Regional Outlook 2021 - Country notes

Ireland

Progress in the net zero transition

EMISSIONS

2018 OECD average: 11.5 tCO_2e/capita	2018 Irish average: 12.6 tCO_2e/capita	Irish target: net zero GHG emissions by 2050

Large regions (TL2)

Figure 1. Estimated regional greenhouse gas emissions per capita

Tons CO_2 equivalent (tCO_2e), large regions (TL2), 2018

Greenhouse gas (GHG) emissions per capita generated in most Irish large regions are above 10 tCO_2e per capita. Only Eastern and Midland have lower emissions per capita than the OECD average of 11.5 tCO_2e.

Estimated emissions per capita in Southern are almost two times higher than in Eastern and Midland.

Small regions (TL3)

Figure 2. Contribution to estimated GHG emissions

By type of small region, 2018

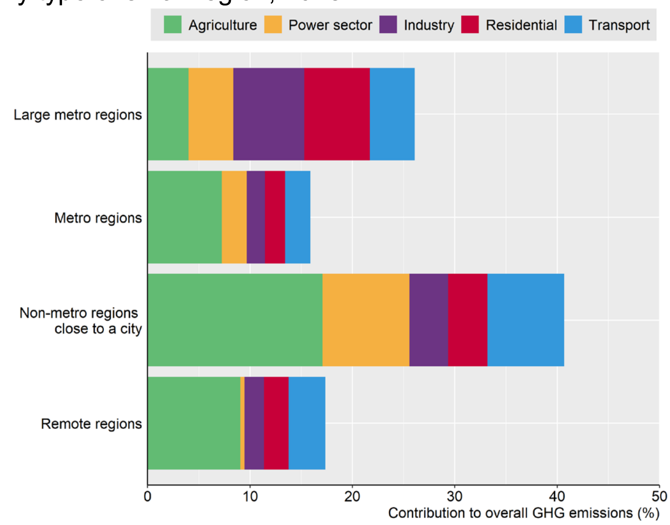
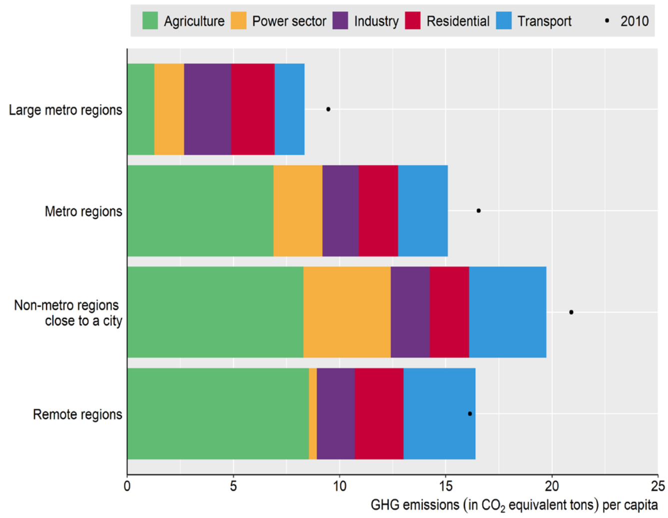


Figure 3. Estimated GHG emissions per capita

By type of small region, 2018



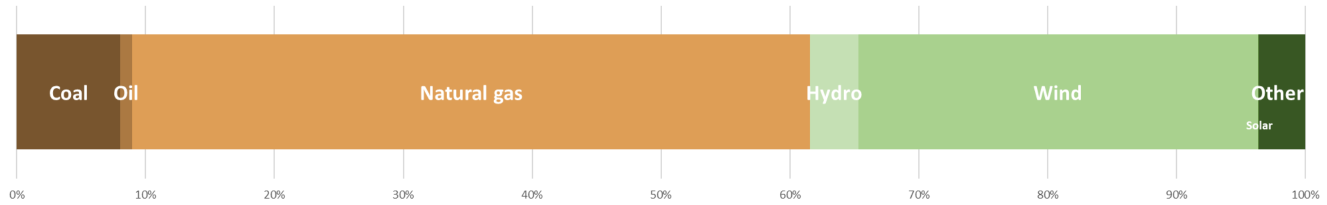
Across the OECD, metropolitan regions emit more greenhouse gases than remote regions. In Ireland, a similar trend can be observed. Emissions per capita in Irish remote rural regions are higher than in metropolitan regions.

Target notes: Emissions targets included in the Net Zero Tracker database from ECIU before January 25, 2021 are considered.
Figure notes: Figures 1, 2, 3 and the OECD average show OECD calculations based on estimated greenhouse gas emissions data from the European Commission's Joint Research Centre (ECJRC). The Emissions Database for Global Atmospheric Research of the ECJRC allocates national greenhouse gas emissions to locations according to about 300 proxies. See Box 3.7 in the 2021 *OECD Regional Outlook* for more details.

ENERGY

Irish electricity mix

Figure 4. National electricity generation by energy source in 2019

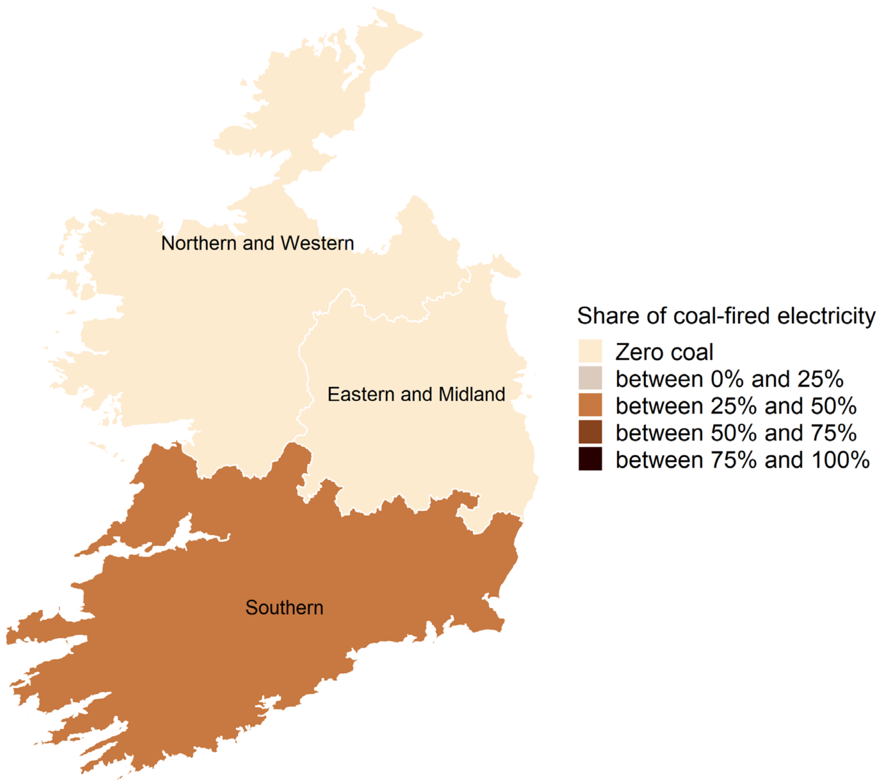


Share of coal-fired electricity generation

2019 OECD average: 23%	**2019 Irish average (including peat): 8%**	**2030 well below 2°C benchmark for the EU: <2%** **2030 1.5°C benchmark for OECD countries: 0%**

Figure 5. Regional coal-fired electricity generation estimates

Per cent of total electricity generation, large regions (TL2), 2017



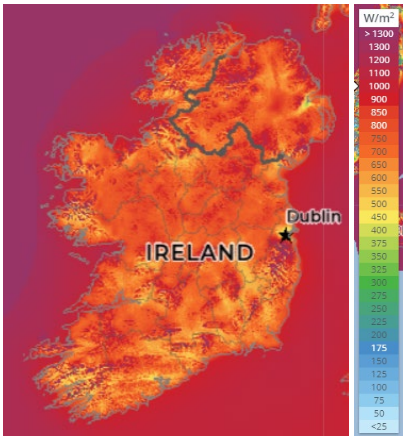
Most regions do not use coal in electricity generation. Only the Southern region used coal for a third of electricity generation in 2017. No new capacity is planned or being built. There were some peat-fired power plants in operation in the Eastern and Midland region. They are not shown on the map.

Wind power

2019 OECD average: 8%	2019 Irish average: 31%	2030 well below 2°C benchmark for the EU: >29%

Figure 6. Wind power potential

Mean wind power density (W/m²)



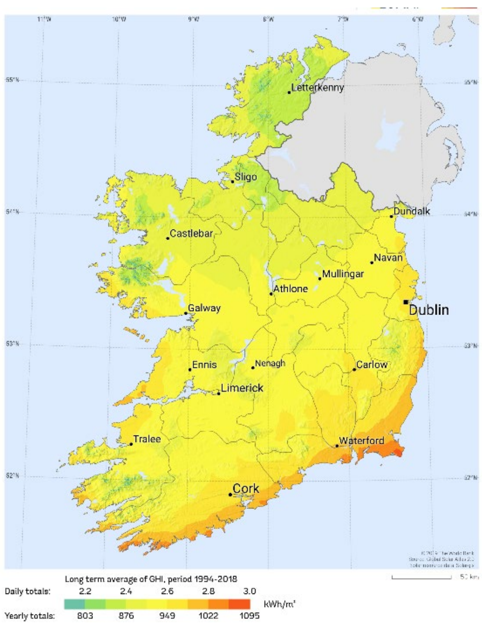
Source: Map produced by The Global Wind Atlas

Solar power

2019 OECD average: 3%	2019 Irish average: 0.1%	2030 well below 2°C benchmark for the EU: >14%

Figure 7. Solar power potential

Global horizontal irradiation (kWh/m²)



Source: Map produced by The Global Solar Atlas

Wind power density is unusually strong across all Irish regions.

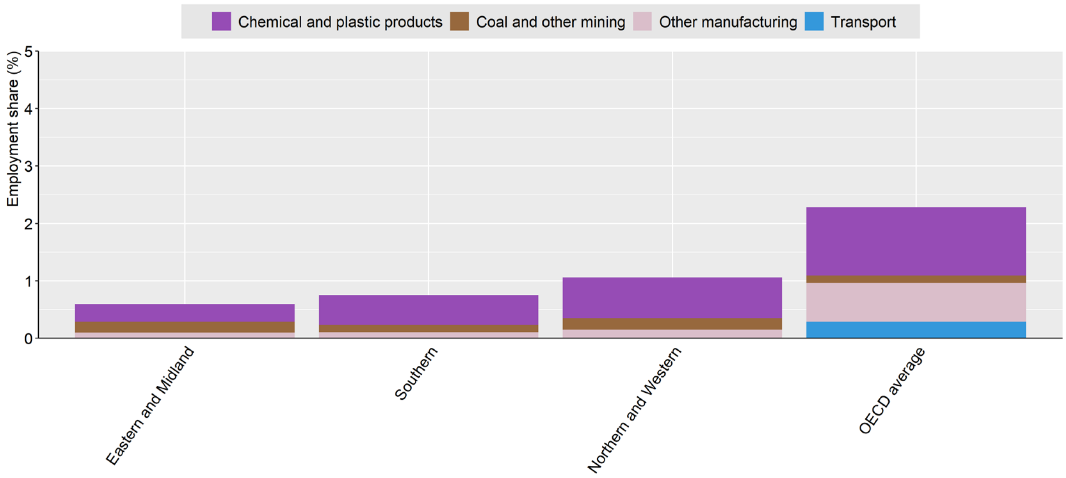
Benchmark notes: The well-below 2 degrees benchmarks show IEA Sustainable Development Scenario (SDS) numbers. The SDS models how the global energy system can evolve in alignment with the Paris Agreement's objective to keep the global average temperature increase well below 2°C above pre-industrial levels. According to the Powering Past Coal Alliance (PPCA), a phase-out of unabated coal by 2030 for OECD countries is cost-effective to limit global warming to 1.5°C.

Figure notes: Figure 4 shows data from the IEA (2020). Figure 5 shows OECD calculations based on the Power Plants Database from the WRI. The database captures electricity generation from the power plants connected to the national power grid. As a result, small electricity generation facilities disconnected from the national power grid might not be captured. See here for more details. Figures 6 and 7 show the power potential of solar and wind. Mean wind power density (WPD) is a measure of wind power available, expressed in Watt per square meter (W/m²). Global horizontal irradiation (GHI) is the sum of direct and diffuse irradiation received by a horizontal surface, measured in kilowatt hours per square metre (kWh/m²).

SECTORAL EMPLOYMENT RISKS

Figure 8. Employment in selected sectors which may be subject to employment loss by 2040 if emissions are reduced in line with the Paris climate agreement

Per cent of total regional employment, large regions (TL2), 2017

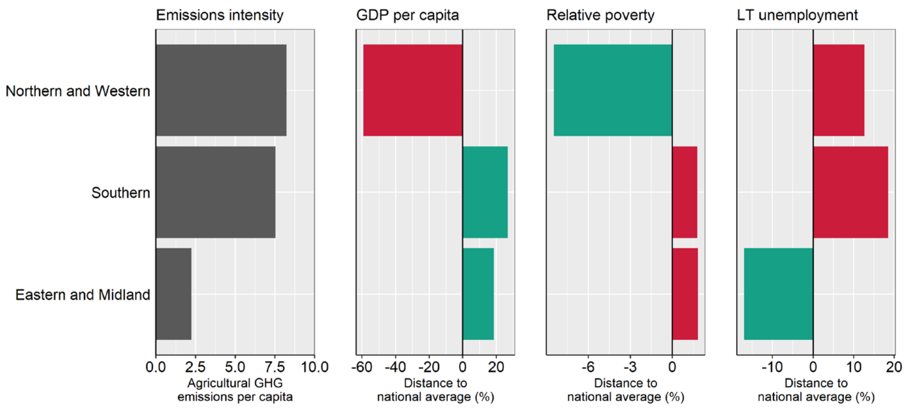


There will be both employment gains and losses due to the transition to net zero greenhouse gas emissions. They may not be distributed in the same way across regions. Employment in sectors that may be subject to some job loss by 2040 as a result of policies to reduce emissions in line with the climate objectives in the Paris Agreement amounts to less than 1.5% in all Irish regions. Irish regions have less employment in these sectors than the OECD average. Northern and Western has the largest share, largely driven by chemicals. The selection of sectors is broad and based on employment effects simulated across OECD countries (See Box 3.9 of the 2021 *OECD Regional Outlook*). It does not take specific local characteristics into account.

AGRICULTURE

Figure 9. Estimated GHG emissions from agriculture per capita and relative difference to country means for GDP per capita, relative poverty and long-term unemployment

Large regions (TL2), 2018



While agriculture is not a sector that was broadly identified as being subject to employment risks based on employment effects simulated across OECD countries (Section 2, Box 8 of the 2021 OECD Regional Outlook), it will be subject to significant transformations, with respect to animal farming, fertiliser use and carbon sequestration. Regions with a higher emissions per capita for agriculture may be exposed to higher transition risk from rising carbon prices. In Ireland, estimated agricultural emissions per capita are highest in the Northern and Western region. It has lower GDP per capita and higher long-term unemployment compared to the national average, but a lower poverty risk.

Figure notes: Figures 8 and 9 are based on data from OECD Statistics and ECJRC. In Figure 8 sectors are selected based on macroeconomic simulations of a scenario limiting global warming to well below 2 degrees. See Box 3.9 in the 2021 *OECD Regional Outlook* for more details. In figure 9, poverty risk is assessed from individuals' survey respondents indicating there have been times in the past 12 months when they did not have enough money to buy food that they or their family needed. Long-term unemployment is defined as unemployed for 12 months or more.

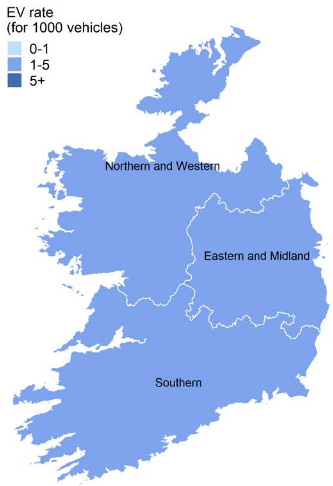
TRANSPORT

Electrification of passenger cars

2018 Irish average share of full-electric new passenger car sales: <5%	Benchmarks for new zero-emission passenger car sales: IEA well-below 2°C benchmark: 100% by 2040. Aligned with net zero emissions by 2050: 100% by 2035 at the latest. 2030 cost-effective.	Irish target sales of zero emission new passenger cars: 100% by 2030

Figure 10. Full-electric road motor vehicles stock

For 1000 vehicles, large regions (TL2), 2018



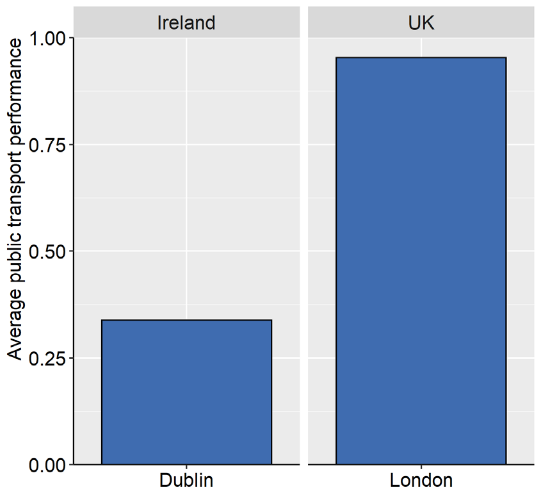
All Irish regions have less than five full-electric vehicles per 1000 road motor vehicles. Eastern and Midland has, with about 3 full-electric vehicles per 1000 vehicles, the largest share of full-electric vehicles in its road motor vehicles stock.

Countries with a net zero target by 2050 will need to phase out sales of new conventional cars by 2035 at the latest (considering cars have an average useful life of 15 years). A phase-out by 2030 is more cost-effective.

Modal shift

Dublin has relatively poor public transport performance. For comparison, London (UK) has among the highest public transport performance scores. Inhabitants of the metropolitan area of London can on average reach 95% of the population living within 8 km in 30 minutes by public transport.

Figure 11. Public transport performance in 2018



Benchmark notes: In the IEA's Sustainable Development Scenario, OECD countries (such as the European Union, Japan and the United States) as well as China fully phase out conventional car sales by 2040. This scenario is aligned with the Paris Agreement's objective to keep the global average temperature increase well below 2°C above pre-industrial levels. The UK Committee on Climate Change finds that all new cars and vans should be electric (or use a low carbon alternative such as hydrogen) by 2035 at the latest to reach net zero GHG emission targets by 2050. A more cost-effective date from the point of view of users is 2030.
Figure notes: Figure 10 is based on data from OECD Statistics. Figure 11 is based on data from ITF and OECD Statistics. See Box 3.10 in the 2021 *OECD Regional Outlook* for more details. GDP per capita is expressed in USD per head, PPP, constant prices from 2015.

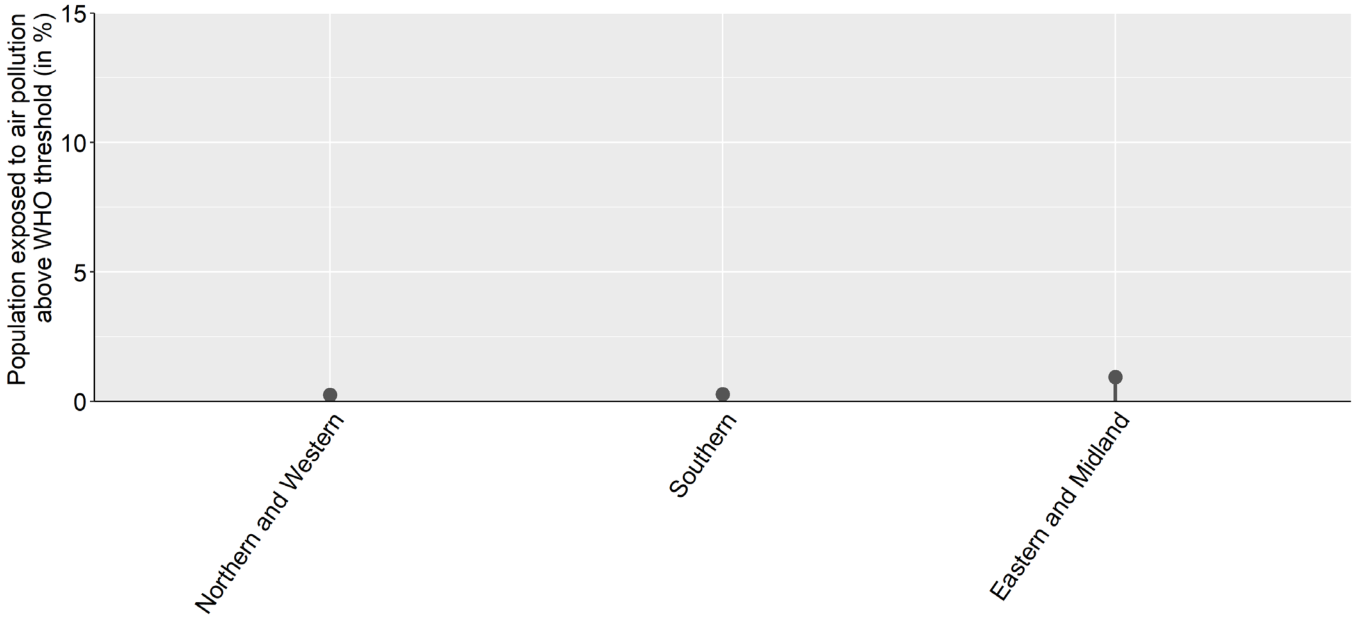
AIR POLLUTION

Large regions (TL2)

2019 OECD share of population exposed above the WHO-recommended threshold: 62%	2019 Irish share of population exposed above the WHO-recommended threshold: 1%	WHO-recommended air quality threshold: PM2.5 annual mean concentration < 10 μg/m^3

Figure 12. Share of population exposed to levels of air pollution above the WHO-recommended threshold

Percentage of population exposed to above 10 μg/m3 PM2.5, large regions (TL2), 2019



Policies towards net-zero greenhouse gas emissions can bring many benefits beyond halting climate change. They include reduced air and noise pollution, reduced traffic congestion, healthier diets, enhanced health due to increased active mobility, health benefits through thermal insulation, and improved water, soil and biodiversity protection. Some are hard to quantify.

Fine particulate matter (PM2.5) is the biggest cause of human mortality induced by air pollution, but few Irish are exposed to levels above the WHO-recommended threshold. Major disease effects include stroke, cardiovascular and respiratory disease. Air pollution amplifies respiratory infectious disease such as Covid-19. It affects children, the elderly and those with respiratory conditions such as asthma the most. It reduces their educational outcomes as well as worker productivity.

Figure notes: Figure 12 is based on data from OECD Statistics.