10. Energy

10.1 The Government published an energy white paper in 2003 which sets out its four goals for future energy policy – cutting the UK's carbon dioxide emissions by 60% by 2050 with real progress by 2020, maintaining the reliability of energy supplies, promoting competitive markets, and ensuring every home is adequately and affordably heated[35]. The Government's current target is that 10% of UK electricity generation should be met by renewable sources by 2010, and to reduce domestic energy consumption by 30% by 2010. A range of measures has been put in place to help achieve these targets, including the Renewables Obligation, the Climate Change Levy and grant aid for developing renewable energy technologies and markets[36]. Therefore, it is likely that increasing numbers of proposals for renewable energy development will come forward. In addition to supporting renewable energy development, the County Council wishes to encourage energy efficiency in new development which is addressed in policy G6.

10.2 RPG9 sets regional and sub-regional targets for electricity generation from renewable sources[37]. Oxfordshire is included in the Thames Valley and Surrey sub-region. Targets proposed for the sub-region are to increase renewable energy capacity to 140 MW by 2010, and 209 MW by 2016[38].

10.3 The greatest potential for developing renewable energy in the sub-region is considered to be from biomass-fuelled electricity generation, wind energy and landfill gas, with a smaller but significant contribution from solar photovoltaics. In Oxfordshire there is currently about 8 MW of existing renewable energy capacity, mostly from landfill and sewage gas sources. The County Council will consider opportunities to work with others in the sub-region to assess potential in more detail and coordinate initiatives to help achieve targets. In particular the County Council is a partner and supporter of TV Energy, a renewable energy agency operating in Berkshire, Buckinghamshire and Oxfordshire that aims to promote and facilitate practical sustainable energy solutions within the Thames Valley.

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35 Our energy future – creating a low carbon economy, DTI, 24 February 2003.

36 The Renewables Obligation requires all licensed electricity suppliers to supply part of their electricity from renewable sources on an increasing scale. The Climate Change Levy is charged on most non-domestic energy use. Renewable energy and Combined Heat and Power plants are exempt from the levy.

37 Regional Planning Guidance for the South East (RPG9) – Energy Efficiency and Renewable Energy, November 2004.

38 As a rule of thumb, 1MW is sufficient to supply the electricity needs of about 1,000 houses.

Proposals for renewable energy development

EG1 Proposals for renewable energy development will be encouraged to help meet Oxfordshire's contribution to regional targets, and to support the development of a more dispersed and locally based pattern of energy generation and use. Proposals will be permitted subject to consideration of their impact on the environment, local communities and traffic generation and their wider environmental and economic benefits. New renewable energy generating plant should be located as close to the energy source material as possible.

10.4 Policy EG1 applies to all sources of renewable energy and their related development including biomass (wood, agriculture and forestry residues, energy crops and biomass waste), wind, solar (photovoltaics and solar water heating), anaerobic digestion, landfill gas, hydro and ground heat pumps. Although waste management options can also contribute towards meeting renewable energy targets. Decisions on waste management should be driven by the waste hierarchy and consideration of the best practicable environmental option. Proposals for waste management, including waste to energy plants, will be considered against the policies on waste.

10.5 The planning implications of different technologies vary considerably, but generally proposals should be close to their energy source to reduce transport distances of fuel (in the case of biomass based technologies) and should not have a detrimental impact on the environment, landscape, biodiversity, or the amenity of local communities, including arising from grid connection. Proposals need not be precluded in Areas of Outstanding Natural Beauty, provided the special character of the landscape is not harmed. In the Green Belt, development for renewable sources of energy will not be permitted unless it maintains its openness and proposals do not conflict with the purposes of the Green Belt, and very special circumstances can be demonstrated that outweigh any harm in line with PPG2 and PPS22[39]. In all cases the wider environmental and economic benefits of proposals for renewable energy, such as reducing emissions of carbon and creation of jobs, are material considerations to be given significant weight, whatever the scale of the proposal.

10.6 To meet regional renewable energy targets a mix of large and small scale schemes will be needed. In Oxfordshire there could be considerable potential for small scale renewable schemes such as those serving individual farms, businesses and communities. These can contribute to economic diversification in rural areas, enable the benefits to be taken advantage of locally, and have reduced environmental impacts such as shorter distances to transport fuel. Installation of solar energy in new and existing development has potential in both urban and rural areas. Cumulatively small scale projects can provide an important contribution towards achieving regional targets, and proposals should not be rejected because their level of output is small.

10.7 Biomass sources of renewable energy are likely to be one of the most significant in Oxfordshire. The County Council wishes to encourage the planting of coppice and energy crops and management of woodlands for energy generation use, and would like to see a market for wood fuel/biomass established in the county. TV Energy are supporting market development for coppice and coppice production through their subsidiaries TV Bioenergy Ltd and TV Bioenergy Coppice. The latter has enabled about 1,000 hectares of coppice to be planted and is aiming for 2,800 hectares by 2008. Proposals for generating plant will be considered against policy EG1.

10.8 As an inland county in southern England, Oxfordshire is not a particularly windy area. However, average wind speeds are high enough in some areas to make the development of wind turbines viable with the current state of the technology, and permission was granted in 2004 for a cluster of five 1.3 MW wind turbines at Westmill Farm, near Watchfield. Individual large turbines about 1.5 MW in size, and small clusters of 1-5 turbines are the most likely appropriate scale of development at present, although this does not mean that consideration of larger schemes should be precluded. Individual and clusters of smaller scale wind turbines will also be appropriate for community level developments. As well as the impact of turbines on landscape and biodiversity, local planning authorities should also consider the impact on local communities of factors such as noise, shadow flicker and interference with electromagnetic transmissions.

[39] Planning Policy Statement (PPS) 22: Renewable Energy, Office of the Deputy Prime Minister, August 2004.

Combined heat and power

EG2 Wherever practical proposals for new energy generation plant should include combined heat and power or the recovery of waste heat for use in other processes. The use of combined heat and power in proposals for major development, including proposals for district heating, will be encouraged.

10.9 Combined heat and power (CHP) uses some of the heat produced during the generation of electricity for space or water heating. It can be powered by various fuels including renewable energy. CHP makes considerably more efficient use of primary fuel sources and can lead to reductions in carbon dioxide and other emissions per unit of delivered energy. The Government has set a target for the installation of 10,000 MW of CHP generation by 2010. In Oxfordshire opportunities to install CHP could arise through development of new renewable energy plant, or could be included in proposals for major development such as industry, large scale residential development in association with district heating systems, hospitals, schools, and large scale shopping or leisure development.

10.10 There are two conventional power stations at Didcot which have capacities of 2000 MW and 1,360 MW respectively. There is a legal agreement related to Didcot B to enable waste heat to be supplied to the power station boundary for use, for example in district heating. However, Didcot B is a combined cycle gas turbine power station which operates at greater levels of efficiency than its mainly coal fired neighbour Didcot A. The efficiency of the power station would be reduced if waste heat from combustion were used in this way as it already reuses heat from its turbines to generate electricity. The possibility of using low grade heat from water used for cooling could be considered further.

New generating plant

EG3 As far as legislation allows, proposals for new large conventional or other non-renewable power stations will be expected to demonstrate that alternatives to additional generating capacity, including investment in energy conservation measures, have been considered and that the proposal represents the best practicable environmental option.

10.11 In order to achieve national commitments to reduce carbon dioxide emissions and increase the diversity and security of supply, the County Council believes that alternatives to conventional and other non-renewable power stations should be considered. However, under current legislation the need for additional generating capacity and alternatives such as investment in energy conservation cannot be taken into account in considering proposals for new conventional power stations.