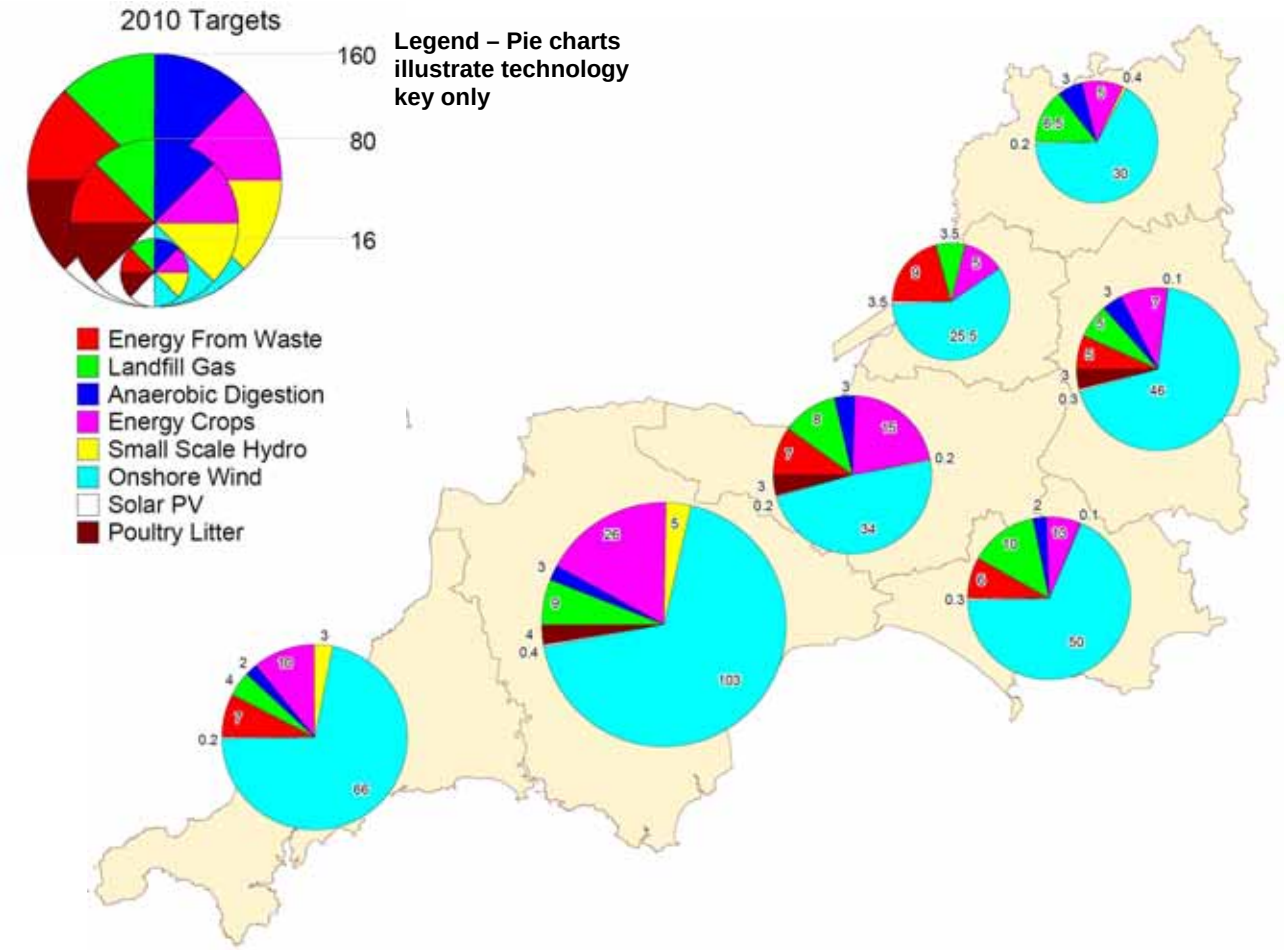
[2] Cornwall County Council adopted the bottom end of the range within their structure plan

The targets outlined within table 1 have been consulted upon and agreed by the counties and/or sub regions as part of the REvision 2010 Project.

Map 1 below suggests one way in which these 2010 targets may be met, though **the actual technology mix itself is not part of the targets and is provided for indicative purposes only.**

For presentation purposes the map takes the mid point range of the figures in table 1. The assumptions that form the basis of this analysis are fully set out at www.oursouthwest.com/revision2010 and summarised in the *[RSS associated document title].*

Map 1: Sub Regional Renewable Electricity Targets for 2010 (MWe)



Further work on establishing appropriate sub regional targets for the 2020 target will be taken forward as an early review of this RSS.

Regional SPD on Renewable Energy *[RSS associated document title]* contains more detailed guidance on some of the issues relating to the spatial distribution of renewable energy technologies within the region.

When taken together, the capacity from onshore and offshore technologies will generate approximately 20% of the region's electricity demand. The estimate of energy demand takes the assumptions from the Energy White Paper in terms of UK energy demand, overlaid by

assumptions around the higher than average forecasts for increasing GVA and household growth within the South West. See *[RSS associated document title]* for more detail.

If the level of energy efficiency assumed within the 20% target for 2020 is not met, there will need to be a higher level of renewable electricity capacity installed in order for the region to successfully meet its target.

1.1.2 Electricity from Offshore Renewables

The South West has one of the best wave and tidal resources within the UK. As a result, offshore renewables are likely to be increasingly developed off the South West coast after 2010, and could play a significant part in achieving the 20% renewable electricity target by 2020. However in order for the 2020 target to be met it seems likely that there will need to be some strengthening of the grid to accommodate the offshore capacity from marine technologies such as wave and tidal stream.

Policy E2 Offshore Renewable Energy Projects

Local Planning Authorities should encourage the development of offshore renewable energy resources by facilitating connections to the electricity grid.[3]

1.2 Renewable Heat Targets

While there are currently no Government targets for heat production from renewable sources this situation is expected to change during the RSS period. PPS 22 talks about increasing the deployment of "renewable energy" in general, which is taken to cover both renewable electricity and renewable heat. There is considerable potential in South West for the production of heat from renewable sources, and the South West has a lot to gain from harnessing its renewable heat resources. Some of the assets of the SW which mean that the SW has more to gain than other regions are:

- the best solar resource in the UK and a significant resource of forest residues that can be used for biomass heating;
- a strong indigenous industry able to support the installation of renewable heating technologies;
- a high proportion of off-gas area, increasing the economic potential for renewable heating;

Some of the benefits that the region can gain from increasing the use of heat from renewable sources are:

- enhanced woodland management, leading to increased biodiversity and the conversion of wood wastes into a resource
- using renewable heating systems as a measure to reduce fuel poverty in "hard to treat homes" in off-gas areas
- local income from wood fuel supply

[3] The level of offshore capacity installed within the region will be monitored through the RDA Wavehub project and DTI consents

Policy E3 Regional Renewable Heat Targets to 2010 and 2020
The minimum targets for the generation of heat from renewable sources outlined within table 6 should be achieved by the use of appropriate resources and technologies:

Table 2: Regional Targets for Renewable Heat by 2010 and 2020

Timescale	Installed Thermal Capacity (MWth)
2010	**105**
2020	**503**

There is a key role for local planning authorities within the region in ensuring a synergy between sites for major new developments, and the location of renewable Combined Heat and Power (CHP) generators, to ensure that the heat from the latter can be effectively used, for example as part of community heating systems.

The targets equate to roughly 0.2% of SW heat demand (excluding transport) by 2010 and 1.4% by 2020 assuming that the full range of energy efficiency measures set out in the Energy White Paper are put into place.

2 DEVELOPMENT CRITERIA FOR RENEWABLE ENERGY

Renewable energy proposals should be positively encouraged by planning authorities and assessed using the regional criteria set out in Policy E4. Local Planning Authorities should prepare Local Development Document criteria policies, which focus on key local issues, within the framework provided by PPS22 and RSS. Regional SPD on Renewable Energy *[RSS associated document title]* also contains more detailed guidance relevant to Local Development Document preparation.

E4 Development Criteria for Renewable Energy

Local Planning Authorities should consider the following regional criteria alongside the full range of issues outlined within PPS22 and local criteria contained within Local Development Documents:

a) Within the region's nationally and internationally recognised designations, schemes should be of an appropriate scale and not compromise the objectives of the designation;
b) Renewable energy schemes should not have a significant adverse cumulative impact in conjunction with other similar developments;
c) Schemes should minimise and deal satisfactorily with any impacts resulting from construction and operation including air quality, landscape and visual impact, atmospheric emissions, noise, odour, water pollution, flood risk, and the disposal of waste;

The wider environmental, community and economic benefits of proposals, whatever their scale, (e.g. carbon reduction, job creation etc) are material considerations that should be given significant weight in determining planning applications.

The combination of renewable energy resource distribution within the South West together with the criteria outlined in policy E4, particularly the significant level of designated landscape within the region, leads to the conclusion that the targets are likely to be met through a mixture of technologies dispersed throughout the region, rather than concentrated in any specific area. The Regional SPD on Renewable Energy provides more detailed guidance on the spatial distribution of renewable energy development within the region.

3 PROMOTING SUSTAINABLE ENERGY USE WITHIN NEW DEVELOPMENT & REGENERATION

PPS22 emphasises the importance of developing positively expressed policies on building integrated renewables. Policies that encourage the on site generation of renewable energy must be placed within a wider context of the need for development, both new build and refurbishment, to incorporate the principles of sustainable energy design. This will involve reducing building energy demand through energy efficiency and low energy design, before meeting the resulting demand from first renewable energy and then fossil fuels or grid electricity. This approach has been characterised as the 'Energy Hierarchy' within the South West, and will ensure that energy efficiency opportunities are maximised before renewable energy is considered within proposals for new developments.

Major development proposals must be accompanied by an "Energy Use Assessment" which describes how much energy is expected to be used within the proposal and goes on to consider ways by which the "Energy Hierarchy" can be put into effect.

This energy use assessment should provide a baseline for annual CO_2 emissions arising from fossil fuel energy use within the building (i.e. energy used for heating, cooling, lighting and appliances, and cooking, but not including industrial processes, transport or embodied energy).

This baseline for CO_2 emissions should be before the use of any on-site renewable energy generation, but after the application of measures to reduce energy use (including passive solar design), and improved energy efficiency.

Policy E5 Sustainable Energy within Development Proposals

All developments will include a proportion of their energy from renewable sources. Major developments will be expected to provide, as a minimum, sufficient on-site renewable energy to reduce carbon dioxide emissions from energy use on site by 10%.

Proposals for major developments must be accompanied by an energy use assessment which sets the baseline for the calculation of the proportion of on site generation and describes the measures that are being taken to put the "Energy Hierarchy" into effect.

Compliance with the 10% target will be measured with reference to the Energy Use Assessment, which will give a baseline figure for CO_2 emissions for a development, before the use of any renewable energy. As well as enforcing compliance with this 10% target, Local Planning Authorities (LPAs) will need to check that built developments comply with the plans submitted as part of the Energy Use Assessment.[4] Developers will be expected to

[4] If the Energy Use Assessment is checked in this way, it will reflect actual practice and can be used to monitor the implementation of this policy by recording renewable energy capacity installed and CO_2 emissions reduced.

demonstrate that they have explored all renewable energy options, and designed their developments to incorporate any renewable energy requirements. A detailed justification will be required from developers if they do not consider that it is feasible to provide the required proportion.

Major development proposals include significant urban regeneration projects covering new build, refurbishment, conversion and change of use, and are defined here based on the ODPM PS2 definition used for reporting general developments, as:

- for dwellings, the development of 10 or more dwellings or sites of more than 0.5 ha, if the number is not given;
- for all other uses, where the floor space will be 1000 square metres or more, or the site is 1ha or more. Floor space is defined as the sum of floor area within the building measured externally to the external wall faces at each level. Basement car parks, rooftop plant rooms, caretaker's flats etc should be included in the floor space figure.

Individual Local Planning Authorities may use lower thresholds for what constitutes a major development and set higher percentages for on site generation, to suit their particular circumstances, within their Local Development Documents. However for reporting purposes, Local Planning Authorities will be required to monitor against the above definitions of "major developments".

Eligible forms of renewable energy for meeting the target currently include: solar water heating, photovoltaics (rooftop or cladding), biomass heating, biomass CHP, wind generators, micro-hydroelectric, ground source heating and cooling, and air and water source heat pumps. It can also include heat from renewable CHP plants, such as: landfill gas, sewage gas, anaerobic digestion, biomass, and energy from waste.

Off-site renewable energy generation would be eligible where there is a physical connection to the site, via a heat main or private wire. However, buying in green electricity is not eligible, as such arrangements can be temporary in nature.