

Country profile – Ireland

The section 'Key climate- and energy-related data' was prepared by the EEA. It includes the latest data available as of 31 July 2014

The section 'Climate and energy policy framework' was prepared by eclareon and Ecologic Institute, Germany. It includes the latest information on national policies and measures available as of 31 May 2014.

For methodological details and other country profiles, see www.eea.europa.eu/themes/climate/country-profiles.

Key climate- and energy-related data — Ireland

Key data on GHG emissions	2005	2011	2012	2013	EU 2012
Total GHG emissions (UNFCCC, Kyoto Protocol) (Mt CO ₂ -eq.)	69.7	57.7	58.5	56.6	4 544.2
GHG per capita (t CO ₂ -eq./cap.)	16.9	12.6	12.8	12.3	9.0
GHG per GDP (g CO ₂ -eq./PPS in EUR)	517	391	388	374	350
Share of GHG emissions in total EU-28 emissions (%)	1.3 %	1.3 %	1.3 %	1.3 %	100 %
EU ETS verified emissions (Mt CO ₂ -eq.)	22.4	15.8	16.9	15.7	1 848.6
Share of EU ETS emissions in total emissions (%)	32 %	27 %	29 %	28 %	41 %
ETS emissions vs allowances (free, auctioned, sold) (%)	+ 16.7 %	- 27.5 %	- 22.3 %	- 1.7 %	- 14.1 %
Share of CERs & ERUs in surrendered allowances (%)	0.0 %	12.4 %	15.0 %	n.a.	26.4 %
Non-ETS (ESD) emissions, adjusted to 2013–2020 scope (Mt CO ₂ -eq.)	46.9	41.6	41.3	40.9	2 566.6
Key data on renewable energy	2005	2010	2011	2012	EU 2012
Share of renewable energy in gross FEC (%)			6.6 %	7.2 %	14.1 %
() = including all biofuels consumed in transport	(2.8 %)	(5.6 %)			
Share of renewable energy for electricity (%)	7.2 %	14.9 %	17.6 %	19.6 %	23.5 %
Share of renewable energy for heating and cooling (%)	3.5 %	4.3 %	4.9 %	5.1 %	15.6 %
Share of renewable energy for transport (%)			3.9 %	4.1 %	5.1 %
() = including all biofuels consumed (%)	(0.0 %)	(2.4 %)			
Key data on energy consumption	2005	2010	2011	2012	EU 2012
Primary energy consumption (Mtoe)	14.7	14.9	13.7	13.6	1 584.8
Primary energy consumption per capita (Mtoe/cap.)	3.6	3.3	3.0	3.0	3.1
Final energy consumption (Mtoe)	12.6	11.9	11.0	10.7	1 104.5
Final energy consumption per capita (Mtoe/cap.)	3.1	2.6	2.4	2.3	2.2
Efficiency of conventional thermal electricity and heat production (%)	43.2 %	47.0 %	48.0 %	46.7 %	50.0 %
Energy consumption per dwelling by end use	2005	2009	2010	2011	EU 2011
Total energy consumption per dwelling (toe/dwelling)	2.12	1.87	1.75	1.70	1.42
Space heating and cooling (toe/dwelling)	1.48	1.27	1.15	1.13	0.96
Water heating (toe/dwelling)	0.34	0.30	0.28	0.27	0.18
Cooking (toe/dwelling)	0.08	0.08	0.08	0.08	0.08
Electricity (lighting, appliances) (toe/dwelling)	0.23	0.23	0.24	0.22	0.20

Progress towards GHG targets (under the Effort Sharing Decision, i.e. non-ETS emissions)

2013 ESD target (% vs base year)	- 3.7 %	2020 ESD target (% vs base year)	- 20.0 %
2013 ESD emissions (% vs base year)	- 11.6 %	2020 ESD projections WEM (% vs base year)	- 3.1 %
		2020 ESD projections WAM (% vs base year)	- 10.0 %

Based on approximated emission estimates for 2013, emissions covered by the Effort Sharing Decision (ESD) (i.e. in the sectors which are not covered by the EU ETS) are expected to be below the annual ESD target in 2013. However, projections indicate that 2020 ESD emissions are expected to be above the 2020 ESD target, despite the implementation of measures planned until 2013.

Progress towards renewable energy targets

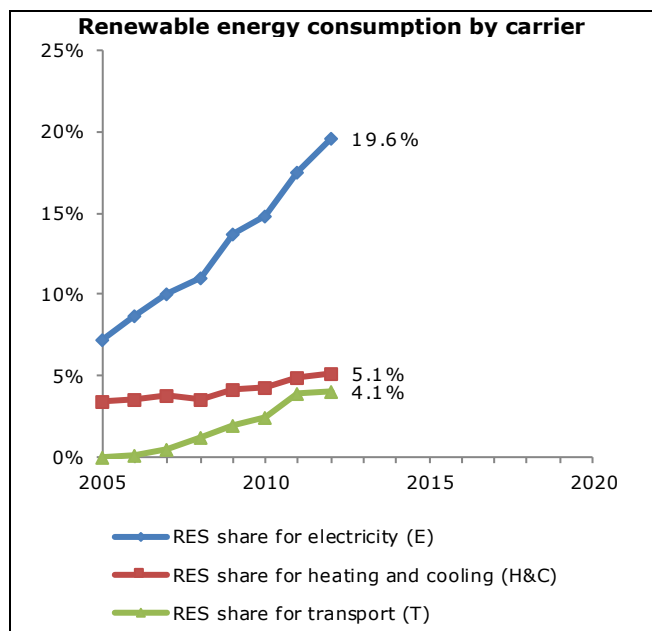
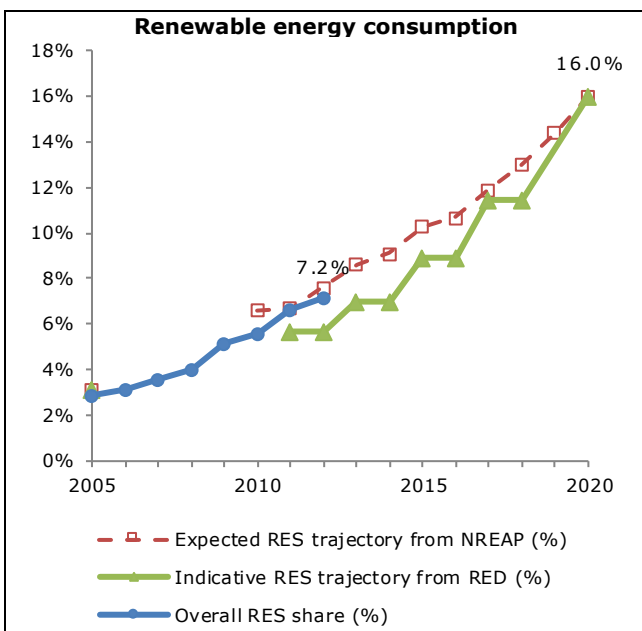
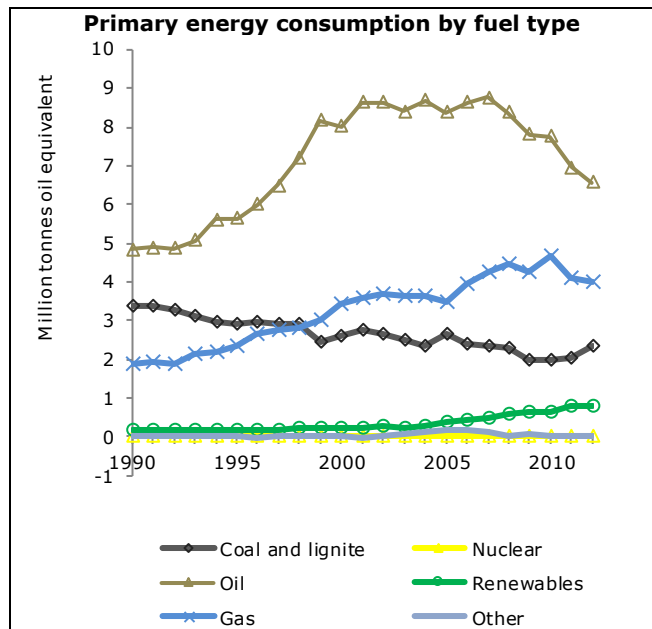
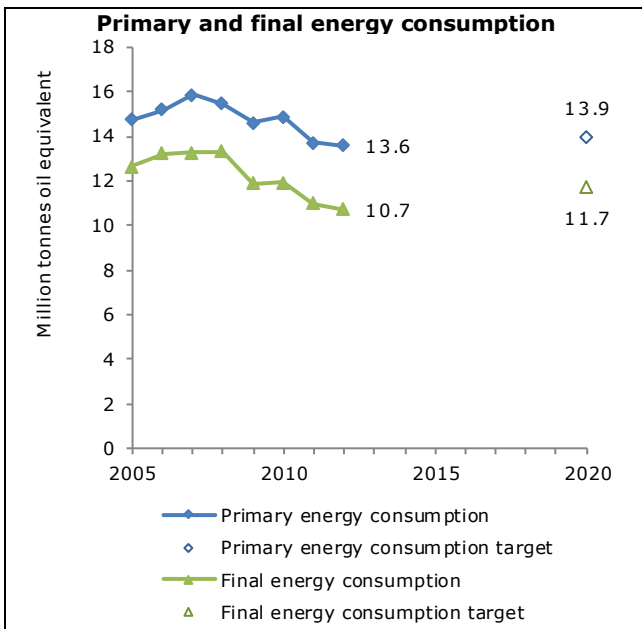
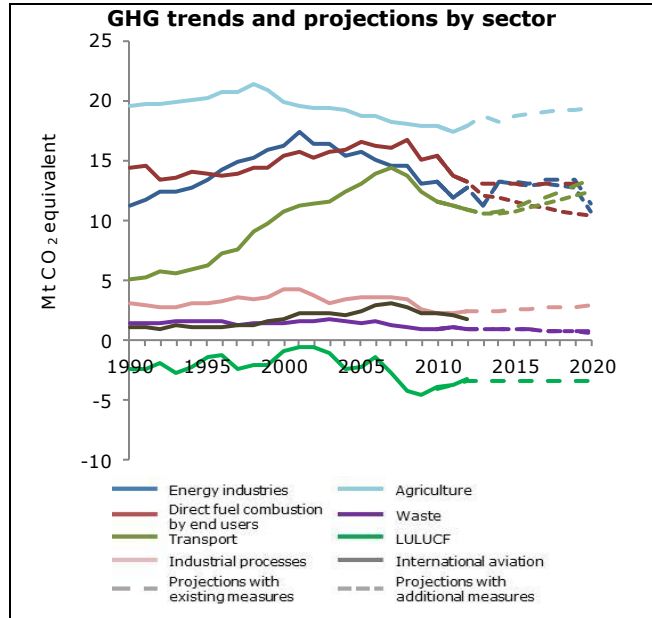
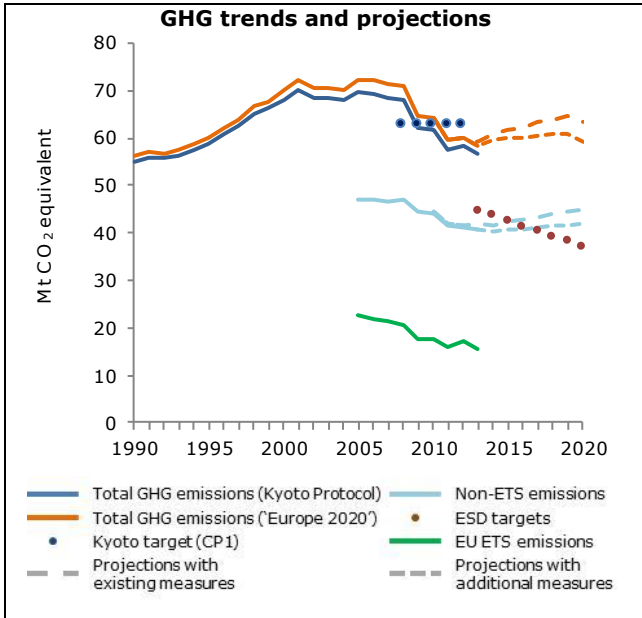
2012 RES share in gross final energy consumption (%)	7.2 %	2011–2012 indicative share from RES Directive (%)	5.7 %
2020 RES target	16.0 %	2012 expected share from NREAP (%)	7.6 %

The average share of renewable sources in gross final energy consumption for 2011–2012 was 6.9% (762 ktoe), which is higher than the indicative RED target for 2011–2012 (5.7%). At the same time, the share of renewables in 2012 (7.2 %) is lower than the expected 2012 NREAP target (7.6 %). Over the period 2005–2012 the observed average annual growth rate in renewable energy consumption amounted to 11.7%. In order to reach its 2020 NREAP target, Ireland needs an average annual growth rate of 14.2% in the run-up to 2020. In absolute terms, this is equivalent to 3.5 times its cumulative effort so far.

Progress towards energy efficiency targets

Primary energy consumption:		Final energy consumption:	
2005–2012 average annual change	-1.2 %	2005–2012 average annual change	-2.3 %
2012–2020 average annual change to target	0.3 %	2012–2020 average annual change to target	1.1 %

During the period 2005–2012, primary and final energy consumption decreased at a faster pace than is necessary to meet the 2020 targets. Alongside the effects of the economic crisis, energy efficiency improvements also contributed to this result, for example in the buildings and industry sectors. Because of the recent increase in coal consumption, facilitated by low international prices, and the low efficiency of oil-based power plants, reducing losses in transformation efficiency for electricity production could contribute to further reducing or stabilising primary energy consumption, as the economy picks up again.



Climate and energy policy framework

Challenges and opportunities

Ireland's energy dependence remains a key challenge for the country. Mainly due to high oil and natural gas imports and a lack of sufficient domestic sources, for example renewable energy, Ireland is among the five most vulnerable countries in the EU in terms of security of supply (European Commission, 2013). It spends around EUR 6.5 billion per year on imported fossil fuels. Increasing the share of renewable energy sources (RES) is a great opportunity to reduce Ireland's energy dependence and fuel import expenses while at the same time reducing greenhouse gas (GHG) emissions. In the past 5 years, renewable energy has not only reduced carbon dioxide (CO₂) emissions by 12 million tonnes but also saved over EUR 1 billion in fossil fuel imports during this period (SEAI, 2014). Moreover, recent analyses highlight the importance of renewable energy to the Irish economy and the potential for green jobs, showing that the wind sector alone could create between 8 000 and 35 000 new jobs depending on the capacity additions, which range from 400 MW to 12 GW, respectively. In addition, improving the energy efficiency of the economy could reduce the need for energy imports, reduce GHG emissions and also support jobs, for example through investments in building insulation measures. The Better Energy Programme, for example, is expected to lead to 3 000 new jobs in addition to those it has already created (SEAI, 2011, 2013).

Climate and energy strategies

In April 2014, Ireland presented its new National Policy Position on Climate Action and Low-Carbon Development and the final general scheme of the Climate Action and Low-Carbon Development Bill. The two instruments focus on balancing environmental, social and economic challenges. The National Policy Position has the aim of bringing clarity and certainty to the national low-carbon transition objective for 2050 to facilitate planning and investment by Irish business. It should also attract potential new national and international investors. Furthermore, four key sectors (electricity generation, environment, transport and, above all, agriculture) have been identified as particularly important. The National Policy Position has set out different targets and aims, including the target of achieving an aggregate reduction in CO₂ emissions of at least 80 % (compared to 1990 levels) by 2050 for electricity generation, built environment and the transport sector (NPP Ireland, 2014).

Ireland's energy policy priorities are presented in the Government White Paper on energy of 2007, which will be replaced by a new green paper in 2014. The 2007 White Paper contains a number of guiding principles, policies and actions to be implemented in the energy sector by 2020, and is supplemented by further policy documents of the Department of Communications, Energy and Natural Resources that focus on energy efficiency and renewable energy in particular (UNFCCC, 2013).

Renewable energy

The main support mechanism for renewable electricity is the Renewable Energy Feed-in Tariff (REFIT), which is subdivided into three schemes (REFIT 1, 2 and 3). REFIT has replaced the Alternative Energy Requirement Programme, a tender scheme to support renewable electricity generation so as to provide certainty to renewable electricity generators. It is funded by the Public Service Obligation, which is paid for by all electricity consumers. Amendments to all schemes were made in 2013. The REFIT 1 and 2 schemes cover small wind (< 5 MW), large wind (> 5 MW), hydroelectricity and biomass/landfill gas. REFIT 3 was introduced in February 2012 as the first REFIT scheme dedicated solely to biomass technologies. It aims to support the generation of bioenergy from anaerobic digestion, biomass cogeneration and co-firing of biomass with peat (UNFCCC, 2013).

Renewables in heating and cooling are supported by grants to promote investment into renewable heat, tax regulations to encourage investments that increase the use of RES and building obligations that ensure that new buildings meet minimum standards for integrating RES. Homeowners can receive a EUR 800 grant for the installation of solar thermal installations under the Better Energy Homes scheme. A tax return of 100 % of the purchase value of certain energy-efficient equipment is given to Irish companies under the Accelerated Capital Allowance scheme (RES Legal).

Energy efficiency

Ireland does not have a long-term strategy outlining energy efficiency targets beyond 2020. Ireland has, however, introduced ambitious policies to increase energy efficiency and a National Energy Efficiency Fund for investments in energy efficiency.

Energy **taxation** is relatively high with the level of excise duties being above the EU average. In addition, there is a carbon tax with rates of EUR 20 per tonne of CO₂ since May 2014. There are excise duty exemptions for businesses holding a GHG emissions permit, and for oil and coal used for chemical reduction or in electrolytic or metallurgical processes. The Natural Gas Carbon Tax has been amended in 2013 to include solid fuels such as peat and coal. Reduced VAT rates of 13.5 % instead of the standard 21 % rate apply to natural gas, electricity, district heating, firewood and heating oil.

Ireland has introduced an **obligation scheme to energy suppliers** to meet its energy saving target under the Energy Efficiency Directive (according to Art. 7). The Energy Efficiency Obligation Scheme was introduced in early 2014. Energy suppliers receive Energy Efficiency Notices that analyse how their energy efficiency savings target can be met so as to avoid penalties. Originally, the scheme was initiated as a voluntary scheme.

There are no specific measures to support **combined heat and power**.

Regarding the **industry** sector, a number of programmes promote energy efficiency in businesses and networks are established for small and medium-sized enterprises to provide advice, mentoring and training, and to share best practices. The Energy in Business programme promotes structured energy management and supports energy efficiency efforts in all business sectors. The Energy Agreements Programme and the Large Industry Energy Network support larger industrial sites (UNFCCC, 2013).

In the **building sector**, the Building Regulations set minimum energy performance requirements for new buildings. Ultimately, the aim is to achieve a Nearly Zero Energy Building framework for dwellings by 2015. The Building Energy Rating scheme has been established to assess the energy performance of buildings. The Quality Housing for Sustainable Communities guidelines set out requirements for the design of energy-efficient housing developments. The Building Regulations also establish certain minimum energy performance requirements for existing buildings. In March

2014, Ireland published the 'Code of Practice for the Energy Efficient Retrofit of Dwellings' to further improve the quality standards in the retrofit of buildings (NSAI, 2014; UNFCCC, 2013). Financial support is provided through different programmes: the Better Energy Homes scheme offers grants for energy-efficient renovations, and the Better Energy Warmer Homes scheme finances energy efficiency improvements in the homes of elderly and vulnerable people.

Transport

Ireland promotes the purchasing of less carbon-intensive cars through a vehicle registration **tax** based on value and CO₂ emissions. Since its introduction in 2008, the average emissions of new cars have constantly decreased and new cars are approximately 23 % more energy efficient than the average new car before 2008 (UNFCCC, 2013). There is a vehicle ownership tax in place that is also based on CO₂ emissions in the case of passenger cars and weight in the case of lorries. Diesel taxes are above the EU average while petrol taxes are only around the EU average.

Ireland has established a quota system for **renewable energies** in the transport sector: the biofuel obligation from 2010 aims at increasing the share of biofuels from 4 % to 6 % from 1 January 2013 onwards. By 2020, the share of renewable energies used in the transport sector should increase to 10 %.

Ireland is working on the improvement of its public transport system, including **rail transport**. In order to improve the level, accessibility and quality of rail services, the Minister for Transport, Tourism & Sport aims to reorganise Irish Rail. In addition, investments in the public transport system included expanding the tram service in Dublin and improving the public bus system. Tax incentives for the purchase of bicycles for commuting as well as tax relief schemes for employers or employees choosing public transport are in place. Furthermore, Ireland has introduced measures such as the Dublin Bikes bicycle sharing scheme to promote the use of bicycles in Dublin, Cork, Galway and Limerick. A Vehicle Pilot Project for the introduction of a charging infrastructure for electric vehicles has recently been approved by the Irish Commission for Energy Regulation.

Fluorinated gases (F-gases)

Ireland's existing laws are mainly based on containment provisions. The country has, however, adopted new legislation that will come into force in 2015 and which will include the phasing down of hydrofluorocarbons, a service and maintenance ban using refrigerants with a high global warming potential, and an introduction of market bans on hydrofluorocarbons of certain products and equipment (UNFCCC, 2013).

Agriculture

In Ireland, approximately 65 % of the total land area is used for agriculture (UNFCCC, 2013). Given that the agricultural sector is the largest single contributor to GHG emissions, the recently published National Policy Position on Climate Action and Low-Carbon Development has highlighted this problem and emphasised that National Low-Carbon Roadmaps will be developed in an iterative process also in the agricultural sector. This should include an approach to carbon neutrality for agriculture, which does not compromise capacity for sustainable food production. Ensuring a coherent and cost-effective approach to the twin challenge of sustainable food production and climate change in the agricultural sector is noted as a particularly important issue for the development of climate policy in Ireland (NPP Ireland, 2014).

Waste

Ireland uses a number of regulatory and market-based instruments to achieve more sustainable waste management practices, including increases in the landfill levy, source-separated collection of biowaste, and the pre-treatment and restriction of particular waste streams to landfill. The National Waste Prevention Programme was introduced in 2004 to prevent waste generation in business, households, hospitals, retail, packaging and local authorities. In 2012, Ireland published its Waste Management Policy that aims to reduce Ireland's dependence on landfill for the treatment of municipal waste. Furthermore, the regulatory impact analysis on household waste collection has suggested strengthening the regulatory regime of the current waste collection market structure, for example by introducing separated waste collections. A review of the current system will be carried out in 2016 (EPA, 2014).

Land use, land-use change and forestry

About 10.5 % of Ireland's total land area is used for forestry. In addition to agriculture, the National Policy Position on Climate Action and Low-Carbon Development also addresses land use and forestry and an approach to carbon neutrality in these sectors. They shall equally be considered in the mentioned roadmapping process.

Ireland has adopted an afforestation programme that plays an important role in mitigating climate change, as a land-based sink for CO₂, and as a source of renewable raw materials for fuel and wood products (UNFCCC, 2013). The Afforestation Grant and Premium Scheme provides grants and annual premiums for new afforestation projects. The grants are available to cover the costs for planting the trees while annual forest premiums are available to compensate farmers and non-farmers for the loss of income if used for other activities (TEAGASC, 2014).

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