

IRELAND'S ENVIRONMENT SUSTAINABLE ENERGY

DID YOU KNOW?

- Over the five year period to 2011, average fuel and electricity use per home has fallen by almost one fifth
- Ireland imported 88% of its energy needs in 2011 leading to an import bill of €6 billion in 2011, with oil accounting for three quarters of that
- By 2050, wind energy has the potential to create 20,000 jobs and generate €15 billion for the Irish economy

Ireland's energy requirement over the past two decades has increased significantly due to growth in energy consumption for transport, electricity and space heating. In 2011 Ireland imported 88% of its energy needs, down from a peak of 90% in 2006. Oil is by far the dominant energy source but natural gas use has also been increasing.

Since 1990 renewable energy use has increased, but it still accounted for just 6.4% of the gross final energy used in 2011. Ireland's target under the EU Renewable Energy Directive is a 16% share of gross final energy by 2020. Ireland has abundant renewable energy resources including wind, water, tidal, and biomass. These sources offer sustainable alternatives to fossil fuels which can reduce our greenhouse gas emissions and our dependency on imported fuels.

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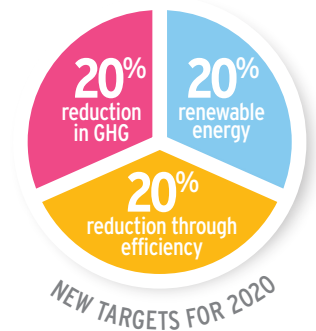


CLEAN & EFFICIENT ENERGY

Ireland is committed to a range of renewable energy and efficiency targets, many of which are being implemented as climate policy measures to reduce carbon emissions. At a European level, the '20/20/20' commitments agreed under the EU Climate Change and Energy Package set three new targets for 2020:

- > A minimum 20% reduction in GHG emissions based on 1990 levels
- > 20% of final energy consumption to be produced by renewable energy resources
- > 20% reduction in primary energy use compared with projected levels to be achieved by improving energy efficiency

Under the European Renewables Directive, the national 2020 target for Ireland is to source 16% of all energy consumed from renewable sources. In addition, Ireland must achieve a 10% share of renewable energy in transport consumption by 2020 (known as RES-T). **Ireland's National Renewable Energy Action Plan** details a pathway for Ireland to meet these binding commitments by setting national targets whereby renewable energy should comprise 12% of heat demand (known as RES-H) and 40% of electricity demand (known as RES-E). Large-scale development of renewable energy sources is envisaged over the next decade, particularly in the heat and transport sectors. The position in relation to these three targets in 2011 is as follows: RES-H was 5%, RES-T was 3.6% and RES-E was 17.6%.

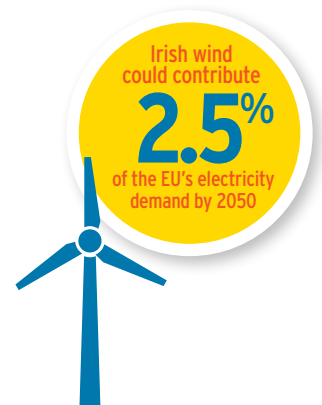


NATIONAL RENEWABLE ENERGY ACTION PLAN		ELECTRICITY DEMAND (RES-E)	HEAT DEMAND (RES-H)	TRANSPORT DEMAND (RES-T)
	TARGET 2020	40%	12%	10%
2011	17.6%	5%	3.6%	



RENEWABLE ENERGY SOURCES

It is envisaged that wind power will be the most significant contributor to national and international targets for green electricity over the coming years. According to a recent Wind Energy Roadmap from SEAI, Irish wind could contribute 2.5% of EU electricity demand, create 20,000 jobs and generate €15 billion for the Irish economy by 2050. Currently the total installed capacity for wind in Ireland amounts to over 1600 MW. While hydro was historically the largest contributor to renewable electricity in Ireland, electricity production from wind energy has now increased to the point that it accounted for 81% of the renewable electricity generated in 2011. Wind, hydro and biomass-generated electricity in 2011, respectively, accounted for 15.6%, 2.5% and 1.2% of Ireland's gross electricity consumption.



ENERGY EFFICIENCY

Energy efficiency enables achievement of the same or improved performance with less energy which is positive from an energy, and subsequently an emissions perspective. Energy efficiency lies at the heart of European energy policy and is fundamental to improving energy supply, reducing carbon emissions, fostering competitiveness and stimulating green technological development. The Energy Services Directive is the overarching framework within which energy efficiency policy is formulated. Ireland's National Energy Efficiency Action Plan sets out Ireland's strategy to meet energy efficiency obligations at national and EU levels. Ireland has a national target to deliver 20% improvement in energy efficiency savings by 2020. Government bodies will take a leadership role in this process and, accordingly, a higher target of 33% has been set for the public sector. While Ireland has already achieved a 50% reduction in the primary energy requirement (per value of output) between 1990 and 2010, the new policy target will be a major challenge.

On the residential side the Home Energy Saving Scheme operated by SEAI was a success, with over 135,000 energy efficiency grants paid. The value of energy cost savings are anticipated to average at €450 per annum per participating home with an estimate of total emissions avoided at 2.4 million tonnes of CO₂.

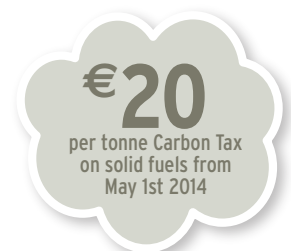
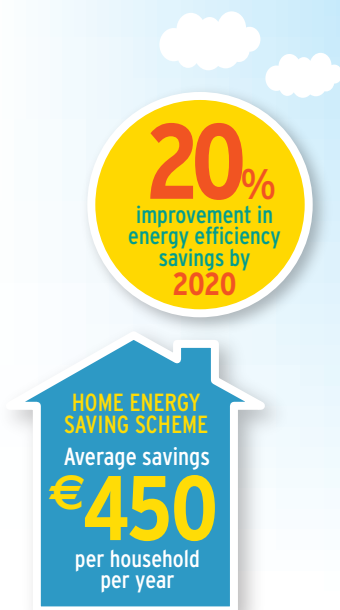
With high fossil fuel prices in recent years, there is evidence that households and businesses are switching to more cost-efficient (and carbon-efficient) energy sources. In 2011 the Better Energy schemes were launched to supersede existing residential energy retrofitting subsidy programmes.

A further benefit of energy efficiency schemes comes from developing the market for efficiency solutions such as high-performance insulation, efficient boilers etc. leading to employment creation in manufacturing and installation businesses.

CARBON TAX

The carbon tax, introduced in 2009, is a policy instrument specifically designed to use pricing to encourage users to switch away from carbon-intensive fuels. It applied originally to many fossil fuels including petrol, diesel, home heating oil and natural gas, and was increased to €20/tonne in Budget 2012.

It was announced in Budget 2013 that the carbon tax would be extended to solid fuels (e.g. peat and coal) on a phased basis. The rate of tax, with effect from May 1st 2013, is based on a charge of €10 per tonne of CO₂ emitted by the fuel concerned. The rates will increase to €20 per tonne with effect from May 1st 2014.



OUTLOOK

Clean energy from renewable sources will be a critical pillar of the green economy. In 2011 the SEAI unveiled three energy roadmaps to 2050 focusing on the potential benefits of Ireland moving to a future energy system where electricity, managed via a smartgrid, and increasingly generated by wind, meets more of the country's energy needs, in particular for heat and transport.