

Regional Outlook 2021 - Country notes

Iceland

Progress in the net zero transition



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EMISSIONS

2018 OECD average:
11.5 tCO₂e/capita

2018 Icelandic average:
14.4 tCO₂e/capita

Icelandic target:
net zero GHG emissions by 2040

Large regions (TL2)

Figure 1. Estimated regional greenhouse gas emissions per capita
Tons CO₂ equivalent (tCO₂e), large regions (TL2), 2018



Greenhouse gas (GHG) emissions per capita generated in Icelandic large regions are above the OECD average of 11.5 tCO₂e per capita.

Estimated emissions per capita in Other Regions are slightly higher than in the capital region.

Small regions (TL3)

Figure 2. Contribution to estimated GHG emissions
By type of small region, 2018

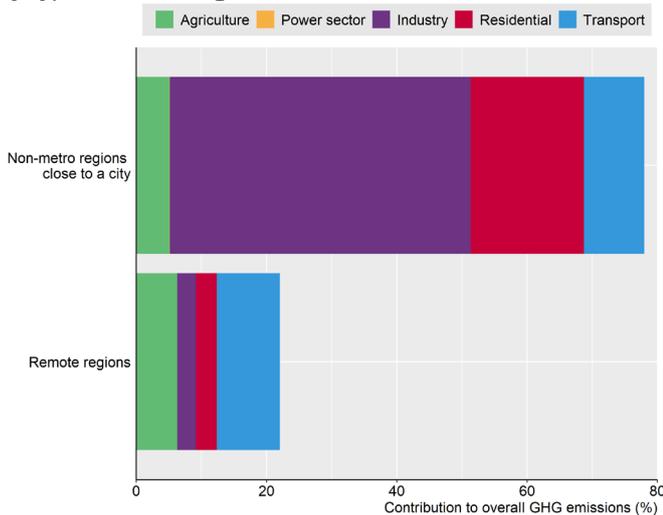
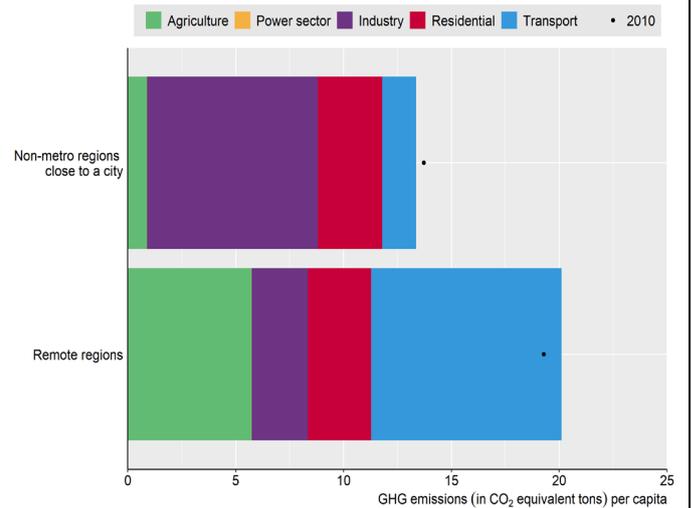


Figure 3. Estimated GHG emissions per capita
By type of small region, 2018



In Iceland, non-metro regions close to a city emit more greenhouse gases than remote regions. On the other hand, emissions per capita in Icelandic remote rural regions are higher than in non-metro regions close to a city.

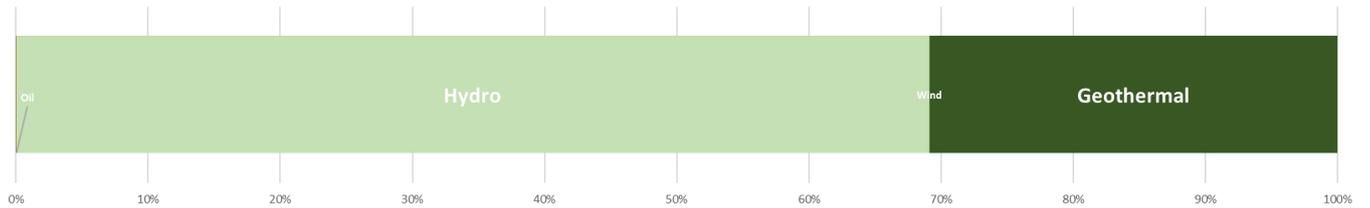
Target notes: Emissions targets included in the Net Zero Tracker database from ECIU before January 25, 2021 are considered.

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

Icelandic electricity mix

Figure 4. National electricity generation by energy source in 2019



Share of coal-fired electricity generation

2019 OECD average: 23%

2019 Icelandic average: 0%

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



Iceland does not use coal in electricity generation. No new capacity is planned or being built.

Wind power

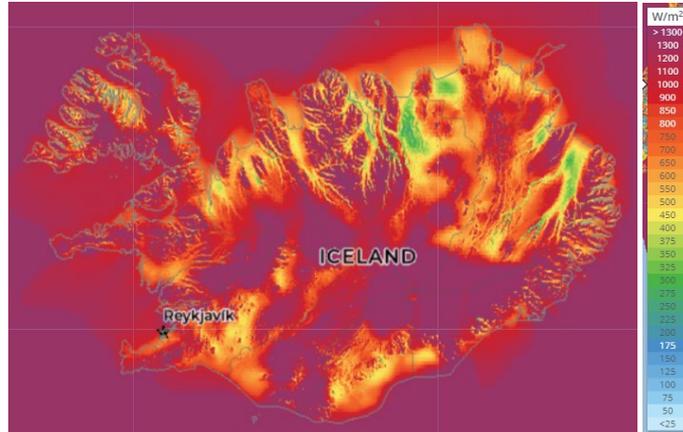
2019 OECD average: 8%

2019 Icelandic average: 0%

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

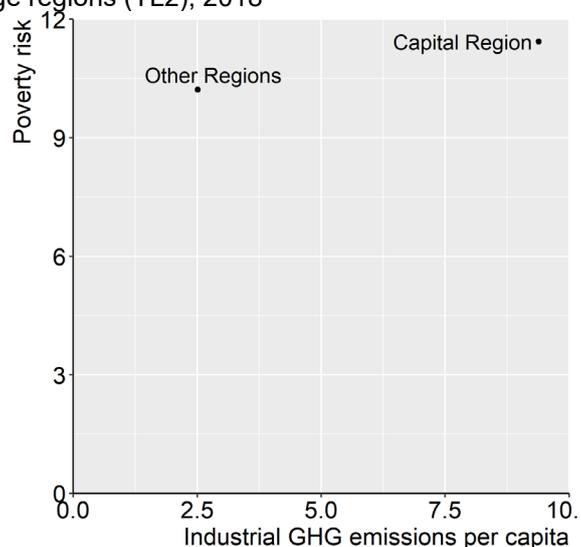
Iceland already has phased out fossil fuel powered electricity generation using hydro and geothermal power.

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. Figure 6 shows the power potential of wind. Mean wind power density (WPD) is a measure of wind power available, expressed in Watt per square meter (W/m²).

INDUSTRY

Figure 7. Estimated GHG emissions from industry per capita and poverty risk

Tons CO₂ equivalent (tCO_{2e}), large regions (TL2), 2018

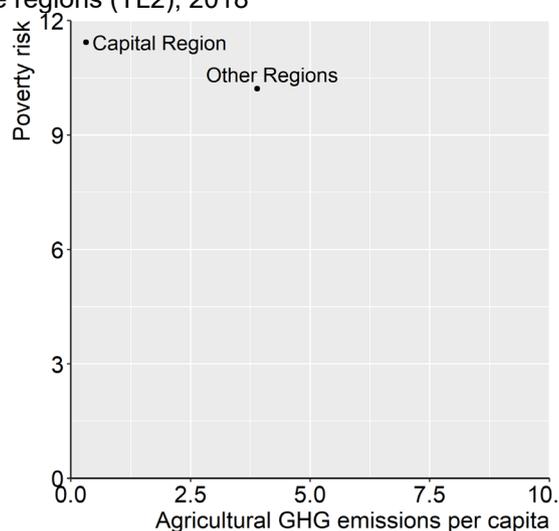


Regions with a higher emissions per capita in industry may have a higher transition risk from rising carbon prices. In Iceland, industrial emissions per capita are highest in the capital region. Industrial emissions per capita in the capital region are much higher than the OECD average of 2.8 tCO_{2e} per capita. The transition to net-zero greenhouse gas emissions needs to be just, avoiding social hardship. The capita region has slightly higher poverty risk.

AGRICULTURE

Figure 8 Estimated GHG emissions from agriculture per capita and poverty risk

Tons CO₂ equivalent (tCO_{2e}), large regions (TL2), 2018



In Iceland, agricultural emissions per capita are highest in Other Regions. This region has a slightly lower poverty risk.

Figure notes: Figure 7 and 8 are based on data from OECD Statistics and ECJRC. 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

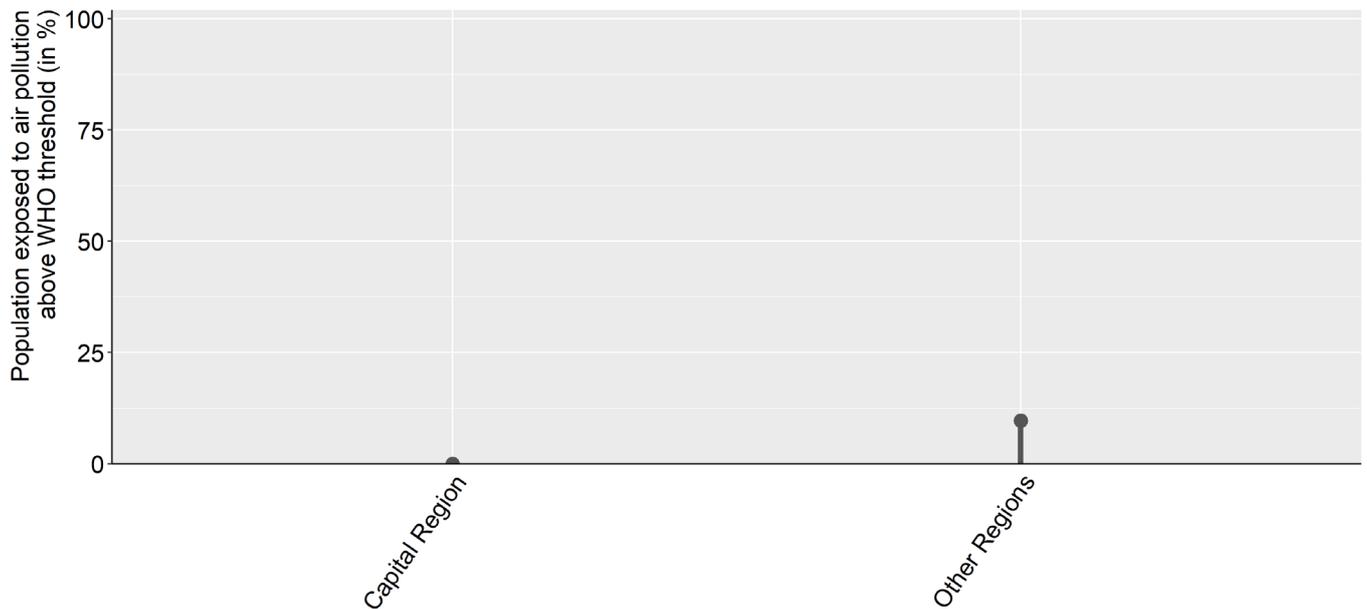
AIR POLLUTION

Large regions (TL2)

2019 OECD share of population exposed above the WHO-recommended threshold: 62%	2019 Icelandic share of population exposed above the WHO-recommended threshold: 3%	WHO-recommended air quality threshold: PM2.5 annual mean concentration < 10 µg/m³
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Figure 9. 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.

Small particulate matter (PM2.5) is the biggest cause of human mortality induced by air pollution. Major disease effects include stroke, cardiovascular and respiratory disease. Air pollution amplifies respiratory infectious disease such as Covid-19. It affects children the most. It reduces their educational outcomes as well as worker productivity.

Figure notes: Figure 9 is based on data from OECD Statistics.