



## WOODLAND TRUST

### THE WOODLAND TRUST INITIAL RESPONSE TO THE PIU ENERGY REVIEW

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The Woodland Trust welcomes this opportunity to feed into the PIU's energy review. The comments that follow are delivered on behalf of the United Kingdom's leading charity solely dedicated to the conservation of native and broadleaved woodland. We achieve our purposes through a combination of acquiring woodland and sites for planting and through wider advocacy of the importance of protecting ancient woodland, enhancing its biodiversity, expanding woodland cover and increasing public enjoyment. We own over 1,100 sites across the country, covering around 18,000 hectares and we have 250,000 members and supporters.

#### Summary:

- We need to reduce energy consumption for a sustainable energy policy
- Renewable energy should play an increasingly important role in the energy mix
- Energy from wood fuel has environmental benefits other than simply reducing emissions, it can bring back into positive management many ancient woods that currently are neglected and can provide an impetus for increased native woodland planting
- Wood fuel provides significant employment opportunities
- Wood is an abundant fuel source and can provide relatively cheap renewable energy
- Revision of PPG22 on Renewable Energy is urgently needed to ensure that there is more forward planning for renewable energy provision rather than it being simply a matter for development control
- There is a need for a national body to oversee strategic implementation of renewable energy and especially the development of the use of wood as a fuel, without this strategic overview development will not be as rapid as is needed

#### The importance of energy efficiency and development of renewables in energy policy:

The highest priority of any sustainable energy policy has to be reduction in the current unsustainable levels of energy consumption. Although the Government has stated in its indicators for sustainable development that *"Between 1950 and 1998 the output of the economy increased by over 200 per cent whilst energy consumption only increased by about 60 per cent. As a result, energy consumption per unit of GDP (the energy ratio) has fallen steadily by about 1 per cent per year"*,<sup>1</sup> it is important that

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<sup>1</sup> DETR (1999) *Quality of Life Counts* (Indicator A2)



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we do not fall into a false sense of security. Current Department of Trade and Industry predictions of energy use are for continued growth of around 0.5 per cent per annum. Carbon dioxide and other emissions are having very serious effects on our environment and it is essential that we continue to strive to achieve significant cuts in energy production through increased efficiency. The Trust believes that the top priority in any energy policy should be to reduce energy needs; we would like to see the Government take significant steps to deliver on the statement by the then Secretary of State for Trade and Industry that "*our policy on renewables is part of a wider approach to climate change, and one of a range of initiatives to support the development of a more sustainable approach to energy use*",<sup>2</sup> by adopting clear and ambitious targets for reduction in energy use.

Fossil fuels have significant negative external environmental costs that are not costed into their price making them an ostensibly cheaper option, whereas in fact the environmental costs of non-renewable energy production are very high. The burning of fossil fuels contributes significantly to climate change, which is perhaps the most serious threat facing our ancient woodland resource. Ancient woodland is land that has been continuously wooded since at least AD1600, and is one of our richest habitats for wildlife and the Trust is concerned that climate disruption will cause severe damage to this and other important wildlife habitats. Significant cuts in greenhouse gas emissions are essential and we need to act sooner rather than later to try to minimise the severe effects that climate change will have on our natural environment and our quality of life.

There is a need to further develop renewable energy sources to make them viable in the energy market and to ensure that the UK does not get left behind in the development of this technology. Currently the only EU member state that produces less of its electricity from renewables than the UK is Belgium.<sup>3</sup> We welcome the statement in the Climate Change Programme that "*the Government and the devolved administrations recognise the importance of developing **renewable sources of energy** as a part of the drive for sustainable development and the long term response to climate change*".<sup>4</sup> However, we look to the Government to step up the rate of progress significantly above and beyond the proposal that 10% of the UK's electricity requirements should be produced from renewable sources by 2010.

### **The value of wood as a fuel in the energy mix:**

We are especially concerned about the slow rate of progress being made on investment in energy generation from wood fuel. Already the UK is far behind many of its European partners in terms of biomass energy generation - for example biomass energy already accounts for 12%, 18% and 23% of energy supply in Austria, Sweden and Finland respectively.<sup>5</sup> In 1999 the UK generated only 0.97% of its electricity from biomass, with the figure for wood fuel reaching only 0.29% of the total primary supply of fuels,<sup>6</sup> this is despite the fact that the UK has one of the best climates in Europe for growing trees. It is imperative that the use of wood fuel is promoted so that the UK can generate significant levels of energy from this renewable material.

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<sup>2</sup> Stephen Byers MP, Secretary of State for Trade and Industry, October 2000

<sup>3</sup> EUROSTAT figures

<sup>4</sup> DETR (2000) *Climate Change: the UK Programme*, p62

<sup>5</sup> European Commission COM (97) 599 final (26/11/1997) *Energy for the Future: Renewable Sources of Energy. White Paper for a Community Strategy and Action Plan*, p37

<sup>6</sup> DTI (2000) Digest of United Kingdom Energy Statistics para 1.5 and chart 7.1



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In our view the technology for solar and wind energy production is still some way off making a significant contribution to the UK's energy production, but we do welcome the proposed investment in these energy sources under the renewables obligation. We believe that wood fuel can make a significant contribution immediately and in the future to sustainable energy production. Although the UK climate change programme notes that the Government '*is working with a wide range of stakeholders to promote the use of wood as fuel. A stable market for wood fuel will assist the sustainable management of currently under managed or derelict woods in the south of England and improve commercial conifer plantations in Scotland where timber production is set to double over the next 15-20 years*',<sup>7</sup> we are disappointed at the rate of progress towards this target so far. Significant additional investment and grant provision is required to help to fund the capital costs of setting up small-scale wood-fired power stations and the ongoing provision of fuel for these stations.

There appears to be a false distinction made in the renewables obligation and in other Government policy statements between energy creation from short rotation coppice and the use of other wood fuel. This is despite the fact that energy generation from both fuel sources involves similar processes. It is important that capital grants incentivise energy generation from forestry residues (by which we mean brash, small branches etc, especially from conifer crops, rather than deadwood that should be left on the forest floor for conservation reasons) as well as from energy crops. In the UK climate change programme it is acknowledged that '*the total annual wood fuel resource from forestry and arboriculture in England, Scotland and Wales is over one million dried tonnes*',<sup>8</sup> it therefore seems strange that the use of forestry residues as a viable means for energy creation is given such a low profile in the UK's energy policy.

The Trust believes that there are four main reasons why wood fuel should be given a higher profile in the Government's energy policy:

### **1. There is a need for immediate action:**

There will be a lead in time for energy crops of at least three to four years. Short rotation coppice schemes will need to be designed, grants will need to be applied for, and the crops planted, and it will not be until the second or third growing season that the crop is actually ready. There is a huge resource already available in woods that could be used in the meantime. The Forestry Commission initiated study *An Evaluation of Market Outlets for Broadleaved Timber in South-East England* (1998) sought to identify potential uses for up to 200,000 tonnes a year of low-grade broadleaved roundwood in the South East. We believe that wood fuel is a prime candidate for use of this and other low-grade timber throughout the UK. There will be a constant and renewable supply of forestry residues that can be used immediately. This would have the benefits of providing a more sustainable form of energy, would reinvigorate the UK's timber market and would reduce the environmental impact of disposal of forest residues.

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<sup>7</sup> DETR (2000) *Climate Change; the UK Programme*, p115

<sup>8</sup> DETR (2000) *Climate Change; the UK Programme*, 2.7 para17



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### 2. Environmental benefits:

There are also potential environmental benefits over and above those provided by other sources of renewable energy. For example, much of the broadleaf woodland in the South East of England has traditionally been managed on some form of coppice system. A diverse array of plants and animals has survived in these woods over the centuries because they thrive on the conditions created by this management system. Interruption of the coppice cycle as a result of market collapse for small diameter timber has led to a rapid ecological decline of many these woods. For example the heath fritillary butterfly requires the open sunny habitats produced by coppicing to breed. As coppice grows the area becomes more and more unsuitable for the butterfly and it moves on. Its number has declined by over 90% in the last 30 years primarily due to a reduction in the amount of coppicing being practised. Development of renewable energy systems based upon low grade, small diameter coppice would not only reduce emissions of greenhouse gases, but would have the additional benefit of helping to halt the ecological decline of one of our most important habitats in areas where traditional woodland management has taken place in the past.

The Trust would like to see woods that provide fuel managed for environmental benefits as well as energy creation. We would therefore hope that development from wood fuel would not prevent for example the restoration of ancient woodland sites that have been planted with non-native species in the past. An immediate and large resource of timber could be provided over the next few decades as a by-product of management of replanted ancient woodland sites to restore them to their original native broadleaved status. This would provide significant amounts of timber as thinning work was undertaken and would provide an immediate resource for local use in energy production as well as providing significant environmental benefits as the habitats were restored to something approaching their previous state.

The Woodland Trust would like to see the Government's energy policy contain strong provision to encourage the use of forestry residues in energy generation. We believe that the Government should encourage the creation of power plants that burn both forest residue and short rotation coppice product to help the market develop.

#### ***Energy crops and potential environmental benefits:***

There are several studies showing that biodiversity increases when land is planted with short rotation coppice (SRC) rather than more traditional intensively farmed crops. A Department of Trade and Industry commissioned report has shown that '*SRC provides opportunities to increase local biodiversity compared with interest on much arable land or improved grassland which is of low nature conservation value.*'<sup>9</sup> Energy crops may represent a reduction in use of agrochemicals, after initial establishment, as compared with arable crops or improved pasture. We would recommend that guidelines are introduced to ensure that SRC planting is pursued in a way that will fulfil all four strands of sustainable development as defined by the Government: economic well-being; social well-being; prudent use of natural resources; and environmental protection.<sup>10</sup> The value of the habitat relative to arable farmland

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<sup>9</sup> ETSU *Ecological Assessment of Short Rotation Coppice*

<sup>10</sup> DETR, *A Better Quality of Life: a strategy for sustainable development in the UK* (1999), p8



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in terms of biodiversity should be explicitly recognised as a welcome by-product of SRC schemes and guidance should be introduced to ensure that any SRC plantation includes a wide variety of willow types to ensure that the crop does not simply replace one monoculture with another.

### **3. Benefits for the local economy:**

Use of timber from existing woodland could play an important role in sustaining rural communities, providing employment opportunities in timber harvesting and transport and supply chains. The Department of Trade and Industry estimates that a 20MW wood-fired power plant (supplying energy for around 20,000 homes) would provide full-time employment for 48 permanent staff and also significant short-term employment opportunities.<sup>11</sup> Although this is an example of a medium to large-scale plant there is certainly an opportunity for small to medium sized plants serving up to 5,000 homes, which would provide significant economic benefits to local communities. It would also help to support the forestry sector and would offer valuable diversification opportunities for farmers.

### **4. Affordability:**

Once the market is established we would see wood fuel as a potentially cheap supply of energy given the abundance of the supply and the relatively low set up costs. This would contribute to the alleviation of fuel poverty in a sustainable way, by providing an affordable renewable energy source.

### **The planning system and wood fuel:**

Sensible planning is essential to ensure that projects are able to develop while ensuring that the damage caused by the developing market is kept to a minimum. However, while the Trust wishes to see the Government promoting renewable energy, we do not believe that the planning system should give 'favoured status' to renewable energy schemes. Equally, we do not feel that they should be treated more rigorously than any other industrial development. Instead the planning system should be used to identify where renewable energy facilities would be best placed, and encourage their development, for example in association with new housing.

Planning Policy Guidance Note (PPG) 22 on renewable energy should be revised to provide stronger guidance to local and regional authorities on the types of development that should be encouraged. At present the PPG provides very weak guidance on how to provide for renewable energy. The current guidance was produced in early 1993 and as such is increasingly out of date. As the renewables obligation is to be UK wide and requires that 10% of energy should be provided from renewable sources by 2010, the Government should take a stronger strategic overview, placing more emphasis on encouraging environmentally sound renewable projects through the forward planning process rather than through development control. This should also provide clear guidance to ensure that the provision of energy from wood fuel is as carbon neutral as possible, minimising the transportation emissions and other associated secondary emissions involved in this form of energy production.

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<sup>11</sup> DTI (2000) *Wood Fuel for Electricity and Heat: Benefits to the Local Economy*



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The planning system as it stands puts up several potential barriers to the development of wood fuelled heat and power stations. These include concerns over the conversion of agricultural land to wood crops. We hope that the limitations on what is perceived as acceptable transportation distances are classed as guidelines to begin with rather than being set in stone, to ensure that the initial development of wood fired power stations is not inhibited. This can be revised as the market develops. We would also like to see a requirement for structure plans to include a commitment to provide new developments with heat and power from renewable resources.

In order to minimise impact on the environment and possible resultant conflicts with the planning system and the needs of the transportation network, we would favour the use of small-scale heat and electricity generating plants. These should serve local users and use wood fuel from local woods. This would ensure that the impact of transportation would be kept to a minimum. It would also create jobs in the local area and help to improve the local environment. The Trust would like to see this type of development encouraged through the planning system ensuring that a significant number of new developments in a local area are provided with energy from wood fuel.

There should be a requirement that any new development in an area will be powered by renewable energy sources. In this way renewable energy provision can be built into the planning process for employment and residential developments and we would see a significant increase in the proportion of energy being produced from renewable sources. Obviously there is potential for large scale wood-fired power stations using fuel from wider areas and we accept that some developments of this type may be necessary, we would, however, see it as vitally important that the environmental impact of such large scale plants are kept to a minimum to ensure that they are as sustainable as possible and do not cause more environmental damage than the benefits they bring.

### **The need for leadership:**

One of the main reasons that the UK is still producing such a low proportion of its energy from wood fuel is the lack of strong leadership from any quarter. The Trust would like to see the establishment of a Government funded or subsidised body to provide a strategic overview on the use of renewable energy generally including the use of wood as a fuel. Wood fuel can provide a significant proportion of the UK's energy immediately, as long as there is capital investment in wood-fired power stations and a body exists that can take the lead and promote best practice. This would ensure that teething problems are ironed out as quickly as possible and would help to encourage the establishment of significant new markets which would in turn help to place the industry on a more sustainable footing.

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