Sustainability Committee

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Conservation of Upland Montgomeryshire : Energy statement

1. Introduction

Britain has no comprehensive energy strategy. Our energy supply is largely governed by market-driven demand for fossil fuels (we are 90% dependent on fossil fuel, 8% dependent on nuclear and 2% dependent on other sources) but our national gas and oil reserves are declining. Apart from the problems caused by dwindling reserves, our energy future is made more uncertain because most of the World's fossil fuel supplies are controlled by nations that are neither stable nor reliable and they are not necessarily friendly to the West. The looming crisis is deepened by the fact that most of our main non-fossil fuel electricity generating technology, nuclear power, is scheduled for closure within ten to fifteen years. This alone leaves a gap in generating capacity of around 35 gigawatts (20% of total capacity). Whilst this represents a yawing energy chasm it pales into insignificance when set against the fact that electricity generation accounts less than 30% of the UK's fossil fuel consumption. Worse still, total energy demand continues to rise, driven by population and economic growth. The government's housing target is 4 million new homes by 2020. This alone is certain to increase energy consumption without taking into account growing demand for road and air travel. But maintaining energy supply is only half the challenge. The other half is reducing emissions of greenhouse gases produced by burning fossil fuels.

2. Identifying Priorities

Of the twin looming crises, which is the most pressing? There is a growing scientific consensus that if we do not substantially reduce CO_2 emissions there will be serious, worldwide consequences. Britain's role in securing a really meaningful reduction in global green house gas emissions must be set in the context of the fact that we produce only 2% of the world's emissions and that developing nations such as India and China are industrialising at an unprecedented rate. China alone is now building 8 major coal fired power stations a month, completely negating any CO_2 saving made by the UK's climate change policies. In the light of this we believe it to be self evident that we need a strategic energy policy that aims to set an example of how to achieve truly qualitative changes in greenhouse emissions. We need to set an economically compelling lead. If we cannot achieve this, then tinkering with a few minor components of our overall energy budget will not impact significantly on the twin problems of national energy security and global climate change.

3. Policy Criteria

We believe it to be increasingly obvious that Britain needs a comprehensive strategic energy policy that is capable of delivering considerable advances in energy security along with really significant reductions in greenhouse emissions. To achieve this it is essential that such a policy is transparent; evidence based and subject to iterative expert review. Energy policy should include the following criteria

3.1 It is essential that policy be based on a strategic overview. In the absence of an economically and environmentally compelling strategy we risk relying on a ragbag of poorly accounted tactical approaches that may turn out to be incapable of delivering what is required.

3.2 Policies should set achievable, timely targets that are based on the best scientific and technical evidence. Without this, targets risk being at best arbitrary and at worst so conservative as to be largely self-fulfilling or so optimistic as to be meaningless.

3.3 Because the fundamental problem is over dependence on carbon-based energy, the basic policy accountancy unit should be carbon. Furthermore, policy-driven carbon savings should be rigorously accounted and subject to expert peer review.

3.4 Policies should give 'in principle' equality to all carbon saving actions and technologies. In reducing green house emissions, sequestering a unit of atmospheric carbon is just as valuable as delivering technologies that avoiding burning fossil fuel. In the absence of a level playing field, policies may fail to encourage the full range of actions and technologies necessary to deliver objectives.

3.5 In the longer term policies must foster solutions that are both economically compelling and deliver savings in greenhouse emissions of the appropriate scale. This can only be achieved if an example is set that has world-wide reach. It is therefore axiomatic that policy outcomes should be

3.5.1 Fully carbon costed.

3.5.2 Fully economically costed.

3.5.3 Evaluated for worldwide relevance.

4. What a comprehensive energy strategy could already have achieved.

The Intergovernmental Panel on Climate Change (IPCC) was set up in 1988. If the UK government had responded to the Panel's early warnings of climate change by immediately developing a comprehensive energy strategy, as outlined above, we would already have had

a 20 year lead in developing technologies and policy-driven solutions to the problem. It also seems obvious that the development and evaluation of appropriate technologies and solutions would be significantly enhanced by the establishment of a centrally funded energy research facility. Whilst it's difficult to avoid the benefits of hindsight in detailing the benefits that would now have accrued from such actions, the likelihood is that there would be significant qualitative and quantitative improvements in reducing CO2 emissions and improving energy security as compared with the current situation. Expertly reviewed, fully carbon and economically costed solutions would have prioritised those actions and technologies that deliver best results at least cost. These are likely to have included early adoption of the following strategies.

4.1 Significant savings in fuel consumption based on energy conservation. A measure that is now widely recognised as offering the most cost-effective method of reducing CO_2 emissions. This would have the added advantage of reducing fuel-based costs for ordinary citizens, thus stemming the current rapid rise in the number of people falling into fuel poverty.

4.2 Scientifically and economically credible carbon trading scheme delivering significant reductions in carbon use.

4.3 Radical improvements in fuel efficiency in a wide range of technologies relying on fuel combustion to deliver heat, power and transportation.

4.4 Development of energy technologies exploiting the most reliable and predictable renewable energy resources such as tidal, wave power, energy from waste organic material. This would have delivered a significant new export market for British technology.

4.5 Fully carbon and economically costed evaluation of the full range of new and existing technologies would have provided a rational basis for fully transparent decision support systems that would have encouraged public participation and backing for new developments.

4.6 Comprehensive analysis of carbon balances across the globe would have placed Britain in a leading position to minimise trade in commodities that exacerbate CO_2 emissions and take remedial action to stem the flow of CO_2 from these sources. For example, it is a little known fact that over the past 25 years UK soils have been losing carbon at the rate of 4 million tonnes a year.* This represents 2.6 % of the UK's total annual carbon emissions of around 150 million tonnes per year. This ongoing loss far exceeds any savings in carbon emissions now being delivered by current energy policies.

Bellamy P.H., Loveland P.J., Bradley R.I., Lark R.M. & Kirk G.J.D. (2005) Carbon losses from all soils across England and Wales 1978-2003. Nature 437, 245-248