

Draft Position Statement on Energy & Climate Change

Background

This statement is one of a series, intended to complement the statutory AONB Management Plan, and outline in a more detailed or more up to date way the inter-relationship between a particular issue and the AONB's purposes (principally to conserve and enhance natural beauty).

With growing awareness of climate change, energy is rapidly becoming a much more significant issue.

Relationship to AONB purposes

The rapid move of climate change to become a central political issue means that in order to maintain support into the future, AONB policy must give a high priority to providing solutions and means of reducing CO2 emissions, in ways that are compatible with landscape conservation. The balance needs to be found of the primary aim 'to conserve and enhance natural beauty' with broader environmental aims and with the socio-economic needs of local communities.

The AONB must concern itself with CO2 reduction measures to mitigate climate change and not restrict its concerns to how the landscape, wildlife, etc. will adapt to climate change. Energy conservation is the best way to achieve reductions in CO2 emissions without harm to the landscape and should be given the highest priority. Reductions can be made by both behavioural change and technological or infrastructure improvements. Renewable energy generation may have impacts on the landscape, natural, historical and cultural features as well as the amenity value of the area (e.g. in relation to visual intrusion, noise, dust, odour and traffic generation).

Links between the AONB and its surrounding area are particularly relevant regarding energy. The area is not self-sufficient and should not be treated as an isolated unit. Energy flows in to the area (grid electricity) and may flow out too perhaps in raw material form e.g. wood. Supply chains should be kept short where possible. Localisation of energy production will help to improve energy security.

Strategy/ policy

- CO2 emission reduction targets - (Reduce CO2 emissions by 20% from a 1990 baseline by the year 2010. Reduce CO2 emissions 'by some 60% by about 2050').
- Renewable energy generation targets – (Produce 10% of energy from renewable sources by 2010 and 15% by 2015, with an aspiration of 20% by 2020).
- Planning Policy Statement 22 Renewable energy. Forthcoming PPS on climate change.
- West Midlands Regional Spatial Strategy
- West Midlands Energy Strategy
- Wood for Energy: Wood Energy Strategy for the West Midlands
- Regional Climate Change Action plan – in development
- Shropshire Local Transport Plan
- South Shropshire Guidance on Renewable Energy
- Local Authority Core Strategies have principle that all new development should play its part – in terms of using and generating renewable, efficiency etc

Current patterns in the area

The main sectors of energy use in the area are considered briefly below:

Transport – Energy use is relatively high due to the rural nature of the area and the distances travelled e.g. to work, shops, leisure, business deliveries, etc. The A49 is a major arterial route with high levels of

through traffic. The area is served by railway lines from Shrewsbury to Knighton, Ludlow and Wellington. Bus services along main routes are reasonable but very limited for many parts of the area. In tourism and recreation car use is predominant though the Shuttle bus service is well used. There is an increasing emphasis on walking and cycling, and on provision of access close to where people live. Planning policy advocates development only in sustainable settlements with the aim of reducing the need to travel for essential services

Domestic – Domestic energy consumption is likely to be relatively high – the carbon footprint for Bishop’s Castle carried out by the Wasteless Society showed levels 40% higher than the national average, mainly due to reliance on electric heating because of being off the main gas grid. The number of older larger properties in the housing stock will mean that energy efficiency standards are quite low, though high standards are now being set in new developments e.g. by South Shropshire Housing Association.

Business – Industry in the area is mostly small scale industry, and the premises energy uses likely to be similar to the domestic sector. Transport levels are often high.

Farming – Energy inputs are considerably lower in livestock farming compared to arable where fertiliser manufacture and grain driers are energy intensive. Use of diesel for transport and machinery is a significant area. Energy use in lower input farming systems (such as organic) are lower, and these also have other environmental benefits. There are non-energy greenhouse gas emissions related to farming e.g. carbon in soils, methane from livestock.

Renewable energy

The main technologies are reviewed briefly below in relation to the Shropshire Hills:

Wind – The area has significant potential for wind but national and local policy is against development of large scale windfarms. Small scale development of single wind turbines for domestic use is likely to be acceptable, but the cumulative impact of a higher number of smaller turbines could become a limiting factor. The potential for larger scale development on land immediately adjacent to the AONB is also an issue.

Solar – This sector has limited development so far in the area. However, being off the mains gas grid makes a major difference to economic viability, especially making solar water heating more attractive. Photovoltaic panels for electricity generation are more expensive, but have been used for some road signs in remoter locations.

Hydro – There may be limited potential for small scale schemes.

Biomass – this is split between :

- Existing biomass resource – i.e. woodlands. This area has the greatest overlap of benefits with conservation as many woods are under managed. High levels of unplanned or uncontrolled harvesting could however be damaging. Wood energy is especially suited to heating rather than electricity generation. Transport will be an issue for larger scale schemes, but the rural nature of the area also makes the use of very local resources cost effective. Use of firewood is already quite high, though the potential exists to increase and improve efficiency e.g. stoves rather than open fires, better use of waste wood/dust for chip, pellets. The range of small scale mobile machinery is improving – log splitters, etc. and can also improve efficiency.

- Specially planted crops – including willow coppice, Miscanthus, and wheat and rape for biofuels. Biofuels are currently a main focus of attention and seen nationally as being a key part of the economic future of farming in UK. Their application will be limited in the Shropshire Hills by the quality of land, and are not likely to cause wholesale change to the landscape. Arable land is concentrated in the Corve Dale and Ape Dale. The intensity of management and impact on wildlife are considerations as well as visual impact. The appearance may however be no less natural than any other crop. A major influence is the demand and where the crops are used and processed.

Biogas – Anaerobic digesters can take plant material and animal dung, and for the latter have the potential to reduce methane emissions even if energy is not recovered from burning. Larger scale installations are more likely in e.g. larger dairy units not so common within the AONB.

Ground/air heat pumps – These are most cost effective at new build as installation is disruptive and also because they are best suited to underfloor heating. Negative impacts are likely to be minimal except on sensitive historic sites.

Lack of knowledge of the various technologies is a major issue. There is currently a rapid rise in interest and demand and this is a rapidly changing sector. The Shropshire Hills area has a strong interest in renewable energy, and a number of innovators and specialists.

Other energy installations/ developments

Conventional generation includes combined heat and power CHP (e.g. gas fired, which is now available at a smaller, even domestic scale), and energy from waste. The same criteria apply to these as other types of proposal i.e. no major developments within the AONB, appropriate scale and location (especially in proximity to demand or to supply of material), with consideration of visual, biodiversity, historic, amenity impacts including indirect effects e.g. through transport.

Draft policies for energy and climate change in relation to the Shropshire Hills AONB

1. **Energy conservation** should be given equal or higher priority to renewable energy generation. Behavioural changes can have as significant effect as technological ones (e.g. minimum use of security lights will reduce energy use as well as light pollution). Local authorities should encourage integration of energy efficiency and renewable energy in all development – new or renewal, and of any scale.
2. **Scale.** Renewable energy developments in the AONB should generally be of a small scale. Wind farms or large scale biomass energy generation facilities are likely to be inappropriate. Larger scale energy developments will be more suitable outside the AONB, e.g. linked to market towns where transport links are better, closer to larger scale demand, etc. These could however have implications for the area, e.g. AONB acts as a source for larger wood chip boilers or biofuel processing plants elsewhere.
3. **Location.** Locating new developments near to or replacing existing development will generally be preferable to locations in open countryside. Landscape character assessments should provide the basis for capacity and sensitivity mapping to determine most appropriate sites with regard to aspects such as visual, historic, biodiversity, water resources, recreation. The impact on the AONB of larger scale developments outside the boundary is a material planning consideration.
4. **Design.** Potential impacts of individual proposals can be lessened through appropriate design and landscape schemes.
5. Further **pro-active work** is necessary on the capacity of the landscape for renewable energy schemes; criteria to identify areas of search; the opportunities and constraints indicated by the character of the landscape; design factors; and the conditions necessary to ensure a satisfactory development.
6. **Small scale domestic renewable installations** are encouraged and AONB designation should not in itself prevent these (e.g. solar panels, roof mounted wind turbines). Adaptations to design and greater sensitivity may be required in Conservation Areas and on Listed Buildings, but even in these circumstances, effort should be made to enable energy benefits to be achieved.
7. **Single wind turbines** of up to 10m are acceptable in the vicinity of undesignated buildings, but location in more open country and near Listed Buildings and in Conservation Areas needs careful consideration. Large turbines and significant groups of turbines will generally be inappropriate.
8. **Biomass energy**, especially wood energy based on existing resources in the area, is particularly compatible with the AONB and should be strongly supported. There are potential biodiversity benefits through improving management of woodlands, by harvesting appropriate levels of material, e.g. reinstating coppicing cycles.
9. **Energy crops** should not in general be opposed on visual grounds. Low intensity regimes are likely to be more beneficial to wildlife. The location of processing plants has transport implications. Biofuels schemes are welcomed in principle provided care is taken to ensure that the scale of the processing site including traffic flows is consistent with the landscape character and tranquillity and

that agricultural monoculture is avoided. Large scale industrial processing sites will not meet these criteria.

10. **Awareness** of energy and climate change issues should be raised and commitment in the community to a low carbon future promoted. Increased community involvement in energy conservation and renewable energy projects should be supported. In the long term an aim could be to become a carbon neutral area, though it is possible that the AONB itself is not well enough known and not directly relevant enough to be the best area to focus such a concept on. Information should be provided, including case studies, local examples, suppliers, etc and through face to face assistance and support.
11. Renewable energy developments can help the **diversification** of rural economies where they have genuine links to other activities and businesses in the locality, and business development should be supported. Care must be taken to avoid adverse impact on those rural enterprises that rely on the undeveloped countryside for part of their asset base.

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