



## *National Planning Policy Guideline*

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## NPPG6 - RENEWABLE ENERGY

### *Introduction*

1. Renewable energy is the term used to cover those energy flows that occur naturally and repeatedly in the environment - from the sun, the wind and oceans, and the fall of water. The heat from within the earth itself (geothermal energy) is usually regarded as renewable, although locally it cannot always sustain continuous extraction. Plant material, often referred to as energy crops, is an important source of renewable energy. Combustible or digestible industrial, agricultural and domestic waste materials are also regarded as renewable sources of energy.
2. The President of the Board of Trade has overall responsibility for energy policy throughout the UK and holds the budget for research and development expenditure on all energy technology. Certain responsibilities in terms of the Electricity Act 1989, including the making of any Scottish Renewables Obligations (SRO), rest with the Secretary of State for Scotland.
3. The planning system in Scotland has an important role in providing a framework within which sound decisions on renewable energy development proposals can be taken. This NPPG therefore sets out the Government's policy on developing renewable energy sources against the background of established land-use planning and environmental considerations.
4. This NPPG focuses on those renewables likely to attract support under the SRO (see paragraphs 16 - 19 below). It defines the factors which the Secretary of State will have in mind when considering policies for renewable energy developments in structure plans, and when considering appeals against refusal of planning permission or non-determination of a planning application. It indicates the considerations which planning authorities should take into account when drawing-up policies in their structure and local plans and when determining planning applications. These are also factors which developers should take into account when preparing development proposals.
5. A variety of factors peculiar to the particular technology involved have to be taken into account in assessing planning applications for renewable energy projects. The main characteristics of renewable energy projects likely to be deployed in Scotland in the foreseeable future are therefore briefly described in paragraphs 42 - 63, and in more detail in the associated Planning Advice Note (PAN 45 : Renewable Energy Technologies).
6. While renewable energy can play a part in reducing environmentally damaging gaseous emissions, other technologies, including improved energy efficiency and techniques for reducing pollutants from emissions ("abatement technologies"), also have a role to play. Such measures are outwith the scope of this particular NPPG. However, separate advice on the planning aspects of energy efficiency will be issued in due course.
7. Similarly, this NPPG relates primarily to projects connecting with the electricity distribution system. Planning applications in respect of smaller projects for on-site use should, however, be considered taking account of the principles and environmental requirements set out in this NPPG.



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### *Policy Context : Renewable Energy Sustainable Development*

8. Sustainable development is an integral part of the Government's domestic and international policies. In the 1990 Environment White Paper "This Common Inheritance" (Cmnd 1200), sustainable development is defined as "living on the Earth's income rather than eroding its capital"; in effect, controlling the consumption of renewable resources and minimising the depletion of non-renewable resources. This definition was further developed in "Sustainable Development : The UK Strategy" (Cmnd 2426, HMSO, January 1994), where it is defined as "promoting economic development in such a way as to protect and enhance our environment, now and for future generations". As such, sustainable development is an attempt to reconcile economic and environmental objectives.

9. In the context of sustainable development, renewable energy offers unique advantages. As an energy source, it underpins development and contributes directly to society's fundamental economic needs; and, as an unlimited resource, it does so without depleting non-renewable resources like fossil fuels. Renewable energy developments are thus activities that are inherently sustainable, although they may have adverse implications for other environmental or economic assets (as with visual intrusion in the landscape or fishing interests).

### *Energy Policy*

10. The UK Sustainable Development Strategy sets out the Government's commitment to the diversity, security, and competitive pricing of energy supplies; and their provision through competitive energy markets. In terms of associated environmental objectives, it sets out the Government's commitment to do so in ways which have less environmental impact.

11. In the light of commitments given at the Earth Summit in Rio de Janeiro in 1992, the Government also has an overall strategy (subject to certain conditions) of returning emissions of CO<sub>2</sub> to 1990 levels by the year 2000 and reducing emissions of other greenhouse gases which are harmful to the environment. At present, power generation accounts for some 30% of CO<sub>2</sub> emissions; and anaerobic digestion of waste in landfill sites accounts for a significant proportion of methane (CH<sub>4</sub>) - a more powerful greenhouse gas.

12. Renewable energy developments do not generally emit gases which are harmful to the environment. In particular, both wind and hydro electricity schemes offer a clean source of electrical energy with no production of particulates or harmful gases such as nitrogen oxides, sulphur dioxides, or carbon dioxide. Other schemes, such as measures to collect and control landfill gas, can also assist in reducing emissions of such gases. Such developments, which are likely to be modest in scale, are consistent with the Government's policy to promote sustainable development.

13. The Government has published Energy Paper 62 "New and Renewable Energy : Future Prospects in the UK" (Department of Trade and Industry March 1994). It contains the following policy :

- **to stimulate the development of new renewable energy sources wherever they have prospects of being economically attractive and environmentally acceptable in order to contribute to :**
- **diverse, secure and sustainable energy supplies;**
- **reduction in the emissions of pollutants;**

- **encouragement of internationally competitive industries.**
- **to take account of those factors which influence business competitiveness, and to work towards 1,500 MW DNC (Declared Net Capacity) of new electricity generating capacity from renewable sources for the UK by 2000.**

14. The European Community (EC) has also given expression to its general policy towards renewable energy sources in several Regulations and Recommendations. These are set out in Annex A.

15. Against this background, the Government has a continuing programme of research, development and demonstration of renewable energy projects in collaboration with industry. A better understanding of the technologies involved is needed, together with the planning considerations which apply, in order that their introduction can proceed smoothly in the coming decades.

### ***Scottish Renewables Obligation (SRO)***

16. To reflect the foregoing, the Government has decided to introduce a Scottish Renewables Obligation which will require ScottishPower and Hydro-Electric to obtain more electricity from renewables sources than at present. To implement this obligation a series of Renewables Orders will be made under the Electricity Act 1989.

17. The first Order is expected to provide for some 30 - 40 MW of new renewable energy capacity to be contracted with effect from November 1994, with contracts running for 15 years. The technology bands covered by this first Order are :

- wind power,
- hydro,
- landfill gas from existing sites,
- municipal and industrial waste, and
- energy crops / agricultural and forestry waste.

18. In his announcement of the first Order, the Secretary of State made it clear that he wished to ensure a wide diversity of projects within it. He has accordingly decided that no project over 15MW gross generating capacity will be eligible for support.

19. Further renewables Orders under the SRO are planned for 1995 and 1997. These will not necessarily cover the same technology bands and may be of a different size from the first Order. The Government's intention is that in due course the most promising renewables technologies should be able to compete without the need for special financial arrangements. Meanwhile, the scale and detail of successive renewables Orders making up the SRO will have a significant bearing on the types and number of renewable energy developments that are likely to come forward in Scotland as planning applications. Planning applications should be considered on their merits; a contract with either of the Scottish public electricity suppliers does not confer a special status in terms of planning legislation.

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### *Policy Guidelines : General Principles Land-use Considerations*

20. In addition to its emphasis on safeguarding the environment, the Environment White Paper, "This Common Inheritance", indicated that there was a need to find enough land for all our requirements in order to help the economy grow. With their contribution to protecting the global environment (and achieving our associated SRO targets) renewable energy developments are one such requirement. However, the Sustainable Development Strategy also makes it clear that the localised environmental impacts of such developments must be acceptable. The planning system therefore has an important contribution to make in meeting the Government's policy objective for renewable energy, and in reconciling such development with other considerations, including the protection of local environments and Scotland's own natural heritage.

21. Scotland possesses a large part of the UK potential for producing energy from hydro, wind, and biomass sources (including energy crops and forestry). To a lesser extent, there will also be opportunities involving waste incineration and landfill gas. This potential was illustrated in the report, "An Assessment of the Potential Renewable Energy Resource in Scotland", prepared by the Energy Technology Support Unit (ETSU) and published in December 1993 by Highlands and Islands Enterprise.

22. Sources of potential renewable energy based on wind, water, or landfill gas, will often be in rural areas or on the coast. Some developments exploiting them will be relatively small and widely dispersed. Others, using wind power for example, could be larger, involving a significant number of turbines in one location. Renewable energy projects such as the incineration of waste and energy crops will have the characteristics of specialised industrial plant. They will be dependent on a catchment area, usually serviced by road, and sufficient to provide the necessary raw material. Hydro schemes may alter river and loch habitats with consequential effects on wildlife. In particular, care will be required in considering proposals in water courses where there are migratory fish. Such developments are likely to require careful planning to ensure that they do not adversely affect the landscape or despoil protected habitats.

23. Development plan policies should take account of the variety of renewable energy sources, their differing characteristics, and the potential for exploiting them within appropriate environmental constraints. Each authority should consider the contribution their area can make. This contribution should reflect the nature and extent of the resources in a particular area and other relevant planning and environmental considerations.

24. Planning policies should also guide developers on how to minimise the impact of proposed developments on the local environment by careful consideration of their scale, location, and relationship to any nearby settlements. Planning policies which simply rule out the development of all such sites will be inappropriate unless there are sound reasons for doing so. On the contrary, the possible benefits of such developments should be borne in mind, particularly where the impact on the local environment is not likely to be significant. Investment in renewable energy developments can make an important contribution to the national and local economy.

25. Accordingly, in relation to renewable energy developments, planning authorities should seek through their policies and decisions :

- **to provide positively for renewable energy developments, where this can be achieved in an environmentally acceptable manner;**
- **to safeguard sites with potential for renewable energy projects against sterilisation by types of development that would prevent or hinder such projects and could be**

accommodated elsewhere;

- to protect areas of important natural and built heritage from inappropriate forms of development;
- to achieve acceptable operating standards during the working life of any project and the early restoration of sites, once operation has permanently ceased.

## ***Environmental Assessment***

26. Where a proposed renewable energy development is likely to have significant effects on the environment, the Town and Country Planning Environmental Assessment (Scotland) Regulations 1988 require the potential effects to be systematically evaluated in a formal Environmental Assessment. Planning authorities and others should consider at an early stage whether environmental assessment (EA) should be undertaken. In particular, it should be noted that the EA Regulations have now been amended to cover wind power developments (see SOEnD Circular 26/1994). This is discussed in paragraphs 44 - 49 below. Further advice on the application of environmental assessment to specific technologies is given in the associated PAN 45 : Renewable Energy Technologies.

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### *Locational Considerations*

#### ***Constraints on renewable energy developments***

27. In certain areas renewable energy developments may be inconsistent with other priorities such as the conservation of the natural and built heritage and greenbelts.

- **The siting of renewable energy developments should be reconciled with the protection of important environmental assets and other interests.**

#### ***Conservation of the Natural Heritage***

28. While recognising the importance of renewable energy development for the global environment, the Government is also firmly committed to the protection of Scotland's own environment. In the more fragile and sensitive areas where landscape and nature conservation has international or national status, protection is achieved through a number of designations, which seek to sustain the character and diversity of Scotland's countryside including its wildlife habitats. Individual designations provide protection for different purposes. Proposals for renewable energy developments will therefore have differing potential effects depending on the purpose of the designation as well as the type and scale of the project proposed. But, in general, sites for renewable energy developments are less likely to be acceptable in designated areas than in non-designated areas.

#### ***International Designations.***

29. Proposals likely to affect significantly those areas classified or proposed for classification under the EC Directive on the Conservation of Wild Birds (Special Protection Areas, SPAs) or under the EC Directive on Flora, Fauna and Habitats (Special Areas of Conservation, SACs) are covered by the Conservation (Natural Habitats, etc) Regulations 1994. As a matter of policy, the Government considers that similar treatment should be afforded to sites designated under the Ramsar Convention 1975 relating to Wetland Sites of International Importance.

Accordingly within these areas :

- Renewable energy developments will only be allowed in the most exceptional circumstances, and these are only likely to arise where it can be demonstrated conclusively that :
- the development will not adversely affect the habitats or species being safeguarded, or,
- there is an overriding national interest in allowing developments to take place, and no reasonable alternative.

An environmental assessment will normally be required.

#### ***National Designations***

30. Within national areas of landscape and nature conservation interest, Government policy seeks to protect, wherever possible, the environmental assets represented by the designations. While renewable energy developments are not prohibited, development proposals must be reconciled with conservation interests. Accordingly, the Government believes that particular care should be

taken in assessing all development proposals located in or affecting such areas; and that the criteria for allowing developments to proceed are only likely to be met in exceptional circumstances. Protection is further afforded through the consultation and notification procedures involving Scottish Natural Heritage and the Secretary of State.

31. Environmental designations of national importance include all National Scenic Areas (NSAs), National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs) not classed as SPA or SACs, Environmentally Sensitive Areas (ESAs), Natural Heritage Areas (NHAs) and Regional Parks.

Accordingly, within these areas :

- **Renewable energy developments should only be permitted where :**
  - **it can be demonstrated that the underlying objectives and overall integrity of the designated area will remain largely unaffected; or**
  - **any adverse effects on the environmental qualities for which the site has been designated are outweighed significantly by the national benefits that could accrue from the development.**

32. Consideration of all proposals in such areas should also normally include an evaluation, based on information supplied by the developer, covering :

- reasonable consideration of alternative sites; and
- the potential impact of the development on the national and local economy.

33. It is for the developer to explain any special circumstances that may justify an exception to the Government's normal policies to protect the best of Scotland's nationally important natural heritage. The precise nature of the evaluation is a matter of judgement to be decided between the developer and the planning authority in the light of individual circumstances. The information in support of the evaluation should be proportionate both to the importance of the particular designation and to the nature and scale of the development proposed. An environmental assessment will normally be required.

## ***Conservation of the Built Heritage***

34. The Government is committed to the preservation of important features of the nation's built heritage for the benefit of future generations. Policy should be based on the following principle :

- **Regard must be had to the statutory obligations on developers undertaking works likely to affect a scheduled monument, listed building and / or conservation area and their settings.**
- The effects of development on features of the built heritage should be minimised and wherever possible avoided. Where works involve the demolition of a building in a conservation area or a listed building, listed building consent will be required. Proposals affecting a scheduled monument under the Ancient Monuments and Archaeological Areas Act 1979 require the prior written consent of the Secretary of State.

35. Works may damage or destroy structures and remains of archaeological interest, hitherto unrecorded or not afforded the protection of scheduled monument status under the Ancient Monuments and Archaeological Areas Act 1979. In cases where unscheduled monuments are likely to be affected, and to take account of the possibility of unrecognised archaeology, the guidance contained in NPPG 5 "Archaeology and Planning" and the advice in the related PAN 42 should be followed. The British Archaeologists and Developers Liaison Group (BADLG) "Code of Practice" is also available.

36. The importance and value of historic gardens and designed landscapes to the built heritage is

now recognised. As well as being of interest in their own right, they may provide the setting for listed buildings and/or contribute to the character and significance of conservation areas. Developments likely to affect such areas are subject to consultation with Historic Scotland and Scottish Natural Heritage. Therefore :

- **Consideration should be given to the likely impact of developments on historic gardens or designed landscapes and their settings.**

## ***Green Belts***

37. The purposes of green belts and Government policy is set out in SDD Circular 24/1985. The Secretary of State attaches great importance to the need to preserve and enhance green belts and the need to establish confidence in their permanence. Renewable energy developments are likely to be incompatible with green belt objectives, with the possible exceptions of small scale hydro projects and landfill gas from existing sites.

## ***Agricultural Land***

38. The Government's policy as set out in SDD Circular 18/1987 is that, when considering the allocation of land for development and in deciding any application for planning permission affecting agricultural land, the agricultural implications must be considered together with the environmental, cultural and socio-economic aspects. Policy should be based on the following principle :

- **Prime quality land should be protected against permanent development or irreversible damage.**

## ***Other Areas***

39. Outwith areas safeguarded by national and international designations, planning authorities may wish to identify, with appropriate justification in their development plans, other environmentally significant areas. These areas may be important locally and, although the degree of outright protection they will require will not normally be as high as that given to national or international designations, potential developments which fall within them will need to be given careful consideration. This is particularly true in relation to the visual impact of wind turbines (discussed at paragraphs 44 - 49 and in PAN 45).

## ***Tourism and Recreation***

40. Given the Government's overall policies for the countryside generally, it will be important that renewable energy developments do not harm countryside interests to an unacceptable extent. This applies whether or not a particular area of the countryside enjoys special protection. In many areas of Scotland tourism and recreation are activities that support local economies, which to varying degrees depend on the quality of the environment, in particular the landscape. Where this is the case, the likely impact of any renewable energy proposals on such other local activity will be a relevant consideration.

## ***Proximity to Settlements***

41. Proximity of renewable energy developments to nearby housing, towns or villages may, in some circumstances, create particular local difficulties. Provided the potential disturbance and impacts can be mitigated satisfactorily, this need not automatically prevent development. In such circumstances, it will be important that the detailed proposals, including access arrangements, take into full account the implications of people living nearby. Development plans can also assist by setting out the criteria to be adopted in reducing the impacts to a satisfactory level.

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### *Additional Policy Guidelines For Individual Technologies*

42. The following paragraphs provide additional guidance on the main technologies which planning authorities in Scotland should consider when preparing development plans and considering planning applications. The individual technologies are discussed in more detail in the associated PAN 45.

43. There is a difference in the extent to which planning and environmental considerations will affect the potential of individual technologies, depending on how the associated energy resource is distributed and harnessed. Two broad technological categories can be identified : ***distributed*** and ***centralised***. ***Distributed technologies*** (wind and hydro) capture locally-available energy on-site and are more likely to be constrained by local environmental considerations. ***Centralised technologies*** (waste combustion, sewage gas, landfill gas, farm wastes and energy crops) rely upon the collection or concentration of pre-existing material at a central point. There is therefore greater choice about where that site should be. Consequently, while subject to normal planning considerations, they are less likely to be constrained by environmental considerations.

### ***Wind***

44. It may be particularly difficult for the Scottish landscape to accommodate wind turbines in significant numbers without detriment to natural heritage and tourism interests. To ensure careful control of such developments, the Secretary of State therefore expects environmental assessments to be undertaken wherever the possibility of such adverse impacts arises, whether within or outwith designated areas. SOEnD Circular 26/1994 and PAN 45 set out the associated indicative thresholds. As discussed in paragraph 84, to ensure careful monitoring, notification arrangements have also been introduced.

45. **Visual Impact** : Turbine siting will always be a balance between maximising energy capture and minimising visual impact. Wind turbines are tall, usually located on high open land and likely to be highly visible. They may be placed individually or in groups, and the desirable pattern of development will clearly be affected by the number of turbines as well as by land form and landscape features. However, they should generally be sited in sympathy with existing landscape features, and with the contours, grain and form of the land. The visual impact on the wider landscape should be considered carefully, although the impact, in part, will diminish with distance.

46. **Noise** : Good design of turbines and allowing for sufficient distance between the turbines and noise-sensitive properties should ensure that no nuisance arises from noise. While British Standard BS4142 may be appropriate as a means of determining potential or actual perceived noise nuisance, the combined effect of turbines should be determined by reference to the particular character or sensitivity of the area. This should be assessed by reference to the nature and character of neighbouring or nearby developments.

47. **Interference** : The characteristics of wind turbines raise specific considerations related to airfield flight paths and military aircraft flying areas, telecommunications (including television reception) , "shadow flicker" and "driver distraction". However, these are predictable and siting can be designed to avoid them.

48. **Ecology** : Although the impact on the local ecology should be minimal, the impact on bird populations at sites near roosting areas or, in particular, on migration pathways should be carefully assessed.

49. Accordingly, in addition to the general policy considerations in paragraphs 20 - 41, specific

policy for wind turbine developments should be based on the following principles :

**Wind turbines should only be permitted where they :**

- **would not be significantly detrimental to areas valued for their landscape character;**
- **would not create noise problems for residential and other noise-sensitive properties;**
- **would not interfere with aircraft activity;**
- **would not interfere with the flight paths of migratory birds;**
- **would not significantly increase the risk of "shadow flicker" or "driver distraction".**

**Hydro**

50. Hydro power is a well established technology in Scotland. However, new hydro developments are likely to be relatively small scale "run of river" schemes rather than large scale projects involving large storage reservoirs. This type of development can have a detrimental effect on some fisheries. It is important therefore to give proper regard to the safeguarding of fisheries and fish stocks. The characteristic impacts associated with this type of development relate primarily to effects on the river regime itself rather than on the surrounding area. In this respect the interests of nature conservation, protection of the water environment and fishing are inter-related.

51. **Nature conservation** : The works associated with the construction of the facility and its operation can have implications where the proposed site is within or likely to affect an area valued for its nature conservation interest. This could relate to movements of fauna within the river system, changes in airborne moisture, oxygenation of the river water, water flow and turbidity during the construction phase. Off-site activity could also result in interference with the drainage regime in nearby wetlands.

52. **Water environment** : The river purification authorities (RPAs) are under a duty to promote the cleanliness of the controlled waters in their areas and to conserve, so far as practicable, their areas' water resources. Consultation with the RPAs should, therefore, be undertaken for all proposed hydro developments, including small-scale projects not already subject to the statutory consultation arrangements for the construction of hydro electric power stations exceeding 1MW capacity under the Electricity Act 1989. The potential effect on water quality of construction works should be borne in mind : under the Control of Pollution Act 1974, it is an offence to cause or knowingly permit any matter to enter inland waters without authorisation if it will impede their proper flow in a manner likely to lead to pollution.

53. **Fisheries** : Many of the implications associated with areas valued for their nature conservation interest will also apply to fishery interests where the economic benefits of tourism can also be a significant factor. Care is required with the protection of all species of fish, particularly with migratory species such as salmon and sea-trout. Consultation with the local District Salmon Fishery Board (DSFB) should be undertaken immediately a hydro scheme is proposed and throughout the planning process. The possible provision of fish passes and means of excluding fish from turbines does not always provide adequate safeguards. The local DSFB should be consulted on fish passes and exclusion devices in their area as requirements are generally site specific. Further advice on fish passes and screens can also be obtained from SOAFD or the Fisheries Committee (see PAN 45).

54. Accordingly, in addition to the general policy considerations in Paras 20 - 41, specific policy for hydro developments should be based on the following principles :

**Hydro schemes should only be permitted where :**

- **they would not be significantly detrimental to areas valued for their nature conservation interest;**

- they can be reconciled with fisheries interests and the development shall avoid, so far as possible, causing injury to fisheries or to the stock of fish in any waters;
- they would not have a detrimental effect on the regime of the river, including water quality.

### ***Energy crops and Forestry Waste Combustion***

55. The characteristics of the plant associated with these technologies are sufficiently similar to allow policy to be based on the same considerations. The significant matters to be considered are visual impact, noise, traffic generation and pollution control.

56. **Visual impact** : There should be no justification for applying standards different to those that normally apply to applications for most types of industrial development. However, in appropriate circumstances, proposals using energy crops and forestry and farm wastes may be considered appropriate uses in the countryside. A site will normally require a significant amount of space for storage of raw material. The solid residue storage / disposal should not represent a major storage problem. Careful consideration should be given to chimney stack design and position to minimise the visual impact.

57. **Noise** : The potential sources of noise and vibration can be divided into three groups :

- noise from vehicular movements;
- noise generated by the plant and equipment;
- noise arising from material handling operations.

The potential for nuisance from the noise generated depends upon the process characteristics and the proximity and location of nearby, noise-sensitive properties.

58. **Traffic generation** : Consideration needs to be given to traffic generation during both the construction and operational phases. The number of traffic movements will depend on the plant size and acceptability will depend on the nature of the local road network and the land use characteristics of the area. In general it will be desirable to locate the development as close as practicable to its sources of supply to reduce transport distances.

59. **Pollution control** : Depending on the scale of the activities, processes involving incineration require either an Integrated Pollution Control authorisation from HM Industrial Pollution Inspectorate or a Local Authority Air Pollution Control authorisation and a waste management licence from the district or islands council.

60. Accordingly, in addition to the general policy considerations in Paras 20 - 41, specific policy for energy crops and forestry, waste combustion and farm wastes should be based on the following :

- **Proposals for energy crops and forestry and farm wastes should normally be acceptable in rural areas.**
- **Proposals for waste combustion should normally be acceptable in urban areas.**

### ***Anaerobic Digestion Landfill Gas***

61. The characteristics of the plant associated with these technologies are sufficiently similar to allow policy to be based on the same considerations. The significant matters to be considered are visual impact, noise, traffic generation and pollution control.

62. Power plant using sewage gas digesters are likely to be installed at existing sewage treatment works where the additional tanks and buildings are considered acceptable. Energy recovery of landfill gas will only take place at or close to an existing landfill site that is generating sufficient gas

for exploitation.

63. Accordingly, in addition to the general policy considerations in Paras 20 - 41, specific policy for sewage gas and landfill gas projects should be based on the following :

- **Since uncontrolled emissions of gases from sewage works and landfill sites are damaging to the environment, and controlled flaring of gas is wasteful of the energy potential, the control of emission through energy recovery schemes should be preferred wherever practicable.**
- **Since gas from sewage and landfill sites is potentially hazardous, safety should be of paramount concern in the establishment and operation of gas control and energy recovery plant.**

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### Action Required

64. The development of renewable energy resources should be within a framework, provided by national policy and development plans, which seeks to accommodate the objectives of both economic development and conservation. In particular, development plans should aim to safeguard sensitive environmental features while guiding developers to locations where renewable energy developments are likely to be permitted, subject to full environmental and amenity standards being met. Additionally, they should set out clearly the criteria against which renewable energy developments will be assessed.

65. To emphasise the importance of the development plan system, section 18A of the 1972 Act, as inserted by section 58 of the Planning and Compensation Act 1991, redefines the legal status of development plans. In effect, the provision enhances the relevance in law of development plans for reaching decisions on all planning applications and appeals. Accordingly, it will be increasingly important that plans incorporate relevant and robust policies for types of renewable energy developments likely to arise within the plan area. In the light of the following guidance, development plans should therefore be reviewed in order to provide the framework for informed and sensitive decision making in relation to individual applications.

### Structure Plans

66. Structure plans should include policies which express the regional council's strategy for renewable energy developments. This strategy should make positive provision for renewable energy developments in so far as this is compatible with other environmental interests. Each authority should consider the contribution their area can make towards providing for renewable energy developments. In so doing, they may wish to note the report "An assessment of the Potential Renewables Energy Resources in Scotland" (Dec 1994).

67. Table 1 below, based on the report, gives an indication of the realistic longer term potential for renewable energy developments in Scotland. It also reflects current best knowledge on resource potential for the seven preferred technology bands, and likely environmental constraints.

68. These figures are the basis of the ETSU assessment that 1500 MW could realistically be provided in Scotland from the various technologies, of which 1000 MW could be introduced into the ScottishPower franchise area. It is also estimated that around 300 MW could be accommodated, mainly in the area south of a line from Dundee to Pitlochry, before major investment is required to reinforce the electricity transmission system in order to achieve the possible balance of 1200 MW. This overall figure of 1500 MW should not be taken as a target, nor should it be confused with the Government's UK figure of 1500 MW quoted in Energy paper 62.

<b>Region</b>	<b>Wind</b>	<b>Hydro</b>	<b>Energy Crops &amp; Forestry</b>	<b>Waste Combustion</b>	<b>Sewage Gas</b>	<b>Landfill Gas</b>	<b>Farm Wastes</b>	<b>Total</b>
BORDERS	126.6	3.1	23				3.3	156
CENTRAL	5.6	6.7	10		0.2		0.6	23.1
DUMFRIES & GALLOWAY	123	6.1	21				12.9	163
FIFE	15.8		12				1.3	29.1
GRAMPIAN	61.3	2.6	9.2	0.2			5.5	78.8

HIGHLAND	76.1	57.1	4.9				0.8	138.9
LOTHIAN	83.1		9.7	18.3		5.3	13.6	130
STRATHCLYDE	522	16.6	39	41.6		5	8	632.2
TAYSIDE	92.5	13.7	37.8	4.5			0.5	149
ISLANDS								0
TOTAL	1106	105.8	166.6	64.6	0.2	10.3	47.4	1501

Based on the ETSU report Table E.8: "Least cost combination of technologies on a district basis to build up the practicable resource"

69. These results constitute one view of the potential, but varying the assumptions may lead to differences in the detailed results. The results should therefore be taken as a broad guide rather than specific targets for individual technologies or individual regions. Nor should this indication of overall capacity be taken as implying that those Regions considered to have small potential do not have opportunities that would be economically viable and environmentally acceptable.

70. All regions have the potential in principle to host wind and hydro developments - individual wind generators or run of the river turbines - and to secure energy from biomass, including the growing of energy crops. For wind energy developments greatest potential would appear to exist in Strathclyde, Borders and Dumfries and Galloway, with less but still significant potential in Lothian. Tayside, Highland and Grampian also have potential if the electricity transmission system is reinforced north of Dundee and Pitlochry.

71. Strathclyde and Lothian also have the potential to host waste incineration and landfill gas developments. There may, in addition, be scope for incineration projects, albeit at a smaller scale, in association with other urbanised regions including Tayside and Grampian.

72. Opportunities for commercial scale renewable energy projects based on farm wastes may be feasible in Lothian and Dumfries and Galloway, which appear to have the greatest potential, and to a lesser degree in Strathclyde and Grampian.

73. Where potential is identified by regional councils, structure plans should guide such development opportunities. The reasoned justification for renewable energy policies in plans should indicate how these policies relate to other structure plan policies. Policies for renewable energy developments should take into full account the nationally and internationally important environmental factors set out in paragraphs 20 - 41, in addition to the specific considerations in paragraphs 42 - 63 and any other factors of local significance that may be included.

74. Policies should give due weight to environmental impacts and set out the criteria to be adopted in reducing the impacts to a satisfactory level, thus enabling renewable energy developments to take place. Where environmental factors suggest that there should be no renewable energy developments, the policy should identify the nationally important resources or other local environmentally significant areas to be safeguarded against inappropriate development.

75. Accordingly Structure Plan policies for renewable energy developments should :-

- **define, in relation to other strategic priorities, search areas for renewable energy developments : this action should be focused on those Regions identified above;**
- **safeguard areas considered suitable for renewable energy projects from developments which would inhibit their subsequent exploitation and which could be accommodated elsewhere;**
- **define areas where, because of environmental and other considerations, renewable energy developments are likely to prove difficult to reconcile with other policy considerations;**

- **set the framework for local plans including priorities for development control.**

## ***Local Plans***

76. Where planning authorities consider that the policies and proposals for renewable energy developments need detailed expression or application to specific sites in the light of renewable development opportunities in a particular area, local plans should be reviewed and policies incorporated dealing with appropriate aspects of renewable energy provision. This should include the relationship to national and structure plan policies, as well as other policies and proposals within the local plan. In appropriate circumstances they should identify sites for future developments and safeguarding, but, where this is not feasible, more broadly defined areas of search should be set out to provide a guide for the industry on the broad locations where development might be permitted.

77. Authorities may also wish to include policies in their plans on the siting of ancillary operations. These can have a significant local environmental impact, for example in terms of visual intrusion, noise, etc. However, there may be operational reasons why the ancillary activities should take place close to the site of the renewable energy project itself.

78. Local plans should, where appropriate, include policies which :-

- **indicate sites, or define areas of search, where the planning authority would favour renewable energy developments;**
- **safeguard renewable energy resource sites from development which would inhibit their subsequent exploitation;**
- **indicate sites or areas where, for environmental reasons, proposals for renewable energy development would only be considered acceptable in exceptional circumstances and then only after the relevant issues have been resolved satisfactorily;**
- **guide developers on the mitigation of significant environmental effects;**
- **safeguard existing renewable energy facilities from developments which would inhibit their efficient operation;**
- **provide an explicit development control framework.**

79. Local plans should provide the framework for development control by specifying the criteria against which individual applications for planning permission will be determined. These would include the :-

- quality and nature of the renewable energy resource;
- contribution to the national requirement for renewable energy;
- impact of power generation and transmission and the implications for nature conservation, built heritage, landscape and residential areas;
- other environmental impacts;
- decommissioning requirements, the use of relevant and enforceable conditions and section 50 agreements.

The locational requirements and potential environmental impacts of specific renewable energy developments are described in the associated PAN 45.

## ***Development Control***

80. Development control provides a positive instrument by which the conflicting claims on land for renewable energy development, agriculture, amenity and other uses can be examined and

reconciled to the fullest possible extent. In seeking to reconcile renewable energy with other development, as well as environmental and conservation interests, the following factors are particularly relevant when assessing individual applications for planning permission and will often be reflected in conditions attached to planning permissions :-

- the type of renewable energy project proposed;
- visual impact and fit in the landscape;
- transmission;
- potential pollution of the air, land and water;
- effect on statutorily designated sites and areas;
- traffic generation.

Planning authorities will need to make a judgement on each application taking into account development plan policies, the applicant's case for the proposed development, the environmental implications of carrying it out and other material considerations including, where appropriate, the factors covered in paragraph 79.

81. Where there are planning objections to a particular proposal, the applicant will need to show how these can be overcome or how any detrimental environmental effects can be mitigated, where appropriate advancing any material arguments which might outweigh objections to the proposed development. As noted in paragraph 19, the awarding of a contract under the SRO confers no special status in planning terms. Therefore, there may be occasions where the local environmental impacts cannot be mitigated satisfactorily and refusal would be appropriate.

82. SDD circular 18/1986 gives advice about imposing conditions on planning permissions. SDD circular 22/1984 covers the use of section 50 agreements. Renewable energy projects may raise novel or unusual considerations for development control. In an uncertain and new context it may therefore be difficult to impose conditions which can fully resolve the environmental and planning issues which may arise on a particular project. In such circumstances, where local authorities are satisfied that a condition cannot be imposed, they may seek to enter into a planning agreement with a developer.

83. In view of the substantial expenditure likely to be involved, the possibility of granting temporary permission may be unreasonable. However, as many renewable energy developments will be in the early stages of technical development, and some may prove unsuccessful, a condition could be imposed to the effect that if, for example, a wind turbine is not in operation producing electricity for a specified period it would be deemed to have ceased to be needed, and should be dismantled, with the land restored, unless the planning authority agree otherwise.

## ***Notification Requirements***

84. Where a planning authority proposes to grant planning permission for a renewable energy project that raises specific issues of national importance (eg proposals which would affect SSSIs), they may be required to notify the Secretary of State who may call in the application for his own determination. Because of the potential visual impact of wind turbines on the Scottish landscape, the Secretary of State wishes to be notified of any such proposals which a planning authority is minded to approve. The Notification Direction has been amended accordingly. The circumstances requiring such notification are described in SDD Circular 29/1988 as amended by SOEnD Circular 25/1994 and are summarised in Annex B to this NPPG.

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### Notes

85. Enquiries about the content of this guideline should be addressed to Alan Denham (031 244 4226). Further copies and a list of current NPPGs and planning circulars may be obtained from Room 6/84, New St Andrews House Edinburgh EH1 3TG (031 244 4082). Advice on good practice is available in Planning Advice Notes from Room 5/87, New St Andrews House (031 244 4219).

86. Enquiries related to the Scottish Renewables Obligation (SRO) should be addressed to Mrs Morag King, Scottish Office Industry Department (SOID), Energy Division, Room 6/43, New St Andrew's House Edinburgh EH1 3TG (031 244 4675).



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### ***Annex A : European Community References to Renewable Energy***

1. The four main references are :-

(a) Council Regulation 2618/80 of 7 October 1980 which institutes a specific Community Regional Development measure contributing to improving security of energy supply in certain community regions by improved use of new techniques for hydro-electric power and alternative energy sources;

(b) Council Regulation 218/84 of 18 January 1984 amending Regulation 2618/80;

(c) Council Resolution of 26 November 1986 (86/C316/01) on a community orientation to develop new and renewable energy sources;

(d) Council Recommendation of 9 June 1988 (88/349/EEC) on developing the exploitation of renewable energy sources in the Community.

2. A Communication from the EC to the European Council on "Energy and the Environment" of 8 February 1990 gave further clear encouragement to energy sources which will diversify the Community's energy supplies and contribute to limiting emissions into the atmosphere from fossil fuel combustion. The current Promotion of Energy Technology for Europe Programme (THERMIE) is partly geared to encouraging solar, energy crops (eg energy forestry or other energy crops), geothermal, wind and hydro-electric renewable energy sources.

3. In addition, the Commission recently published a Communication to the Council, A Community Strategy to limit Carbon Dioxide Emissions and Improve Energy Efficiency, 14 October 1991 : SEC (91)1774, proposing that the Community's renewable energy programmes be strengthened and introducing a combined carbon/energy tax which would encourage switching to renewable sources of energy by exempting them from it. This communication is currently under discussion.



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### ***Annex B :***

### ***Notification of Planning Applications to the Secretary of State***

1. The Notification of Applications Direction at Annex A of SDD Circular 29/1988, as amended by the 1994 Amendment Direction enclosed with SOEnD Circular 25/1994, sets out the circumstances in which planning applications should be notified to the Secretary of State. Applications for renewable energy developments do not in themselves automatically raise notifiable issues, but in the following circumstances should be notified once the planning authority has decided to grant planning permission :-

1.1 developments involving use of 10 hectares or more of prime quality agricultural land (class 1, 2 or 3.1 Land Capability Classification, Macaulay Land Use Research Institute) where the development would be contrary to a local plan which has been adopted or no local plan has been adopted or approved, or where an officer of DAFS (now SOAFD) has been consulted and advised against granting permission, or no such officer has been consulted.

1.2 developments affecting a Site of Special Scientific Interest which has been notified to the planning authority by the NCC (now SNH) as a site of national or international importance and where SNH had advised against granting of planning permission.

1.3 developments affecting sites reserved for high technology activities, large scale industry or petrochemical development or in the vicinity of a major hazard.

1.4 developments affecting trunk roads and special roads where the Secretary of State has advised against granting of planning permission or has recommended conditions which the planning authority do not propose to attach to the planning permission.

1.5 developments which the planning authority considers to be significant departures to approved structure plans and those local plans approved by the Secretary of State.

1.6 developments consisting of one or more wind generators.

2. SDD Circular 20/1980 sets out the arrangements for controlling developments in National Scenic Areas. Amongst the categories of development in which the Secretary of State can intervene are :-

2.1 all non-residential developments of more than 0.5 hectares where the Countryside Commission for Scotland (now SNH) have advised against granting of planning permission and the planning authority propose to give planning permission against SNH advice.