COUNCIL FOR NATURE CONSERVATION AND THE COUNTRYSIDE

POLICY STATEMENT

TOWARDS A POLICY ON RENEWABLE ENERGY

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SUMMARY

The Council for Nature Conservation and the Countryside (CNCC) supports Government's efforts to encourage the development of renewable energy resources, and feels there is a need for clear government policies relating to all aspects of the siting, design and use of the many forms of renewable energy. Renewable energy covers those energy flows which occur naturally and repeatedly in the environment.

CNCC is concerned that government should not be unduly hasty in granting permissions, given the rate of technological development taking place within the sector and the wide range of environmental factors to be borne in mind in determining each planning application.

While Northern Ireland is favourably situated to benefit from wind energy on Europe's Atlantic fringe, this form of energy should not be developed to the exclusion of other methods.

While wind power has the potential to generate up to 22% of our needs, NIE estimates the actual proportion of power to be generated from wind in the next ten years to be at most 8%.

The profitability of wind farms is to some extent assisted by the relative cheapness of upland locations; this in turn makes it imperative for objectors to be able to argue cases on strong environmental grounds.

CNCC is concerned that in the absence of a co-ordinated strategy on the use of renewable energy there could be a rash of developments in environmentally or economically unsuitable locations.

CNCC welcomes the establishment of an inter-departmental group involving DARD, DOE, DETI and DED to examine the future for biological means of generating power.

CNCC recommends that proposals for renewable energy projects should be subject to Strategic Environmental Assessment (SEA).

CNCC believes that among the issues that need to be considered in dealing with wind farm applications are international legislation, Government policy, changing technology, impact on flora and fauna, visual impact, impact on the physical environment, impact on farming and domestic activities and overall effectiveness of projects.

CNCC encourages the Department, at an early stage, to follow the line in England where a PPS deals with all aspects of renewable energy currently in use.

CNCC asks that, in the interim, the Department adopts a series of recommendations regarding planning applications relating to any form of renewable energy, with particular reference to, but not exclusively, designated areas.

TOWARDS A POLICY ON RENEWABLE ENERGY

In its role of advising the Department of the Environment on matters relating to the conservation of nature and the countryside, the Council has examined the issues relating to the impact of several forms of renewable energy. This paper represents the views of CNCC on the need for clear government policies relating to all aspects of the siting, design and use of the many forms of renewable energy, and is presented to the Department for its consideration and transmission to other relevant Departments and Agencies.

For the purpose of this paper, renewable energy covers those energy flows which occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and from biomass (from agricultural, forestry, industrial and waste sources). It covers technologies such as onshore wind generation, hydro generation, photovoltaics, passive solar, biomass and energy crops, energy from waste (but not energy from the mass incineration of domestic waste), and landfill and sewage gases.

Background

In the last twenty years or so, and particularly since the Rio Summit and subsequently the Kyoto Protocol proposals, issues relating to the generation, distribution and use of energy have become increasingly significant in government thinking in many countries. In Northern Ireland, the public's greatest concerns relate to the location, siting and design of the means of energy generation rather than to the environmental benefits, accepting the need for planning controls as a means of addressing come of their concerns. While CNCC supports the government's efforts to increase dependency on non-fossil fuel energy sources, one of its concerns is that government should not be unduly hasty in granting planning permissions, given the rate of technological development taking place within the sector and the wide range of environmental factors to be borne in mind in determining a planning application.

Any of the methods currently developed for the use of renewable resources will have environmental consequences, and it has yet to be established which is the ideal, given our particular physical, economic and social circumstances What is most probable is that it will require a combination of energy forms to supply our domestic and industrial needs.

Government's proposals in this field have met with a mixed reception. Some environmentalists consider the proposals to be neither sufficiently radical nor robust to provide a real solution, while others object vociferously to proposals which will have an environmental impact, especially those using wind power. In many cases it is the lack of information to, and understanding by, the public of the total range of issues involved which has led to uncertainties reflected in biased objections.

The first phase of projects included a number of small-scale hydro-electric generation schemes which, by and large, excited little adverse comment other than from angling interests; experiments with biomass production and use have to date received scant public attention. Yet both these sources have the potential to supply a number of local needs and can be designed in such a way as to produce few detrimental environmental effects. Other forms of energy generation yet to be adequately researched include wave and tidal power, solar energy, geothermal sources, and the use of waste from domestic, industrial and agricultural sources. At some stage an evaluation of the potential for nuclear energy may well have to be made.

Given Northern Ireland's location on Europe's Atlantic fringe, the availability of regular winds over much of the land mass has proved attractive to both Government and generating companies and is now accepted as a major player in the Government's plans for future generation, at least in the short term. While sections of this paper concentrate mainly on wind generation, many of the issues considered are relevant to other forms of generation.

Wind power has many attractions to the developer and the environmentalist. Especially, it is “clean” and turbines can be sited in a variety of locations. It also has disadvantages: in certain locations it can be visually obtrusive, it requires a connection to the National Grid which may be unsightly, and it cannot develop power when there is no wind or only a light breeze. This latter point means that a developer must have an alternative means of generation available, though this does not have to be located in the vicinity of the wind farm. Conversely, should the Grid not require the amount of power being generated by a wind turbine? Technology has not yet been developed to allow this power to be stored and so it is wasted. Research into the use of hydrogen to store electricity by electrolysis may provide an opportunity to harness this otherwise spare production. While wind power has the potential to generate up to 22% of our needs, because of several factors, NIE estimates the actual proportion of power to be generated from wind in the next ten years to be at most 8%.

The profitability of wind farms is to some extent assisted by the relative cheapness of upland locations; this in turn makes it imperative for objectors to be able to argue cases on strong environmental grounds.

THE CASE FOR A CO-ORDINATED APPROACH TO RENEWABLE ENERGY PRODUCTION

Until now, there has been little sign of a co-ordinated strategy between the relevant government departments involved to establish demands, assess the positive and negative environmental, health and social impacts and predict what will happen to sites once a particular source has ceased to be economic or functional. The absence of such a strategy could easily lead to a rash of sites in environmentally or economically unsuitable locations; at the wider level it could result in wasteful development of one form of energy in locations where another may be more efficient. One group has recently been set up, involving DARD, DOE, DETI and DRD to examine the future for biological means of generating power. This is a welcome development, though it may be argued that the terms of reference are not sufficient to cover all environmental aspects.

The ideal approach would be to subject proposals for renewable energy to Strategic Environmental Assessment (SEA), a European Commission concept now enshrined in Northern Ireland legislation, which allows a comprehensive assessment of the direct and indirect impacts of plans and programmes to be carried out at the strategic level. The consideration of renewables at the total Northern Ireland level would appear to fall neatly within the aims of the SEA concept, one of the essential elements of which is the achievement of a high degree of integration at the policy level.

The role of an SEA includes: advocacy, awareness raising, co-ordination and communication, guidance and training, information, accountability, selection of best sustainable options, monitoring and quality control. The process should be transparent, should assess the impacts of alternative options rather than option alternatives, involve shareholders, policy makers and the general public, and require high-quality assessment methodologies.

An SEA is an active, participatory and educational process for all parties, in that stakeholders are able to influence the decision-maker, who in turn is able to raise awareness of the strategic dimensions of the policy, plan or programme. It is therefore appropriate to consider its benefits in the local scene, where there is a multiplicity of stakeholders, each with its own agenda.

ISSUES TO BE CONSIDERED IN DEALING WITH WIND FARM PROJECTS AND APPLICATIONS

As stated above, Northern Ireland is well suited to the generation of energy from wind power, and this form of development has the potential to cause serious damage to nature and countryside conservation interests. Because of this, EHS commissioned, on behalf of CNCC, a report from Steer Davies Gleave which sets out in detail the various aspects which must be considered in dealing with

planning applications for wind farms. Other conservation organisations have also considered the impacts, real and potential, of wind farms, and the following is a summary of issues raised by the various bodies.

1 International legislation

There are two principal relevant European measures, the EC Directive on the Conservation of Wild Birds (1979) and the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (commonly called the Habitats Directive) of 1992. Both define measures which Member States must take in order to protect a range of rare, threatened or vulnerable habitats and species throughout the Community. Their requirements have been translated into national legislation in the Conservation (Natural Habitats etc.) Regulations (N.I.) 1995 and its 2004 Amendment.

Environmental Impact Assessments are dealt with in EC Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment of 1997.

The Convention on the Conservation of Wetlands of International Importance (known as the Ramsar Convention) of 1971 requires Contracting Parties to adopt a policy of wise use regarding all sites on the Ramsar List and to all wetlands under their jurisdiction; “wetland” is defined widely to include Peatlands as well as marine and fresh waters.

2 Government policy

The Government’s policy of reducing the use of fossil fuels is endorsed by CNCC; the development of wind farms is an essential part of the outworking of this policy. The probability is that many proposals to develop wind farms will conflict with policies relating to nature and countryside conservation issues. A major problem in Northern Ireland is that several aspects of overall policy are handled by individual Departments with little apparent co-ordination of effort.

3 Changing technology

Forms of power generation are currently subject to considerable development so that before any particular proposal is activated its overall efficiency may have been overtaken by improved technology, which may also reduce environmental problems. An example of rapid change is the development of larger turbine blades and taller towers; turbines of the size used in the first generation used in Northern Ireland are now considered too small and are no longer manufactured. However, our planning system precludes consideration of changing technologies in dealing with a planning application.

4 Impact on flora and fauna

As wind farms are recent additions to our countryside, their long-term effects cannot yet be properly assessed; outside Northern Ireland there have been a number of scientific surveys undertaken to address the impacts on flora and fauna. One of our relatively strong points is that we have a good idea of the distribution of botanically high quality upland Peatland sites, and fortunately to date most applications have related to botanically poor locations, including degraded peat. Consequently there has been little urgency to address the absence of hard and fast information, and perhaps CNCC should draw this to the attention of all appropriate bodies.

The same lack of useful data is also true of the upland faunal situation. Ornithologists have taken any real interest in uplands only where red grouse, golden plover, merlin or hen harriers are present during the breeding season. In winter the presence of white-fronted geese or snow buntings is about all that is ever documented. In the local context there has been no long-term evaluation of the effects of wind farms on any of these species, despite the fact that some of them are in decline.

Birds are at risk from wind farm activity in two principal ways. Collisions with towers or blades are most common where farms lie across migration routes, or across routes used by birds moving to and from roosts. Raptors have been known to rest on towers when the turbines are inactive, to be damaged once generation begins, or to fly into blades while hunting. The second threat is that of disturbance, which can take many forms, including physical damage to feeding sites or breeding areas, human disturbance during construction or monitoring, and failure of the birds to adapt to new features in their surroundings.

An important, but often overlooked, aspect is that of invertebrates. Little is known of their distribution, of their ecology and therefore of the likely effects on their feeding regimes and movements as a result of wind farm construction and operation.

In considering virtually all planning applications, CNCC (and EHS) will therefore have difficulty in providing a detailed assessment and will have to rely to a large extent on the information contained in the Environmental Statement provided by the applicant. Such statements vary in quality, though in general the standard in improving. Professional and amateur naturalists should be encouraged to undertake survey work resulting in the production of data which could be relevant in dealing with wind farm applications.

5 Visual impact

This is the most controversial area, surveys apparently showing that the population is divided into two camps – those who accept wind farms in the landscape or seascape and those who do not. It is suggested that it is the urban and suburban dweller who is most likely to object to the visual impact of a wind farm, with locals accepting them, partly on the strength of the social and economic benefits they bring. Objections from locals seem to be more related to issues of noise and the flashing effects of rotating blades.

In assessing the impact on the visual environment, and in order to avoid dependence on personal preferences, generally accepted criteria must be used and DOE's landscape character assessments must form the basis for any evaluation. Sites should be examined in varying weather conditions and at different times of the year, as weather conditions can markedly affect the visual effect of a group of masts. Siting is a more critical issue where a site is close to a major tourist route, a section of a major footway, or to habitations, or where sky lining is involved.

Occasionally, farms are to be sited part way down slope; while in general this may be more satisfactory, location of the viewer is again critical.

6 **Impact on the physical environment**

Little interest has been taken in this aspect to date, but a recent landslip in Mayo has drawn attention to the potential of major physical damage, particularly in degraded peat areas. Perhaps promoters of such schemes can be asked to produce an evaluation of the impacts on the local, and not-so-local, environments, with particular reference to the potential for landslips to occur. A sample of the physical effects on upland habitats includes the disruption of the hydrology, both surface and sub-surface, changes in water turbidity through pollution, overall degradation of vegetation, habitat fragmentation, and peat erosion.

7. Impact on farming and domestic activities.

The overall impact of proposals on the farming industry and community is relevant, as are the effects on countryside recreational activities – grouse shooting, bird watching, hill-walking, etc.

8 Overall effectiveness of projects

While there has been a general welcome for many of the proposals to use renewables in an attempt to reduce both the demand for fossil fuels, and the overall amount of pollution, there

are suggestions that schemes may not produce the impact originally proposed. It would be important to ensure that projects reach their proposed targets, and that there is not a surfeit of proposals merely to compensate for any shortfall in supply from inefficient activities.

OPTIONS FOR CNCC IN DEALING WITH APPLICATIONS RELATING TO THE USE OF OTHER RENEWABLE ENERGY SOURCES

CNCC is firmly committed to the concept of renewable energy development and has made comments on a number of applications for wind farms. It now needs to become acquainted with the environmental consequences of other forms of renewable energy so that it is in a position to fully advise the Department on any issues which arise. It is inevitable that applications covering a range of renewable categories will be submitted over the next few years, and CNCC encourages the Department to take a proactive interest in these applications and to engage with other Departments and agencies in producing an overall government strategy on renewables dealing with the practical and environmental issues involved – ideally through an SEA. At the very least, through this mechanism EHS should be able to provide CNCC with information on the present state of all applications for the use of renewables, and on the areas where future exploitation is likely to be concentrated.

CNCC encourages the Department, at an early stage, to follow the line in England where a PPS deals with all aspects of renewable energy currently in use. It is believed that the Department may consider it desirable, to combine the requirements for a PPS on renewables with one dealing with the wider aspects of public services and utilities, and with this CNCC agrees.

In the interim, CNCC recommends that the Department adopts the following recommendations regarding applications (for any form of renewable energy development) in designated areas, (assuming that CNCC is not commenting in detail on individual applications) in the expectation that most, if not all, of these recommendations will be included in the PPS.

(a) Internationally Designated Sites

In sites of international importance for nature conservation (Special Protection Areas, Special Areas of Conservation and Ramsar Listed Sites) planning permission should only be granted for renewable energy developments once an assessment has shown that the integrity of the site will not be adversely affected. Many renewable energy developments are likely to have some adverse effects on the integrity of such sites; in these circumstances, planning permission will be granted only where the requirements of the Conservation (Natural Habitats etc.) Regulations (Northern Ireland) 1995 and its 2004 Amendment are met, viz., there is no alternative solution and there are imperative reasons for overriding public interest, including those of a social and economic nature.

(b) National Designations (Countryside and Nature Conservation)

In sites with national designations (including Areas of Special Scientific Interest, National Nature Reserves and National Parks) planning permission should be granted only where it can be demonstrated that the objectives of designation will not be compromised by the proposed development, and any significant effects on the qualities for which the area has been designated are clearly outweighed by the environmental, economic and social benefits. Small-scale developments may be permitted within sites designated under countryside classifications provided there is no serious environmental detriment to the area concerned.

(c) Areas of Special Planning Controls

In Areas of Outstanding Natural Beauty, Green Belts or where special local planning restrictions apply, the visual impact of projects will be given considerable weight in determining whether a proposal will be granted; developers will need to demonstrate very special circumstances that clearly outweigh any harm by reason of inappropriateness or any other harm if projects are to

proceed. These very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable resources.

(d) Other considerations

1. In all applications, the scale of the development should be taken into account in its determination.

2. Renewable energy resources can only be developed where the resources exist and where it is economically feasible to exploit them. In this context, when preparing development plans at all levels, consideration should be given to the use of sites previously undeveloped because of unsuitability (e.g. for housing) for some forms of renewable energy projects and to the use of urban areas or large-scale new developments.

3. The visual effect of projects will vary on a case by case basis, according to the location or landscape setting of the proposed development. Adverse impacts may be minimised through appropriate siting, design and landscaping schemes. Potential developments should be assessed using objective descriptive material and analysis wherever possible, but it is appreciated that the final decision on the visual impact will be to some degree subjective.

   Wind turbines, whether at an individual or wind farm level, are likely to have the greatest visual impact and engender the greatest public controversy, and the cumulative effect of wind generation projects in particular areas should be taken into account. It should not be policy to set limits to the number of turbines or wind farms at the regional or other development plan levels.

4. Renewable energy developments should be located and designed in such a way as to minimise increases in ambient noise levels.

5. Certain forms of renewable energy may be considered to have harmful health effects and produce unwelcome odours; in determining applications, these potential impacts and the proposals put forward for their control should be carefully assessed.

6. Many forms of renewable energy result in increases in road and rail transport. Ideally, generation plants should be located as close as possible to the sources of generation or fuel to be used, or to the distribution points for the finished product.

7. Developers should be asked to ensure that proposals are located as close as possible to connections to the National Grid, the Inter-connector or the Irish National Grid.

8. Developers should be responsible for ensuring that all compliances with air navigation or security requirements are met before an application in submitted.

OFFSHORE DEVELOPMENTS

This paper does not address the issues relating to offshore developments as it is intended to examine them in another document. However, early indications are that it may be the view of CNCC that these issues should be covered in any governmental consideration.

INTRA-GOVERNMENTAL CONSIDERATION

In preparing regional and sub-regional development plans, issues relating to renewable energy should be discussed with the Government Departments, Agencies, Advisory Committees and other relevant parties as part of a Strategic Environmental Assessment dealing with all aspects of renewable energy production and use at the overall Northern Ireland level. Individual applications may be similarly discussed.

RESEARCH NEEDS

There are many aspects of the outworking of any energy generation on which information is scant. Some of these are referred to above, and CNCC will encourage EHS to institute projects to close information gaps. Some of these projects have been carried out elsewhere in the UK or Europe, but need application to the particular scene in Northern Ireland. A number of the projects could be undertaken at an all-Ireland level. Examples of projects include:

- Ecological effects of wind farm developments on degraded upland peat.
- Effects on the distribution and behaviour of five bird species – hen harrier, merlin, golden plover, red grouse and white-fronted goose.
- Listing the invertebrate communities of upland peat and the effects, direct and indirect, on them of wind farm developments.
- Assessment of the possibility of mass movement of peat following disturbance in the construction phase of wind farm development.
- Investigation of environmental issues relating to the use of biogas.
- Review of the environmental impacts of currently operational projects, including assessments of impacts predicted at the time of application.
- Investigation of the effectiveness and efficiency of developments to date.
- Production of a bibliography of relevant papers and legislation.

RELATIONSHIP WITH DEVELOPERS

Developers play a vital role in all environmental aspects of the use of renewables. It is vital that all players understand the concerns and motivations of other parties; through understanding can come environmental and social benefits. Developers should be encouraged to become familiar with environmental legislation, with the views of statutory advisory committees, and in general be made to feel part of the entire process. Ensuring that this happens is the responsibility of Government, ideally through whatever form of joint structure is set up. CNCC may have a catalyst or advisory role.