

**South West Regional Spatial Strategy
Examination in Public
South West Regional Assembly
Response to Panel
Information Note B**

Energy and Renewable Targets

It would be of assistance to the Panel and the EiP discussions if advice could be provided, by the SW Regional Assembly, in the form of an information note covering:

- a) The methodology for converting between the national target for renewable electricity generation to the regional installed capacity targets?
- b) The relevance to the national electricity generation targets of off-shore wind capacity, renewable heat and energy efficiency measures in the Draft RSS.
- c) The implications of the levels of household growth in the ONS 2004 projection.
- d) Whether an up-to-date tabulation can be produced of existing installed capacity (by technology) and commitments?

1. A) The methodology for converting between the national target for renewable electricity generation to the regional installed capacity targets?

- 1.1 The regional electricity targets were developed through the REvision2010 and REvision 2020 exercises, which included wide consultation with stakeholders¹. These exercises quantified the available resources in the region, exploitable through a range of technologies, taking into account a wide range of constraints and figures were developed for capacity within the region (and in the case of 2010 at county level as well) based on this analysis. Further analysis was then undertaken on these capacity figures, including identifying electricity generation figures, taking into account load factors of the different technologies², and taking into account expected electricity demand.
- 1.2 Expected demand was forecast, taking into account existing demand, population growth and planned improvements in energy efficiency over the period to put these capacity figures into context.
- 1.3 This analysis verified that the capacity figures (in Megawatts) for onshore and offshore renewable electricity, would meet around 10% of demand in 2010 and 20% of regional demand in 2020. The targets in the draft RSS are expressed in Megawatts of installed capacity, as required by PPS22. However, to improve understanding, and to relate more closely to the national targets (ie 10% in 2010) and aspirations (20% in 2020), the figures are also expressed as a proportion of demand.

2. B) The relevance to the national electricity generation targets of off-shore wind capacity, renewable heat and energy efficiency measures in the Draft RSS.

- 2.1 The offshore renewables targets, which include wind, wave and tidal power do not affect the regional onshore electricity targets as they are based on a different resource. However the targets for onshore and offshore renewable electricity capacity when combined, and taking into account load factors and forecast demand, provide capacity (see above) to meet 10% of regional electricity demand in 2010 and 20% in 2020, therefore clearly demonstrating that the region will contribute to meeting national targets and aspirations.
- 2.2 The renewable heat targets are separate from the renewable electricity targets and so do not contribute to the national or regional electricity

¹ The process is summarised in the EIP Information Note 8 on Energy, prepared by SWRA in January 2007 <http://www.southwesteip.co.uk/downloads/documents/20070207143253.pdf>

² Load factors used are identified in table 25 of the Revision2020 report (page 59)

- generation targets. However given the strong regional heat resources and the opportunities in the region, it was considered of benefit to include specific heat targets in the RSS³. Where a technology provides heat and electricity (for example biomass combined heat and power) the different components are calculated separately, with electrical output contributing to the electricity targets and heat output contributing to heat targets.
- 2.3 The requirements in (modified) policies DP G and RE5 to deliver minimum levels of energy through onsite renewables in new developments is taken into account in the overall electricity and heat targets. However these policies relate to overall energy demand and do not distinguish between heat and electricity. However assumptions have been made in the targets about how much electricity or heat will be generated through these policies and these have been factored into the relevant targets, so that where electricity is produced (eg from solar PV or microwind) this contributes to delivery of the electricity target and where heat is produced (eg solar hot water, biomass heating, ground source heat pumps) this contributes to delivery of the heat target⁴.
- 2.4 Policies in the draft RSS do not set specific energy efficiency requirements. Development Policy G sets minimum requirements for carbon reductions from energy use. This can be met through a range of measures including energy efficiency measures as well as the use of low and zero carbon technologies, as long as the minimum energy generation targets in policy RE5 are met.
- 2.5 The forecasts of energy demand used in translating the energy targets in the draft RSS into proportions of demand are drawn from the assumptions made by government in the 2003 Energy White Paper. If these assumptions were not delivered upon then the draft RSS indicates that even if the regional renewables targets were met, the output of renewable electricity facilities in the region would not meet 20% of demand by 2020 and if the region wanted to deliver fully against the national aspiration for 2020 the capacity targets would need to be raised.

³ See paragraph A4 of the SWRA Statement on Matter 7/2

<http://www.southwesteip.co.uk/downloads/documents/20070424124310.pdf>

⁴ It should be noted that this analysis does not take into account where the energy would have been sourced instead. For example in offgas grid areas solar hot water might be used to provide hot water where the alternative would have been to use electricity via an immersion heater. However the solar hot water is classified as renewable heat and not as an electricity substitute in terms of delivering against the targets.

3. C) The implications of the levels of household growth in the ONS 2004 projection.

3.1 The household growth levels used in the analysis of the 2020 targets were based on 2003 household numbers using the draft RSS growth projections. These figures have not been updated to take account of 2004 projections. The Regional Assembly does not consider it necessary to do this at this stage as the higher growth rates are mainly forecast towards the end of the plan period. As the national requirements for all new developments to be zero carbon from 2016 will be in force by then the impact of increased household growth should be small on energy demand by then and other factors such as the efficiency of appliances and improvements in energy efficiency in existing housing stock are likely to have a far more significant impact. Furthermore as the regional targets are based on resource, not on proportion of demand, changes in population growth levels will have minimal impact on the available resources.

4. D) Whether an up-to-date tabulation can be produced of existing installed capacity (by technology) and commitments?

4.1 RegenSW, the regional renewable energy agency published a survey of existing installed capacity in April 2007⁵. This identified a total of 137MW of renewable electricity capacity and 28MW of renewable heat capacity installed in the region. A copy has been placed in the EIP library.

4.2 RegenSW has also identified the following commitments for renewable electricity projects (ie planning permission granted but not yet in operation):

Confirmed megawatts

Approved Wind:

- | | | |
|-------------------|-------|----------|
| • Den Brook | 18MW | Devon |
| • Roskrow Barton | 1.8MW | Cornwall |
| • Shooters Bottom | 2MW | Somerset |
| • Avonmouth | 6MW | Avon |

Total 27.8MW

Approved Biomass:

- | | | |
|-------------------|--------|----------------------|
| • Charlton Energy | 7MW | Somerset (pyrolysis) |
| • Roves Energy | 2MW | Wiltshire |
| • Compact Power | 1.25MW | Avon |

Total 10.25MW

⁵ Survey of Renewable Electricity and Heat Projects in South West England, RegenSW, April 2007

- 5.3 The following projects are in appeal, awaiting planning decisions or projects being consulted on publicly (pre-planning) where planning applications are expected shortly:

Megawatts in the planning system or soon to be in planning:

At appeal

• Winkleigh (biomass)	23MW	Devon
• Brent Knoll (wind)	10MW	Somerset
• West Hinkley (wind)	25MW	Somerset
Total	58MW	

In planning/public domain:

• Fullabrook Down	66MW	Devon
• Batsworthy Cross	16MW	Devon
• Bickham Moor	12MW	Devon
• Wheelers Cross	5MW	Devon
• Beech Tree Farm	3.9MW	Devon
• Crossmoor	5MW	Devon
• Exeter EFW	2.5MW	Devon
• Alveston	12MW	Avon
• Bristol City Council	4MW	Avon
• Somerset County	12MW	Somerset
• Delabole (repowering)	6.4MW	Cornwall
• Cricket St Thomas	3.9MW	Somerset
Total	148.7MW	