

IRELAND



Country at a glance

- Population: 4.47 million (2010) [1]
- Total area: 70,273 sq. km [2]
- Carbon emissions per capita: 8.65 metric tons (2010) [3]
- Energy consumption per capita: 37.47 MWh (2010) [4]
- Percentage of global carbon emissions: 0.13% (2010) [3]



Wind farms: major source of electricity for Ireland

As of 24 March 2012, Ireland has an installed capacity of 2,000 megawatts. Depending on weather conditions this is enough to supply over 1 million homes.

The rate of growth of wind power in Ireland is amongst the highest in the world.

Ballywater Windfarm from Morris Castle Wexford by Terence Wiki. Permission; see; en.wikipedia.org/wiki/File:Ballywater_Windfarm_from_MorrisCastle_Wexford_MCY2007.JPG

Table 1 Breakdown of energy use, electricity and heat generation, 2010

| | Primary energy sourced within country | | Energy imports minus exports | Primary energy used within the country ^(a) | | | Electricity Generation ^(b) | | Heat Generation ^(c) | | |
|-----------------------------------|---------------------------------------|--------------|------------------------------|---|---------------|----------------|---------------------------------------|---------------|--------------------------------|----------|----------|
| | unit | ktoe | | % | ktoe | GWh | % | GWh | % | GWh | % |
| Coal, including brown coal & peat | | 1,040 | 52 | 1,038 | 2,085 | 24,253 | 14 | 6,384 | 22 | 0 | 0 |
| Oil fuels | | 0 | 0 | 7,534 | 6,910 | 80,367 | 48 | 605 | 2 | 0 | 0 |
| Natural gas | | 316 | 16 | 4,385 | 4,695 | 54,598 | 33 | 17,714 | 62 | 0 | 0 |
| Nuclear | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hydroelectric | | 52 | 3 | 0 | 52 | 599 | 0 | 599 | 2 | 0 | 0 |
| Biofuels and waste | | 330 | 17 | 41 | 367 | 4,272 | 3 | 317 | 1 | 0 | 0 |
| Solar photovoltaics | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Solar thermal | | 6 | 0 | 0 | 6 | 64 | 0 | 0 | 0 | 0 | 0 |
| Tide, wave and ocean | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind | | 242 | 12 | 0 | 242 | 2,816 | 2 | 2,815 | 10 | 0 | 0 |
| Geothermal | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Electricity (imported) | | 0 | 0 | 40 | 40 | 470 | 0 | 0 | 0 | 0 | 0 |
| Sub total Renewables | | 629 | 32 | 41 | 666 | 7,751 | 5 | 3,731 | 13 | 0 | 0 |
| Totals | | 1,985 | 100 | 13,038 | 14,397 | 167,438 | 100 | 28,434 | 100 | 0 | 0 |

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Notes:

Standard conversion used is 1 ktoe = 11.63 GWh

(a) Sum of energy sourced within country, energy imports minus exports, international marine and aviation bunkers and stock change flows.

(b) Includes all electricity generation, including any exported.

(c) Does not include electrical heating. Includes waste heat recovery from electricity generation plants.

Table 2 Breakdown of transport fuel use, 2010

| | Total transport mix | % | Domestic aviation | Road | % | Rail | Pipeline transport | Domestic navigation | Non-specified (transport) |
|----------------------|---------------------|------------|-------------------|--------------|------------|-----------|--------------------|---------------------|---------------------------|
| (in ktoe) | | | | | | | | | |
| Oil products | 3,819 | 98 | 28 | 3,730 | 98 | 41 | 0 | 20 | 0 |
| Natural gas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Biofuels and waste | 91 | 2 | 0 | 91 | 2 | 0 | 0 | 0 | 0 |
| Electricity | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Sub total Renewables | 91 | 2 | 0 | 91 | 2 | 0 | 0 | 0 | 0 |
| Total | 3,914 | 100 | 28 | 3,821 | 100 | 41 | 0 | 20 | 4 |

Source: Based on World Energy Statistics and Balances Database 2012, "World Energy Balances." © OECD/IEA, 2012.

Stand on climate change

Ireland ratified the United Nations Framework Convention on Climate Change in April 1994 and the Kyoto Protocol in May 2002. It became a Party to the Protocol when it entered into force in February 2005 [5].

National climate change programmes

Since the Fourth National Communication was published, the policy context for the principal greenhouse gas emitting sectors has continued to evolve. A new National Climate Change Strategy was published in 2007, and this has been backed up inter alia by major new strategy documents in the areas of sustainable transport and energy efficiency. New policies and measures have been introduced, some of which were envisaged by the 2007 National Climate Change Strategy, while others derive from measures agreed at European Union level.

A significant contribution to the achievement of the national greenhouse gas emission reduction target for the purposes of the Kyoto Protocol will be made by firms in the energy and industry sectors that are covered by the EU Emissions Trading Scheme (EU-ETS). Collectively these firms account for some 33% of total national greenhouse gas emissions. The EU-ETS was brought into operation on 1 January 2005 with a three-year pilot phase from 2005 to 2007. A substantive five-year trading period began in January 2008 to coincide with the compliance period under the Kyoto Protocol. The EU-ETS is the largest 'cap and trade' scheme in the world covering 27 EU States and over 10,000 industrial installations. Effective participation by over 100 Irish installations in the EU-ETS has been a policy priority since the scheme commenced in 2005 [5].

- Energy Efficiency Achievements
 - Total final consumption of energy in the economy would have been 8.4% higher in 2007 were it not for energy efficiency improvements made since 1995
 - The energy savings due to energy efficiency improvements recorded in 2007 were two and a half times greater than the contribution of renewable energy
 - Energy efficiency for industry improved by 16% between 1995 and 2007
 - Energy efficiency for the residential sector improved by 15% in the same period
 - Despite the fact that transport energy use grew faster than the economy between 1995 and 2007, energy efficiency in the sector improved slightly by 1.4%
- Grid 2025
 - To deliver a reliable electricity supply by to 2025
 - To double the capacity of the national transmission grid by 2025, by upgrading the existing network and by constructing new transmission infrastructure

Transport Sector:

- Smarter Travel Policy
 - Considerable shift to public transport and other sustainable forms of travel

- Public transport congestion and other sustainable forms of travel will be improved for all citizens, irrespective of location and mobility needs
- National Cycle Policy Framework (NCPF) aims to create a new culture of cycling in Ireland by 2020 with 10% of all trips to work being made by bike within the next twelve years and implying an increment of 125,000 people commuting to work by bike
- The Government has already introduced appropriate fiscal policies by ensuring the motor tax systems from July 2008 are entirely based on CO₂ emissions with rates considerably varying between models on the basis of their emissions. This has had a positive impact, with initial indications suggesting that average emissions of new cars are at least 8% less than before the changes.

Forestry Sector

- Afforestation Programme
 - Government to provide grants to landowners, covering the cost of afforestation and an annual premium to land owners to compensate for the foregone income from conventional farming to forestry

Waste Sector

- Diversion of Biodegradable Waste from Landfill
 - Gas production in landfill occurs predominantly over a 21-year period and is greater in well managed landfill sites where the potential for aerobic decomposition is more limited. Ireland is obliged under the EU Landfill Directive to ensure that no more than 35% of 1995 levels of biodegradable municipal waste are landfilled by 2016 [5].

Ministries involved in climate change/energy policy making [6]:

| Ministries involved | Web links |
|---|--|
| Department of Agriculture, Food and the Marine | www.agriculture.gov.ie/ |
| Department of Communications, Energy and Natural Resources | www.dcenr.gov.ie/ |
| Department of Environment, Community and Local Government | www.viron.ie/en/ |
| Environmental Protection Agency | www.epa.ie |
| Sustainable Energy Authority of Ireland | www.seai.ie/Home/ |
| COFORD - the National Council for Forest Research and Development | www.coford.ie/ |

Education institutes involved in climate change/energy policy making [6]:

| Education Institutes involved | Web links |
|---|--|
| The Irish Academy of Engineering | www.iae.ie/ |
| The Royal Irish Academy | www.ria.ie/committees/iccc/index.html |
| The Irish Climate Analysis and Research Unit (ICARUS) | icarus.nuim.ie/ |

References

- [1] "World Population Prospects: The 2010 Revision." Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat.
- [2] "CIA - The World Factbook." Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/th.html>. [Accessed: 24-Jun-2013].
- [3] CO₂ Emissions from Fuel Combustion Statistics database 2012, "Indicators for CO₂ emissions." © OECD/IEA, 2012.
- [4] World Energy Statistics and Balances database 2012, "World Energy Balances." © OECD/IEA, 2012.
- [5] Environment, Heritage and Local Government, "Ireland's Fifth National Communication under the United Nations Framework Convention on Climate Change". Available at: http://unfccc.int/resource/docs/natc/irl_nc5_resubmit.pdf
- [6] "Government Departments, Websites" Available at: <http://www.gov.ie/en/tag/departments/> [Accessed: 24-Jun-2013]



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