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Wind Energy in Ireland



Business Support on Your Doorstep

Country Facts:

Basic Information

Official Name: Republic of Ireland

Date of Establishment: 29 December 1937

EU Accession: 1 January 1973

Time Zone: GMT

Capital City: Dublin (1.084 m 2009)

Neighbouring Countries:
Northern Ireland

Area: 68,890 km²

Population: 4,670,976 (July 2011)

Territorial Division (26 regions):
Carlow, Cavan, Clare, Cork, Donegal, Dublin, Galway, Kerry, Kildare, Kilkenny, Laois, Leitrim, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Sligo, Tipperary, Waterford, Westmeath, Wexford, Wicklow

Ethnic Groups: Irish: 87.4%, Other White: 7.5%, Asian: 1.3%, Black: 1.1%, Mixed: 1.1%, Unspecified: 1.6%

Economic Data

Currency: Euro since 1 January 2002

Inflation: -1.6% (2010)

GDP (\$bn): 204.144 (2010)

GDP (Purchasing Power Parity): 173.614 (2010)

Real GDP Growth 2011: 2.3%

Real GDP Growth 2010: -0.3%

Structure of GDP: Agriculture 2%, Industry 29%, Services 70%



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Economic Data Cont...

Key Industries: Pharmaceuticals, Chemicals, Computer Hardware and Software, Food products, Beverages and Brewing, and Medical Devices

Political Data

State Organisation: Republic

Political System:

Parliamentary Democracy

President: Mary McAleese

Prime Minister: Enda Kenny

Membership of International Organisations: EU, UN, UNESCO, OECD, IMF, UNIDO, WHO, WTO, INTERPOL, EMU, CE, IAEA, ICC

What is Wind Energy?

Wind is actually a form of solar energy caused by the uneven heating of the atmosphere by the sun, the irregularities of the earth's surface, and rotation of the earth. Patterns of wind flow are then determined by terrain, bodies of water and vegetative cover. Modern wind farms, both on-shore and off-shore, harvest this motion energy to generate electricity.

Why Ireland?

Ireland has one of the best wind resources in the world making this a key area for further development. As a result of its geographical positioning, terrain and climate, Ireland is ideally situated to be a major producer of wind energy.

Additionally, Ireland offers a number of **investment incentives**: The Government has announced plans for a Renewable Energy Feed in Tariff (REFIT) of €140 per MWh of electricity produced from off-shore wind. For additional information go to http://www.seai.ie/Renewables/Bioenergy/Renewable_Energy_Feed_In_Tariff/

Growth of Wind Energy

In recent years more wind energy capacity has been installed than any other form of generation including gas, nuclear or hydro in Ireland. In fact, Ireland's wind energy capacity has grown three-fold since 2005. In 2009, 39% of all new generation added was wind. Wind energy's contribution to Ireland's electricity supply continues to rise as record capacity is added. Wind farm connection rates have been maintained above 200MW for the second year with 237MW connecting in 2009, a slight increase on 2008. 237MW is a new record for additions of wind capacity in Ireland. With the continued mainstreaming of wind energy as an energy source, 12% of Ireland's electricity needs are met by wind energy.

Advantages of Wind Energy

- **Wind Energy is a naturally renewable resource** compared against fossil fuels such as coal, oil, gas and peat are fossil fuels which take thousands of years to form and create pollution and climate change.
- **Increasing use of wind to produce energy leads to the increased security it can deliver to Ireland's fuel supply.** Currently, about 90% of Ireland's energy currently comes from imports, making us the least self-sufficient country in the industrialised world
- **Wind energy is one of the cheapest of the renewable energy technologies.** The energy source itself is free and high capital and maintenance costs are rapidly decreasing as wind energy becomes more widely used. A new study by IWEA (Irish Wind Energy Association) in conjunction with Wind Skillnet, has shown that wind energy in Ireland will provide savings of up to €100 million for Irish power

consumers in the next ten years and found that an 11.5% reduction in wholesale electricity prices will be achieved through delivering 45% of the overall generation mix from wind by 2020.

Current Capabilities

There are 110 on-shore and 1 offshore wind energy projects in operation in the Republic of Ireland with a total installed capacity of 1,379 Megawatts. According to IWEA calculations, in 2010, wind energy accounted for the electricity needs of over 753,000 domestic households in Ireland.

Job Opportunities

There are many opportunities for employment with in the industry:

- **Construction** provides the majority of the jobs opportunities available from the wind energy sector. Offshore wind development requires significant construction inputs in order to develop the large scale wind farm projects planned. It is estimated that there will be in excess of 7,250 jobs that can be supported by the construction element of wind energy projects.
- In terms of staff on site, wind farms require **qualified electrical and mechanical engineers** to oversee the operation of the turbines and the internal electrical system, as well as **computational analysts** to assess the projected generation output systems in terms of the constant updating of notification of generation ability to the grid operator.
- There are also the **administrative jobs** created for the companies involved in the industry.

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New Developments in the EU

Ireland is actively involved in developments on an offshore grid with regard to offshore wind, wave and tidal energy potential and is involved in a number of initiatives and developments in the EU context.

• North Seas Offshore Grid Initiative

The North Sea Offshore Grid, officially the North Seas Countries Offshore Grid Initiative (NSCOGI), is a collaboration between EU member-states and Norway to create an integrated offshore energy grid which links wind farms and other renewable energy sources across the northern seas of Europe.

offshore grids.

• ISLES project

The Irish Scottish Links on Energy Study (ISLES) is a joint EU Interreg funded feasibility study (ISLES) is a joint EU Interreg funded feasibility project between the Department of Communications, Energy and Natural Resources (Ireland), the Scottish Government and the Department of Enterprise, Trade and Investment (Northern Ireland.) ISLES is assessing the feasibility of creating an integrated offshore transmission network, much of it through a new subsea electricity grid, using abundant renewable energy sources (wind, wave, tidal) off the coast of western Scotland and the Irish Sea.

• Off-shore Grid Connection Study

The TSO, EirGrid, is involved in carrying out a preliminary study on how significant offshore wind resources off the east coast of Ireland could be integrated into the Irish transmission system, if developed. Early indications from the study suggest that there are positive synergies between on and offshore systems.

• British Irish Council

The British Irish Council was established under the Good Friday Agreement and has been given legal footing in Ireland by the 1999 British Irish Agreement Act. Membership of the British-Irish Council comprises representatives of the Irish and British Governments and of the devolved administrations in Northern Ireland, Scotland and Wales, together with representatives of the Isle of Man, Guernsey and Jersey. Within the last 12 months, the British Irish Council commenced an energy work programme which is looking at the potential to develop grid interconnections between the member administrations and potentially between the member administrations and continental Europe.

• Offshore export potential

The Sustainable Energy Authority of Ireland is examining Ireland's potential to develop offshore renewable generation for export. The Authority intends to commission an economic study in this area.

Useful Links and Resources:

• Irish Wind Energy Association (IWEA)

IWEA is the national association for the wind industry in Ireland. IWEA is committed to education and awareness building to promote the use of a sustainable energy system in Ireland and thus contribute to a cleaner

environment with the benefits of non fossil fuels.

<http://www.iwea.com/>

• The Sustainable Energy Authority of Ireland (SEAI)

The Sustainable Energy Authority of Ireland (SEAI), formerly the Irish Energy Centre was set up by the government in 2002 as Ireland's national energy authority.

<http://www.seai.ie/>

• Energy Ireland

Energy Ireland is Ireland's largest energy forum. It consists of a number of events throughout the year, including the main Energy Ireland conference which takes place each June in Dublin. Energy Ireland also publishes a yearbook which has become the main desktop resource for the Irish energy sector.

<http://www.energyireland.ie/>

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