What We Think

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Energy Conservation

The John Muir Trust is concerned about the effects of climate change and the implications of global warming for people, the environment and wild land. We have supported strong Climate Change Bills incorporating targets of 80% greenhouse gas emission reductions by 2050 – based on the Intergovernmental Panel on Climate Change conclusions in its 2007 Reports.

The required greenhouse gas emission reductions should be achieved by a combination of measures - including increasing the proportion of energy produced by a broad range of renewable energy sources, but also, crucially and as the preferred choice, by reducing energy consumption.

It is well recognised that energy conservation and increased efficiency measures in business and homes could have a very significant effect on demand, whilst addressing fuel poverty – increasingly a major issue.

Scotland and the UK urgently require a joined-up national energy strategy designed to deliver three aims:

- A secure, adequate and affordable energy supply;
- The required reduction in greenhouse gas production;
- A commitment to protect our local and global environment as much as possible.

The John Muir Trust believes that energy conservation and efficiency measures must be prioritised immediately. These can bring about the most effective change, with the most environmental gain and least financial cost. They also have the greatest social benefit with regard to jobs and fuel poverty.

The current rush for large scale onshore wind developments, connected by a hugely centralised grid system shows a poverty of imagination and thinking rooted in the early 20th Century. If attention continues to be focused on increasing renewable energy targets, without any requirement to demonstrate what each development will achieve in greenhouse gas emissions reductions (including all aspects of the generation and transmission), we face a possible worst case scenario, where we achieve renewable energy targets through inappropriate developments and at great cost to important environments - only to discover that our greenhouse gas emissions are up, along with our energy consumption, and our energy supply is not secure.

It is key that wind power is used as part of a genuine mix of power sources. Community scale schemes should become the norm in remote, sensitive locations, and decentralised grid systems are one way forward, as is hydrogen storage to try and counter the intermittency of wind.

All aspects of a development need to be considered in relation to assessment of carbon emissions. Whilst Environmental Statements for developments might refer to “payback time”, these generally only consider the carbon emissions associated with construction of turbines.

Far more research and development into renewable energy methods such as ground source heat and tidal energy is required. Combined heat and power schemes are essential to increase the efficiency of conventional generation.

There are major concerns regarding sites on deep peatland, over the release of carbon from the peat. The UK’s peat bogs, the majority of which are in Scotland, store the equivalent of the country’s output of carbon dioxide for the next 21 years. There is great uncertainty about how much carbon might be released from wind developments on peat sites. A moratorium on building on deep peat should be considered until sufficient understanding allows rational choices.

Renewable energy targets are a secondary, moving target. So the trust applauds the start of a shift in policy thinking from renewable targets to greenhouse gas reductions. Developments need to take place with due respect to the local and national importance of the country’s natural heritage This is a key asset with major economic importance, as well as social and environmental benefits.

Energy Hierarchy

UK governments and local authorities should use an energy hierarchy model where every decision in every department, is considered against the model to see which option is the most sustainable. This sets out different options for delivering carbon reduction, with those at the top having least risk of adverse social and environmental impact. Capacity should be taken up in the top elements to prevent environmental conflicts when setting targets for those elements lower down the hierarchy.

Conservation and avoidance

- Energy management systems to control lighting, heating etc

Energy efficiency

- Insulation, efficient building design, energy efficient appliances

Micro-renewables and micro-CHP Household / development scale

- Incl CHP boilers, rooftop turbines, heatpumps, pv, solar thermal etc
- Heat
- Electricity

Macro-renewables, Community scale wind, biomass, hydro etc

- Heat
- Electricity

Macro renewables and Carbon Capture & Storage, Commercial scale

- Wind, wave, tidal, biomass – avoiding areas of environmental sensitivity
- Distributed generation
- Grid based generation

Non-renewable generation

- Industrial scale combined heat and power
- Electricity generation only

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