



**Friends of
the Earth
Cymru**
**Cyfeillion
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Cymru**

Welsh Assembly Government Consultation
Draft Technical Advice Note 8:
Renewable Energy
July 2004

Response by
Friends of the Earth Cymru

November 2004

Friends of the Earth Cymru

Friends of the Earth Cymru inspires solutions to environmental problems, which make life better for people.

Friends of the Earth Cymru:

- is dedicated to protecting the environment and promoting a sustainable future for Wales
- is part of the UK's most influential environmental campaigning organisation
- is part of the most extensive environmental network in the world, with over 60 national organisations across five continents
- supports a unique network of campaigning local groups working in communities across Wales
- is dependent upon individuals for over 90% of its income

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PLANNING POLICY WALES

DRAFT TECHNICAL ADVICE NOTE 8: RENEWABLE ENERGY (July 2004)

Consultation Response from Friends of the Earth Cymru

Introduction

We welcome the opportunity to comment on this draft Technical Advice Note on renewable energy.

We are strong supporters of renewable forms of energy in order to both combat the threat of global climate change and reduce the other harmful effects of burning fossil fuels, such as acid rain, ill health and premature death. In a recent presentation to Welsh Assembly Members, one of the World's leading experts on climate change, Sir John Houghton, warned of the catastrophic consequences of a changing climate and stressed the urgent need to develop renewable energy systems.

It should also be noted that official estimates show that two thirds of the surface area of Wales is acidified (1) and that up to 24,000 people die prematurely each year in the UK as a result of air pollution (2). We maintain our long held opposition to nuclear power as an energy source and point out that the dangers of nuclear power are actually increasing as acts of terrorism reach new heights. Also as the UK and Wales have a stated aim or duty of playing a leading role globally in action on climate change and sustainable development we believe that renewables should be progressed strongly to encourage other countries to follow the same path and avoid the dangers of nuclear proliferation.

We were supportive of the Government's vision for a sustainable low carbon energy system, as set out in the Energy White Paper (February 2003), and of the recommendations, in the Review of Renewable Energy Policy in Wales (January 2003) undertaken by the National Assembly for Wales' Economic Development Committee, that over the next twenty to fifty years it will be necessary to move to a zero carbon electricity system and that the Welsh Assembly Government should set a benchmark for the production of electricity from renewable sources of 4TWh per year by 2010, amounting to just over 20% of annual Welsh electricity demand in Wales (figure based on 2002 UK per capita electricity consumption). Although the overriding purpose of developing renewable energy must be to deliver a very significant reduction in emissions of carbon dioxide, we also believe that the development of a new sustainable industry will have considerable economic and social benefits for Wales.

Planning

Planning has an important role to play in helping us to move from a highly centralised, fossil fuel and nuclear-based energy system towards a more distributed and sustainable renewable energy system. The consequences of this are that local authorities, local communities, environmental organisations, government agencies and developers, who might never have previously had much involvement in the consideration of energy projects, will now be more likely to be involved in shaping policies and assessing applications. It is, therefore, important that they receive clear and unequivocal guidance from the Welsh Assembly Government.

The key policy dilemma for TAN 8 is to balance the imperative for the development of renewable energy with respect for important statutory designations and other considerations relating to biodiversity, built heritage and landscape quality. In our view, renewable energy development, which is of a scale and form that does not damage the features of interest underpinning such designations, should be encouraged. TAN 8 should provide strong general encouragement for the development of renewable energy technology and we welcome the statement in Section 12.8.5 of the Draft Ministerial Interim Planning Policy Statement on Renewable Energy (June 2004) that “renewable energy projects should generally be supported by local planning authorities providing environmental impacts are avoided or managed, and nationally and internationally designated areas are not compromised”.

Specific Comments

Energy Benchmarks and Proposed Capacity for Wind Turbines

We welcome the Welsh Assembly Government's 'benchmark' or minimum commitment of generating 4 TerraWatt hours (TWh) per year of energy (mainly electricity but also some heat) from renewable resources by 2010 as part of its policy of reducing the emission of the gases and pollutants that are causing climate change. The 4TWh would amount to approximately 20% of Welsh electricity demand. We also broadly welcome the Assembly Government's aim of securing most of this output by means of wind energy (800MW of onshore wind along with 200MW of offshore wind and other renewables) as this is the most economically attractive and technologically applicable renewable energy resource currently available.

The cost of generating electricity from onshore wind energy (currently around 3p per kilowatt hour depending on site) has fallen significantly in recent years and wind is now competitive with new clean coal generation (3.0-3.5p per kilowatt hour - PIU 2020 Forecast) and cheaper than from new generation nuclear reactors (3-4p per kilowatt hour - PIU 2020 Forecast). The Energy Review, produced by the Performance and Innovation Unit (PIU) in the Cabinet Office in February 2002, estimated that, by 2020, onshore wind would provide the cheapest form of electricity (1.5-2.5p per kilowatt hour) in the UK. Wales particularly has relatively high wind speeds so generation costs towards the lower end of this range may be attained on many sites. For example, the Moel Moelogan windfarm in north Wales has been operating at an annual load factor of

about 37%, the nominal value being 30% for onshore sites in the UK.

Wind energy has a positive energy balance, recovering all of the energy used in its manufacture, operation and decommissioning within approximately three months thereby recovering about 80 times its energy input over an operating life of around 20 years. In terms of carbon emissions, a number of life cycle analysis studies (3) indicate that wind produces the least amount of carbon throughout the processes of manufacture, use and decommissioning of all electricity generating systems.

Map-Based Planning

We appreciate the intention behind the Assembly Government's map-based approach to wind energy planning. Such mapping has the potential to identify the least sensitive and most appropriate sites with regard to a given benchmark capacity. However, we have reservations about the degree of reliance on a map-based as distinct from a criteria-based approach. While it is entirely reasonable to use available knowledge and data about Wales to identify the best locations for windfarms, the usefulness of the sieve-mapping approach is very dependent on assumptions and the quality of the data and could result in inappropriate guidance.

In order to reduce unnecessary cumulative visual or other impacts, we agree that, generally speaking, developments should consist of fewer large windfarms rather than a larger number of smaller windfarms. This approach also has benefits in terms of road access, grid connection and environmental disturbance. So, the idea of designating strategic search areas (SSAs) has much to commend it in terms of identifying the most appropriate and least sensitive areas in Wales. However, we think that the current SSAs in the draft TAN may be placing excessive pressure and potentially unreasonable expectations within certain SSAs while excluding suitable sites outside the SSAs.

The implied presumption that much, most or possibly all of the 800MW capacity benchmark could or should be achieved within certain Strategic Search Areas (SSAs) identified by the study is questionable, if indeed that is the presumption implied. More detailed site surveys may identify further constraints and the estimated capacity for a given SSA may not actually be achievable in practice. We understand that Welsh-based wind energy developers have already come to the conclusion that the SSAs would not support the capacity estimated in TAN 8 once detailed site constraints are taken into account. Also, the SSAs may well include some unsuitable locations, whereas suitable areas outside of the SSAs are potentially being excluded not least because of the arbitrary cap of 25MW capacity. The proposals as they stand also beg the question about the policy for windfarm proposals outside the SSAs if the nearest SSA is not deemed fully developed.

For the same cumulative impact reasons the 25 MW capacity cap on schemes in areas outside the SSAs is too restrictive. There may be a few good sites for schemes between 25MW and the 100MW minimum designated for the SSAs. For example a 75MW

scheme would likely have less cumulative impact than three 25MW schemes. Presumably if the mapping data is up to the job then such sites should be capable of being identified. Consequently, we recommend that the 25 MW cap on proposals outside the SSAs is deleted and criteria-based policy would apply across Wales, with less stringent cumulative impact criteria within the SSAs.

To sum up, we believe that planning guidance would be better if the best aspects of the mapping and a criteria approach were integrated. This would build on the criteria based guidance followed in England and Scotland which assesses each individual application on its merits. The merits of the SSA idea could be integrated into 'criteria-plus' guidance that would retain a criteria based system but would include the positive benefits of mapping exercises and SSAs to identify the most appropriate way of achieving the specified capacity.

Updating the Maps

We recommend that the TAN should also include provision for revision of the maps as and when constraints change over time. Indeed, the constraints and opportunities could change potentially very significantly (eg. TTAs, radar exclusion zones, sensitive areas for birds, ecology, etc). Also the data-sets which generate the maps may well improve over time and the maps should quickly be updated and refined accordingly.

In particular, if the MoD's Tactical Training Area (TTA) in mid Wales is reduced in part or whole, or moved in exchange, then whole new areas of low sensitivity may suddenly become available. The proposed Camddwr windfarm at 300MW+ (40% of the 2010 benchmark capacity) may become a very attractive proposition for all concerned in achieving the 2010 benchmark if the TTA constraint changed. We recommend that the Assembly Government should specifically assess the Camddwr Trust's proposals and approach the MoD to do what it can to realise the possible benefits of a scheme in this area (see Annex 1 for details of the Camddwr Trust windfarm proposals).

The assumptions made about Grid access for the mapping are simplistic at the moment (the constraint used appears to be for schemes within 10km from existing Grid lines). Grid connection costs are a function of transformer and the nearby network Grid capacity, not just distance. Furthermore, some sites at greater distances but with higher wind speeds may still be commercially viable even with higher connection costs. More accurate data-sets should be incorporated as soon as they become available.

The current maps also do not clearly indicate that the SSAs are subject to Grid and road access considerations, if not constraints, when they may actually exist. A map indicating road and track access would be useful. Road access is particularly relevant in the case of SSArea D, Nant y Moch in Pumlumon where Grid and road access is poor. Also, this area also appears to be of greater landscape sensitivity than the other SSAs, and some areas outside the current SSAs, and there are already several existing windfarms operating in the vicinity. Consequently we recommend that the Nant y Moch area should not be designated as an SSA and criteria-based policy only should apply. We do

however recommend that the Nant y Moch area should be considered for designation as a TTA in exchange for that part of the existing TTA area which currently precludes the building of the Camddwr Trust's windfarm proposal.

Sensitive Areas

Considering the 2010 benchmark we agree that windfarms should not be considered within the National Parks and AONBs and a 4 km buffer around such areas would seem reasonable and would probably not preclude much capacity anyway. Smaller community-scale and domestic turbines should be allowed.

Community and Consumer Involvement

We welcome the recognition in TAN 8 of the need for the active involvement of the local community in windfarm developments (large and small) and would like to see greater emphasis placed on this important issue. Section 43 should read, "Developers are obliged [rather than encouraged] to consider ways in which their proposals may include the active involvement of the local community". That said, some windfarm proposals have already been proposed where the public can invest in the scheme. Also some windfarm developers already offer significant annual funds for biodiversity, community and energy efficiency projects.

We would also suggest that planning guidance, and the distinction between building regulations, for small windturbines (0.2kW- 25kW) in domestic, commercial and industrial locations (roofs, elevations, gardens etc) needs to be clearly stated. There could be significant potential for community and consumer involvement and investment in shared or privately purchased devices (similarly, there also needs to be clear guidance or regulations for solar panels both thermal and PV).

Interim Policy

Planning policy for scheme proposals already well advanced or submitted should not be undermined by the significant change the new TAN represents. The TAN may take some months before coming into effect and a positive interim policy should be adopted in the meantime.

Onshore Renewables other than Windfarms

While it is inevitable that much of the TAN has focussed on planning for onshore wind energy we are pleased that various other onshore renewables have been highlighted. However, we are concerned that insufficient consideration has been given to the potential contribution and planning implications of both heat energy and other forms of renewable energy in TAN 8. This is particularly the case with regard to wood fuel and we believe that the TAN 8 estimate of this fuel resource, at just 10MW, is an

underestimate. Wood heating schemes, such as at Preseli School and Leisure Centre in Crymych and the refurbished Pembrokeshire Coast National Park offices at Llanion Park, Pembroke Dock, provide good examples that could be replicated on a large scale throughout Wales in the near future.

We believe that the potential for the use of methane from coalmines as a source of fuel (although not strictly a renewable source) has also not been fully explored. We would also like to see greater emphasis being placed on the use of combined heat and power (CHP) technologies to maximise the efficiency of energy generation. Section 79 recognises that CHP is “a particularly efficient way of generating electricity whilst using the waste heat for productive purposes” and that this results in “significant carbon savings”. Yet, the implementation of CHP in recent years has been extremely disappointing and is likely to remain so unless measures are introduced to specifically improve the take up of CHP.

Whilst accepting that time is of the essence and that wind energy is the best available option for achieving the required contribution from renewable energy by 2010, we believe that greater consideration has to be given to these other options if we are to meet the 200MW target for offshore and other renewable sources. There will likely be planning implications especially if any technologies become more commercially attractive and are deployed sooner than anticipated. For example, increasing farm-scale biomass capacity may stress or de-stress the network capacity of the nearby Grid which may have knock on implications for other renewable developers and visa-versa.

As there is little specific guidance on the various non wind renewables perhaps the guidance could incorporate some of the relevant technical annexes from PPS22.

Recommendations

Onshore wind energy planning:

- 1) The 800MW by 2010 onshore wind energy capacity benchmark is retained
- 2) The sieve-mapping planning approach should be better integrated with criteria planning to create a ‘criteria-plus’ approach
- 3) The 25MW capacity cap for windfarms outside the SSAs should be removed
- 4) Great clarity is needed as to the acceptability and relationship of developing windfarm capacity outside the SSAs with that inside the SSAs
- 5) The maps should be updated as and when constraints change and when more detailed data-sets become available. Consideration should be made for the creation of new SSAs in the event of constraints being removed.

6) WAG should identify the merits of and put the case for the Camddwr Trust windfarm proposal to the M.O.D as the current Tactical Training Area restrictions are having a very significant effect on the strategic planning of wind energy in Wales

7) The Nant y Moch SSA (Area D) should be deleted and possibly offered to the MoD as an exchange area for a TTA in the Camddwr area

Other onshore renewables:

8) Greater consideration should be given to the planning implications of a more rapid grow of other forms of renewable energy schemes and devices (eg: biomass schemes, small hydro schemes, CHP schemes, small wind turbines)

Notes

- 1) 'A Living Environment for Wales' by The Countryside Council for Wales (Fig. 11.2)
- 2) The Commission on the Medical Effects of Air Pollution
- 3) Open University publication RENEW edition 133 Sept/Oct 2001. The Energy Technology Support Unit (ETSU) 1999. 'Power in Balance: Energy Challenges for the 21st Century by Friends of the Earth (p97).

Annex 1

Camddwr Trust Windfarm Proposal

One suggested large site outside of the SSAs is the 300MW (which would supply 5% of Wales' electricity demand) Camddwr site near Tregaron. This area is arguably less landscape sensitive than areas within the proposed SSAs as it is on a less intrusive upland and forested plateau. Whereas a number of the SSA sites have poor road access, the Camddwr area is already well provided with forestry tracks. The scheme would also have a significant community benefit, via the Cymuned Camddwr Trust, that would invest 5% of the project's revenues (around £2m per annum) into local community and regeneration activities. There would likely be a major biodiversity enhancement as it is intended to undertake environmental enhancement work on the site replacing the Sitka plantations with a far more habitat rich open broadleaf woodland.

The Camddwr area is currently designated an absolute constraint in the mapping process, yet would almost certainly show up as major SSA if the MoD's tactical training area designation was removed (with the potential of over 300MW of capacity). The MoD

only uses the area occasionally (about 30hrs per year) for low flying by large slow moving Hercules transport aircraft (as distinct from fast jets). The Welsh Assembly Government could negotiate with the MoD about this restriction and offer another appropriate area, such as the Nant y Moch area.