

# 11. Energy and telecommunications



## 11.1 Energy

The availability of energy is of critical importance to facilitate new development. The NDP 2007-2013 sets out the strategic context and programmes for the provision of energy and related infrastructure. In addition, the Government has also issued a number of policy documents and guidelines in relation to energy in the following publications:

- *National Climate Change Strategy 2007-2012* (2007)
- *Energy White Paper – Delivering a sustainable Energy future for Ireland* (2007)
- *Maximising Ireland's Energy Efficiency – National Energy Efficiency Action Plan 2009-2020* (2009)

Sligo County Council aims to facilitate, promote and achieve a balance between responding to central Government policy on renewable energy and enabling energy resources within the plan area to be harnessed in a manner which is in accordance with the principles of proper planning and sustainable development.

### Strategic energy policies

It is the policy of Sligo County Council to:

- SP-EN-1** Support the sustainable infrastructural development of energy generation and transmission networks, to ensure the security of energy supply and provide for future needs, subject to compliance with the requirements of the Habitats Directive.
- SP-EN-2** Promote energy conservation and efficiency measures and facilitate innovative building design that promotes energy efficiency in accordance with national policy and guidelines.
- SP-EN-3** Encourage the development of sustainable, energy-efficient buildings throughout the plan area.

## Strategic energy objectives

It is an objective of Sligo County Council to:

- SO-EN-1** Preserve significant landscape views from the visual intrusion of large-scale energy infrastructure.
- SO-EN-2** Seek the extension of the natural gas supply infrastructure to Sligo.
- SO-EN-3** Implement Government policy on limiting emissions of greenhouse gasses and encouraging the development of renewable energy sources in an appropriate and sustainable manner.

### 11.1.1 Electricity

The transmission network forms the backbone of power supply. Its development is critical to ensuring that County Sligo has the necessary infrastructure to attract business and accommodate economic growth and the future development of the local economy.

In 2002 and 2003, planning permission was granted to the ESB for major upgrading of the electricity transmission infrastructure in Sligo and neighbouring counties. For County Sligo, this included the construction of a 220 kV line running from the south-east of the County to a new substation at Ballysumaghan, along with the construction of five other new 110 kV lines to serve the north and east of the County. Construction commenced in April 2004 and the substation at Ballysumaghan has now been completed. This will improve quality of supply and provide security and adequate capacity of supply to service future industrial, commercial and domestic development.

## Policies for the provision of electricity

It is the policy of Sligo County Council to:

- P-EL-1** Facilitate the sustainable provision of new high-voltage electricity infrastructure in County Sligo.
- P-EL-2** Support the maintenance and upgrading of electricity infrastructure throughout the County.

### 11.1.2 Gas

While Sligo is not served by gas infrastructure at present, Bord Gáis has identified Sligo City as a 'Phase 3: town being considered for connection to the distribution network' and part of north Sligo towards Donegal has been identified as an 'Area location for consideration'. The extension of the natural gas pipeline to Sligo would be a significant boost to the economic growth of the region.

### 11.1.3 Renewable sources of energy

The concept of energy efficiency promotes more sustainable forms of energy production, including the greater exploitation of wind, hydro, solar and tidal power sources.

The target for Ireland in the European Renewable Energy Directive (2009/28/EC) is a 16% share of renewable energy in the final consumption by 2020. The share of electricity from renewable energy has more than doubled between 1990 and 2008 – from 4.9% to 11.9%, an increase of 7 percentage points over eighteen years. Most of this increase took place in the seven years after 2000. Nationally, growth in renewable energy use in 2005-2008 was up 16%.

The government policy in relation to the reduction of greenhouse gas emissions is set out in the National Climate Change Strategy 2007-2012. Sligo County Council recognises the contribution that alternative energy sources can make towards limiting pollution associated with the generation of electricity (emissions of carbon dioxide, sulphur dioxide, nitrogen oxides and smoke). It is the policy of the Council to promote the generation of energy from renewable and alternative sources in an environmentally acceptable manner.

### 11.1.4 Wind energy

Sligo's mountainous landscape and exposed location on the western seaboard combine to create good conditions for the generation of wind power. The wind farm capacity available in the County in 2010 is 51.1 MW, produced by four companies with installations at King's Mountain, Carran Hill, Geevagh and Lackan.

The wind energy potential available in the County is indicated in Sustainable Energy Ireland's *Wind Atlas for Ireland*.



Wind farm at Kingsmountain, West Sligo

It is a challenge for the Council to achieve a reasonable balance between: (a) responding to government policy on renewable energy; and (b) enabling the wind energy resources of the County to be harnessed in an environmentally sustainable manner.

Pressure for future wind farm development is likely to be concentrated in upland and coastal areas and in offshore locations, particularly where energy providers can access the national electricity grid.

The development of wind energy has potential benefits for the County as a whole, including employment creation, assisting rural development by providing an additional source of income for farm families and local communities, and reducing dependence on oil and other imported fuels.

The siting of wind turbines requires careful consideration. While turbines located on elevated sites tend to have a higher output, they also have a significant visual impact. Visual obtrusiveness depends on the location, layout, size, number, design and colour of the turbines, as well as the subjective perceptions of the viewer.

The *Wind Energy Guidelines* published by the DoEHLG in June 2006 outline the main criteria to be used in assessing development proposals. These criteria include:

- environmental impact – effects on landscape, natural and archaeological heritage;
- seeking visual harmony and balance – choice of turbines, towers, colour and siting;

- keeping secondary structures to a minimum – buried on-site cabling, minimal fencing, transformers placed inside towers where possible;
- keeping access roads to a minimum – using established roads where possible and following natural contours if roads are necessary;
- managing the building site – removing waste, avoiding erosion, replanting the land.

In assessing proposals for wind farms, the Council will require detailed information to Environmental Impact Assessment (EIA) standard. Assessment in accordance with government guidelines will have regard to visual impact (including the scarring effect of access roads), noise, electro-magnetic interference, ecological impact, safety (including aircraft safety and navigation) and land use implications.

Proposals will generally be discouraged in or close to pNHAs, cSACs, SPAs, designated Sensitive Rural Landscapes, Visually Vulnerable Areas, Scenic Routes, protected views, Zones of Archaeological Potential.

### 11.1.5. Hydroelectric power

Turbines driven by falling water have the potential to generate hydroelectric power. County Sligo has the resources to generate 2.5 MW of power per annum from small hydroelectric plants. At present, the County has several small-scale hydroelectric power stations, at least one of which holds a Power Purchase Agreement with the ESB until December 2010.

In assessing development proposals for hydroelectric power stations, the main considerations are:

- integration of the facility into the riverscape;
- non-interference with fish and wildlife;
- safe and sensitive undergrounding of power lines;
- the effect on the landscape and ecology.

The Council will also consider the document *Guidelines on the Planning, Design, Construction & Operation of Small-Scale Hydro-Electric Schemes and Fisheries* (Engineering Division & Central and Regional Fisheries Board, DCENR 2007).

### 11.1.6 Wave energy

Ireland has made significant advances in the research and development of wave-generated energy and County Sligo's extensive coastline has potential for this form of development. While proposals below the High Water Mark are outside the Councils jurisdiction, on-shore ancillary plant, buildings and power lines will require assessment and all on-shore impacts must be mitigated to the greatest extent possible.

Most of the coastal zone, particularly in the west of the County, is relatively flat, providing long open views. Development proposals should therefore avoid locations that are immediately adjacent to coastal settlements or significant tourist attractions. Detailed visual, ecological, archaeological heritage and social impact of such proposals will be assessed in determining their acceptability.

### 11.1.7 Bioenergy

Bioenergy is energy derived from biofuels, such as biodiesel, biogas or biomass. Biofuels are considered to be "CO<sub>2</sub>-neutral", not adding to the carbon dioxide level in the atmosphere. Technologies used to produce electricity from biofuels vary widely. The Planning Authority will consider each proposal on its merits, subject to proper planning and environmental consideration.

The Council will encourage the production of trees for biomass and other initiatives for the generation of renewable energy. Burning of such biomass has a neutral greenhouse gas effect and the important advantage of providing the opportunity for farmers to diversify into new crops. Power generation from this source does not suffer from the lack of consistency in supply that affects wind power.

### 11.1.8 Solar energy

In recent years, the use of solar energy in Ireland, in addition to ground-source heating systems, has provided sustainable energy for buildings and reduced the demand for electricity supply from the national grid. Such initiatives will be encouraged in the future.

#### Renewable energy policies

It is the policy of Sligo County Council to:

- P-REN-1** Support and promote a move away from fossil-fuel energy production through investment in renewable energy.
- P-REN-2** Encourage and facilitate the sustainable production of energy from renewable sources, energy conversion and capture in forms such as wind power, hydro-power, wave-generated energy, biomass, solar technology and energy-efficient building design/servicing. All such development proposals will be assessed for their potential impact on Natura 2000 sites, designated Sensitive Rural Landscapes, Visually Vulnerable Areas, Scenic Routes and scenic views, as well as in accordance with strict location, siting and design criteria, subject to compliance with the requirements of the Habitats Directive.
- P-REN-3** Support existing and new enterprises who wish to use renewable energy to serve their own needs by on-site energy production, subject to normal planning criteria.

#### Renewable energy objectives

It is an objective of Sligo County Council to:

- O-REN-1** Identify and map, during the lifetime of this Plan (subject to resources), areas within the county where there is significant wind energy potential and where energy development would be acceptable in principle, subject to visual, landscape, heritage, environmental and amenity considerations.
- O-REN-2** Facilitate small-scale renewable energy developments within urban areas, where appropriate, and support small community-based generation projects in rural areas, subject to visual, landscape, heritage, environmental and amenity considerations.
- O-REN-3** Implement the provisions of the integrated Regional Energy Strategy that will be prepared by the Border Regional Authority in accordance with the Regional Planning Guidelines 2010.

## 11.2 Telecommunications

Intensive digitisation of telecommunications offers a competitive advantage in attracting economic development and investment. It also offers more flexible working arrangements, enabling people to work and communicate internationally from their homes. The movement away from labour-intensive manufacturing to the skilled services sector of the economy has major policy implications for the provision of infrastructure, particularly the provision of telecommunications. Census 2006 data indicated that the Border Region was joint lowest (with the Midlands) for broadband coverage (12%) in Ireland. Of particular significance to the Border Region is Project Kelvin, which will significantly boost broadband availability and capacity in the Region.

Sligo County Council acknowledges the importance of telecommunications, particularly broadband telecommunications, in terms of capitalising on investment opportunities.

## 11.2.1 Broadband infrastructure

The following initiatives are supported by Sligo County Council, which is targeting full coverage of broadband connectivity throughout the County:

- Ireland's Broadband Strategy (2003): this report outlines the government's action plan regarding the deployment of broadband throughout the country. The government's Broadband Action Plan (2003) will focus on towns with population in excess of 1,500 people that are currently without broadband. These are to be linked to high-speed Internet access as part of a 140 million euro spending programme by government in partnership with local authorities. Outside towns of this population size, the Group Broadband Scheme will help provide high-speed connectivity.
- Group Broadband Scheme: provides funding for the provision of broadband services to small, underserved rural or remote areas and particularly for community organisations.
- Metropolitan Area Network (MAN): a network of ducting and fibre-optic cable laid within a metropolitan area, predominantly aimed at large business and reselling operators to provide services including telecommunications, Internet access, television, telematics and CCTV. The optical fibre infrastructure allows for very high throughput rates between the service provider and the customer.
- School Broadband Access Programme: in a joint approach, the telecommunications sector and the government has provided funding for the roll-out of broadband to all primary and secondary schools in the country.
- The National Broadband Scheme (NBS) is being run by the Department of Communications Energy and Natural Resources. It aims to provide broadband services to consumers and businesses located within those parts of the country which have no form of broadband available at the moment. The contract to implement and operate the National Broadband Scheme (NBS) was entered into with "3" (a Hutchison Whampoa company trading as 3) on 23 December 2008. Under the contract, 3 will be required to provide services to all premises in the NBS area who seek a service. In order to facilitate competition in the area, 3 will also be required to provide wholesale access to any other authorised operator who wishes to serve premises in the NBS area.

## 11.2.2 Mobile telephony infrastructure

With regard to mobile phone network development, the physical infrastructure and structures needed to provide this service must be developed in a strategic way that minimises the impact on the environment and takes public opinion into account. Good siting and design need to become an integral part of the planning system, respecting not only environmentally sensitive areas, but also the wider context.

Antennae, their support structures, power lines, equipment containers and access roads will be assessed with respect to safety, siting and design criteria and the mitigation of intrusive impacts. In all circumstances, the sensitivity to the context of the proposed development requires consideration. Site conditions, safety aspects, technical constraints, landscape features and capacity requirements affect the design of such installations.

Options to reduce the negative visual effect of such structures include:

- mast and/or site sharing;
- installation on existing buildings and structures;
- camouflaging/disguising techniques to integrate telecommunications equipment into the design, scale, colour and/or texture of existing buildings and landscape;
- using small-scale equipment.

Proposals in the following areas will be permitted only on the basis of absolute necessity, visual mitigation, mast or tower design and site restoration following obsolescence:

- cSACs, SPAs, pNHAs
- designated Sensitive Landscapes, Visually Vulnerable Areas and Scenic Routes.

It is the policy of the Council to achieve a balance between facilitating the provision of telecommunications services in the interests of social and economic progress and sustaining residential amenities, environmental quality and public health.

Proposals for telecommunication masts and infrastructure shall comply with the DoEHLG's *Telecommunications Antennae and Support Structures Guidelines* (1996) and any revisions.

The Council will use the sequential approach in terms of factors to be taken into account in the control of telecommunications structures in built-up areas, as outlined in the Guidelines. The following series of "tests" will be applied to development proposals for telecommunications infrastructure on sites in or near residential areas, education facilities, hospitals, child care facilities or nursing homes:

- is an existing utilities site available, such as an electricity substation?
- has the mast/antenna been designed and adapted for the specific location?
- are possible sites in commercial or retail areas available?
- is an existing tall building or structure available?

Proposals shall be accompanied by a statement and supporting evidence of compliance with the International Commission on Non-Ionising Radiation Protection (ICNIRP) Guidelines or the equivalent European pre-standard 500166-2 conditioned in licensing arrangements with the DCMNR. Any permission granted will be conditioned with respect to time limitation, replacement of obsolescent technology with more environmentally acceptable designs, bonding arrangements and site restoration on cessation of service.

In the vicinity of larger towns, developers should endeavour to locate in industrial estates.

In areas outside of towns/villages, masts should be placed in tree groupings or forestry plantations where such features exist, provided that the antennae are clear of obstruction and so long as ancillary facilities, such as access roads, do not impact negatively on the landscape. The developer will be required to retain a cordon of trees around the site, which will not be felled during the lifetime of the mast, with the written agreement of the owner.

In unforested areas, softening of the visual impact should be achieved through judicious choice of colour scheme and through the planting of shrubs, trees etc. as a screen and backdrop.

In general, proximity to Protected Structures, archaeological sites and other monuments should be avoided. Any proposals affecting Protected Structures or within ACAs shall have due regard to the guidance provided in the DoEHLG's Architectural Heritage Protection Guidelines for Planning Authorities 2005.

Where existing support structures are not unduly obtrusive, the Council will encourage co-location of antennae on existing support structures, masts and tall buildings. Applicants must satisfy the Council that they have made every reasonable effort to share with other operators and to minimize adverse visual impact. Where it is not possible to share a support structure, the developer should share the site or an adjacent site so that masts and antennae may be clustered.

Development proposals for telecommunication structures must have regard for aircraft safety and navigation.



Mast on the Ox Mountains

## Telecommunications policies

It is the policy of Sligo County Council to:

- P-TEL-1** Protect areas of significant landscape importance from the visual intrusion of large-scale telecommunications infrastructure.
- P-TEL-2** Ensure that telecommunications infrastructure is adequately screened, integrated and/or landscaped, so as to minimise any adverse visual impacts on the environment.
- P-TEL-3** Facilitate open access to high-speed and high-capacity broadband digital networks to support the development of a smart economy within the County.

## Telecommunications objectives

It is an objective of Sligo County Council to:

- O-TEL-1** Support a programme of broadband connectivity throughout the County by liaising with telecommunication service providers.
- O-TEL-2** Support the National Broadband Scheme in its bid for funding for development of broadband in the county.
- O-TEL-3** Support and facilitate take-up of the Group Broadband Scheme and the School Broadband Access Programme.
- O-TEL-4** Support, by planning condition where appropriate, the development of underground broadband infrastructure for road, commercial and residential schemes, as set out in the government's recommendations.
- O-TEL-5** Have regard to Government guidelines on telecommunications infrastructure, including Telecommunications Antennae and Support Structures – Guidelines for Planning Authorities 1996 (DoEHLG) and any subsequent revisions.
- O-TEL-6** Implement the provisions of the Draft Border Regional Planning Guidelines 2010 by:
  - a. supporting the repair and upgrading of the existing telephone network including the provision of improved broadband enabled individual line services to all subscribers (Draft RPG policy *INFO12*);
  - b. promoting the provision of open access ducting in all new developments (Draft RPG policy *INFO13*);
  - c. supporting the network-enabling of all new residential development and the provision of open access co-located communication service connection and access facilities (Draft RPG policy *INFO14*);
  - d. providing open access ducting in all public infrastructural projects (Draft RPG policy *INFO15*);
  - e. supporting the extension of access to the MANs to small business and residential users through lower connection and use costs (Draft RPG policy *INFO17*).