

Climate action in the Netherlands

Latest state of play

The EU binding [climate and energy legislation](#) for 2030 requires Member States to adopt [national energy and climate plans](#) (NECPs) covering the period 2021 to 2030. In October 2020, the European Commission published an [assessment](#) for each NECP. The Netherlands submitted its [NECP](#) in November 2019. A high proportion of Dutch people ([73 %](#)) expect national governments to tackle climate.

The Netherlands accounts for 5.2 % of total EU greenhouse gas (GHG) emissions and has reduced its emissions at a slower pace than the EU average since 2005. The carbon intensity of the Dutch economy decreased by 29 % between 2005 and 2019, a slower rate than the EU-wide average.

Energy industry emissions fell by 15 % in the 2005-2019 period in the country. Measures such as the introduction of carbon pricing, are expected to further decrease these emissions. The sector with the greatest percentage reduction in emissions between 2005 and 2019 – 55 % – was waste management. Under the Effort-sharing Decision (2013-2020) and Effort-sharing Regulation (2021-2030), the Netherlands needs to reduce its emissions in sectors not included in the EU emissions trading system by 16 % and 36 % respectively, compared with 2005 levels.

The share of renewable energy sources in the country reached 8.8 % in 2019, and for 2030 the target is 27 %, to be reached mainly through solar power and offshore and onshore wind farms.

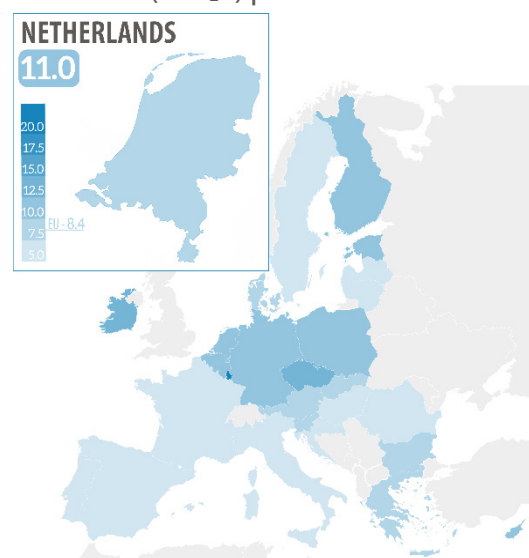
Emissions and demographics

In 2019, the densely-populated Netherlands had just over 17.3 million inhabitants, accounting for 3.9 % of the total EU-27 [population](#).

With 11 tonnes of carbon dioxide equivalent (CO₂e), Dutch per capita emissions in 2019 were above average in the Union. The country's per capita level decreased from 2005 to 2009, but in 2010 registered its highest value for the 2005-2019 period. From 2010 onwards, with the exception of an increase in 2015, the country maintained a reduction trend. In 2005, Netherlands's per capita emissions were 3.1 tCO₂e above the EU average. Between 2005 and 2019 the country was able to reduce the difference by 0.2 tCO₂e.

The Dutch population is [growing](#), and is expected to remain on that path until 2045, going against an expected EU decreasing trend starting from 2025.

Figure 1 – Total greenhouse gas emissions (tCO₂e) per inhabitant in 2019



Data source: Eurostat demo_pjan and EEA ([GHG trends](#), [GHG estimates](#), [UNFCCC reporting](#)).

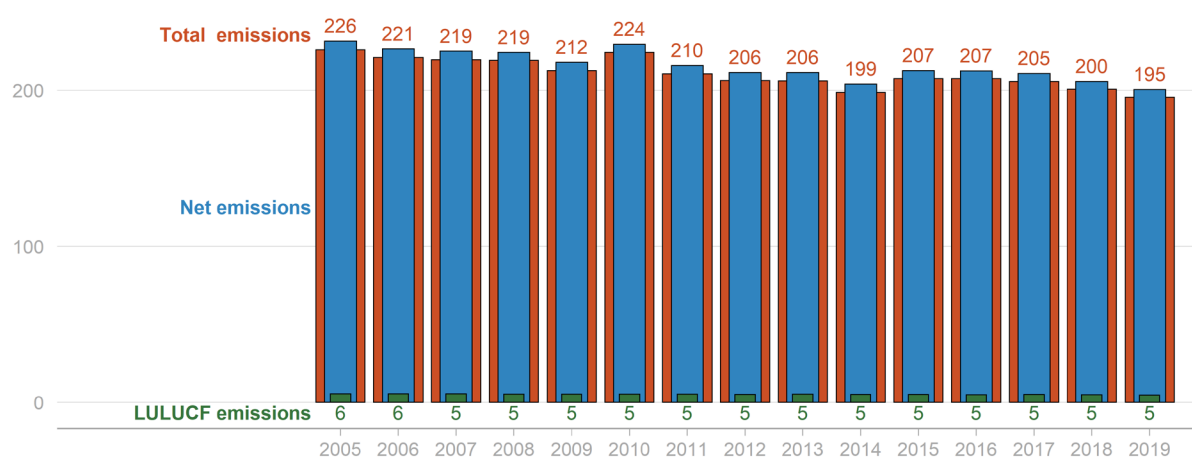
This briefing is one in a series covering all EU Member States.

Netherlands' progress so far

In 2019, the Netherlands recorded net emissions of 200 million tonnes (Mt) CO₂e. The Netherlands' total emissions make up 5.2 % of the EU total and have decreased by 13.4 % since 2005. This is below the EU-wide emissions reduction of 19 % in the same period.

Unlike in many Member States, the Netherlands' [LULUCF](#) sector (land use, land use change and forestry) is a carbon source and remained stable between 2005 and 2019. The NECP [outlines](#) several measures to increase carbon sink functions, such as reduction of oxidation in peat meadows, carbon storage and sequestration through land and water management, afforestation and prevention of deforestation, and the exploration of synergies between objectives and policies relating to mitigation and adaptation in forestry. Furthermore, the country is aiming to manage all its agricultural soils sustainably by 2030.

Figure 2 – Total, LULUCF and net greenhouse gas (GHG) emissions (MtCO₂e)



Data source: EEA ([GHG trends](#), [GHG estimates](#), [UNFCCC reporting](#)).

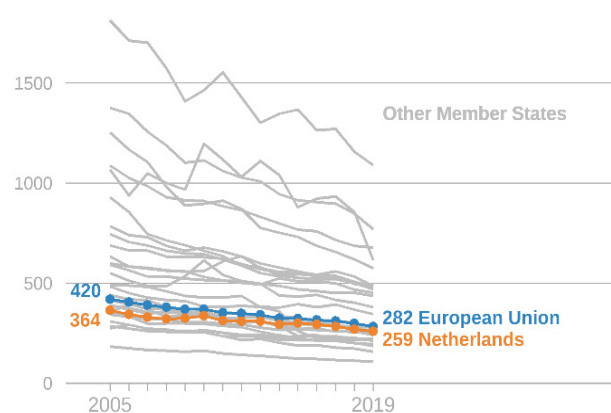
Emissions in the LULUCF sector are [expected](#) to rise to 5.6 MtCO₂e in 2030. This increase is linked to increased emissions from arable land, from shifts in the acreage of agricultural land, and reduced carbon capture from forests.

Carbon intensity

The Netherlands is among those Member States whose economies show average carbon intensity. In 2019, the country's carbon intensity per euro of GDP was 259 gCO₂e - 23 gCO₂e below the EU average.

Over the 14-year period, the Netherlands reduced its emissions intensity per unit of GDP by 29 %, against the EU average reduction of 33 %. The [impact](#) of the 2009 financial crisis led to a slight increase in the carbon intensity of the Netherlands economy, peaking in 2010. From there onwards the country was able to resume the reduction trend.

Figure 3 – Carbon intensity of the economy: GHG emissions (gCO₂e) per unit of GDP (euros in 2015 prices)



Data source: Eurostat Nama_10_gdp [CLV15MEUR] and EEA ([GHG trends](#), [GHG estimates](#), [UNFCCC reporting](#)).

Emissions across the economy

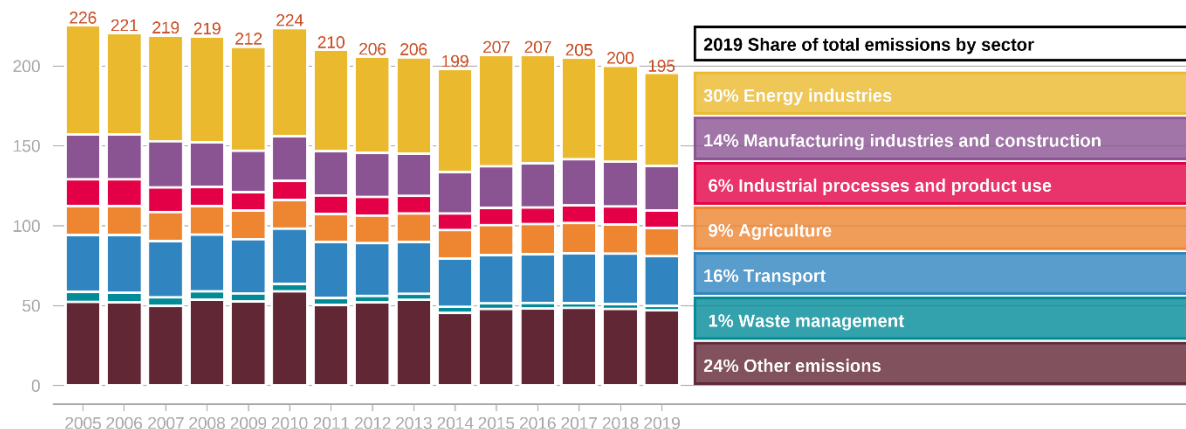
With a 29.7 % share of the total, energy industries accounted for the largest share of the Netherlands' GHG emissions in 2019. Emissions from energy industries fell by 15 % in the 2005-2019 period, representing a slight decrease of 0.6 percentage points in their share of total emissions. In 2020, the country [proposed](#) a minimum carbon price for electricity generation starting at €12.3/tCO₂ which would rise 159 % up to 2030. In 2021, a carbon tax for the industry has been introduced, starting at €30/tCO₂ with a linear increase of €125 to €150/tCO₂ in 2030, including the ETS price. Moving towards 2030, an exempt part, on which the carbon tax is not due, will gradually decrease. Owing to the pandemic situation, the Dutch government [decided](#) to increase that exemption level by 20 % for the first four years.



Further development of both onshore and offshore wind farm projects will help the country reduce its GHG emissions.

All sectors reduced their emissions during the period. The biggest emissions reduction was in the waste management sector, which reduced its share of total emissions over the period from 2.8 % to 1.5 %. This translates into a 55 % reduction in emissions since 2005 or 3.5 MtCO₂e. Emissions from industrial processes and product use (-33.7 %), transport (-12.5 %), 'other emissions' (buildings and tertiary sector, -10.4 %), agriculture (-2.3 %) and manufacturing industries and construction (-0.6 %) fell between 2005 and 2019.

Figure 4 – Total GHG emissions by sector (MtCO₂e) (rounded data)



Data source: EEA ([GHG trends](#), [GHG estimates](#), [UNFCCC reporting](#)).

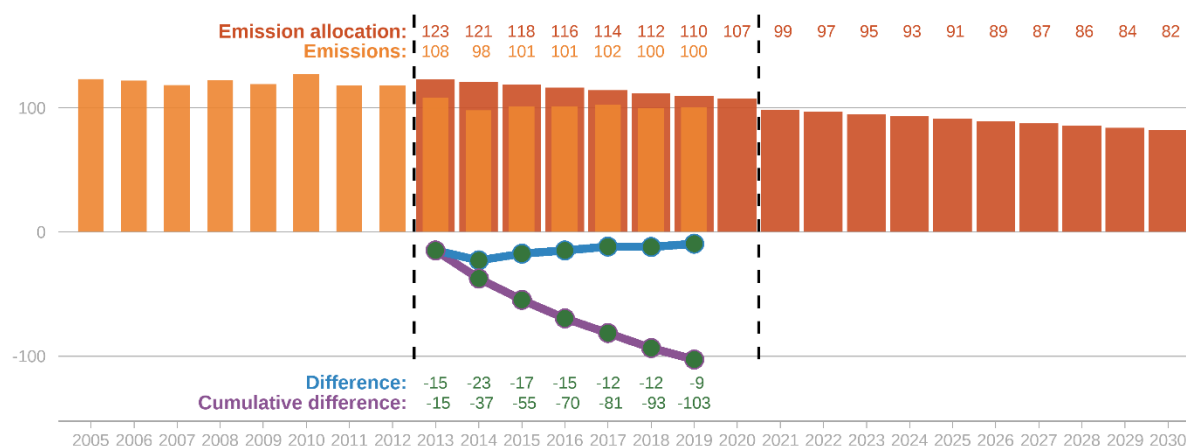
The EU-wide [emissions trading system](#) (ETS) covers emissions from electricity generation and industry. The Dutch government has set a [target](#) to reduce total GHG emissions by 49 % by 2030, a decrease by 49 MtCO₂e compared to unchanged policies. Planned measures in the electricity generation sector include a ban on coal from 2030 onwards, a national grant for carbon emission reductions, and encouragement and support for renewable energy.

In the agriculture sector, with the proposed measures, the country's NECP [expects](#) emissions to reach 20.2-22.8 MtCO₂e by 2030, compared with 24.5 MtCO₂e without additional action. [Measures](#) in this sector include the reduction of emissions from livestock farming through the optimisation of animal feed and improved manure management; reduction of emissions and carbon storage by means of smart land use; and consumer-targeted information with respect to food consumption and food waste.

Effort-sharing sectors

EU effort-sharing legislation covers emissions from sectors not included in the ETS, such as transport, buildings, agriculture and waste. The Effort-sharing Decision (ESD) for the 2013-2020 period requires the Netherlands to decrease its non-ETS GHG emissions by 16 %, compared with 2005. The country stayed below its allocations up until 2019. For the 2021-2030 [Effort-sharing Regulation](#) (ESR) period, the Netherlands must reduce its emissions by 36 % compared with 2005 levels. The NECP [sets](#) a maximum cumulative emissions ceiling of 891 MtCO₂e for the ESR period and with existing policies the country expects to achieve 31 % reductions in these sectors, meaning that additional measures will be [needed](#) to reach the 2030 target.

Figure 5 – Netherlands' emissions under the Effort-sharing Decision/Regulation (MtCO₂e)



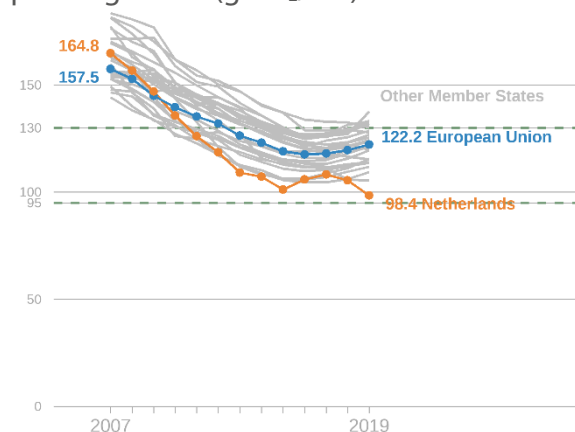
Data source: Commission [ESD allocation](#), [EUR-Lex](#) and [EEA](#), figures display rounded data.

In the building sector, the Netherlands is [aiming](#) for emissions of around 15.2 to 17.7 MtCO₂e by 2030, a reduction from 24.4 MtCO₂e in 2018. This is to be achieved mainly through changes to [heating sources](#) with the phasing-out of natural gas, starting with new buildings. Adjustments will be made to [energy taxation](#), with higher taxes on natural gas and lower taxes on electricity. Among other measures, the country intends to develop new financial instruments to address sustainability in the built environment.

In the transport sector, the country is [aiming](#) for emission levels of 29.3-31.7 MtCO₂e by 2030, a reduction from 35.6 MtCO₂e in 2018. The Netherlands [aims](#) to achieve this reduction through increased use of shared mobility, further market penetration of electric vehicles by means of infrastructure development, roll-out of biofuels and green hydrogen as alternative fuel sources and action to address the sustainability of the logistics sector.

The average [emissions of new passenger cars](#) in the Netherlands have been below the EU target ceiling of 130 g CO₂/km since 2011, and below the EU average since 2009. In 2019 the country was first in the EU and third in Europe for [registrations of electric vehicles](#), at 16 % of total new registrations. Also in 2019, the country was already close to the new EU-wide target ceiling of 95 g CO₂/km that applies from 2021.

Figure 6 – Average emissions: new passenger cars (g CO₂/km)



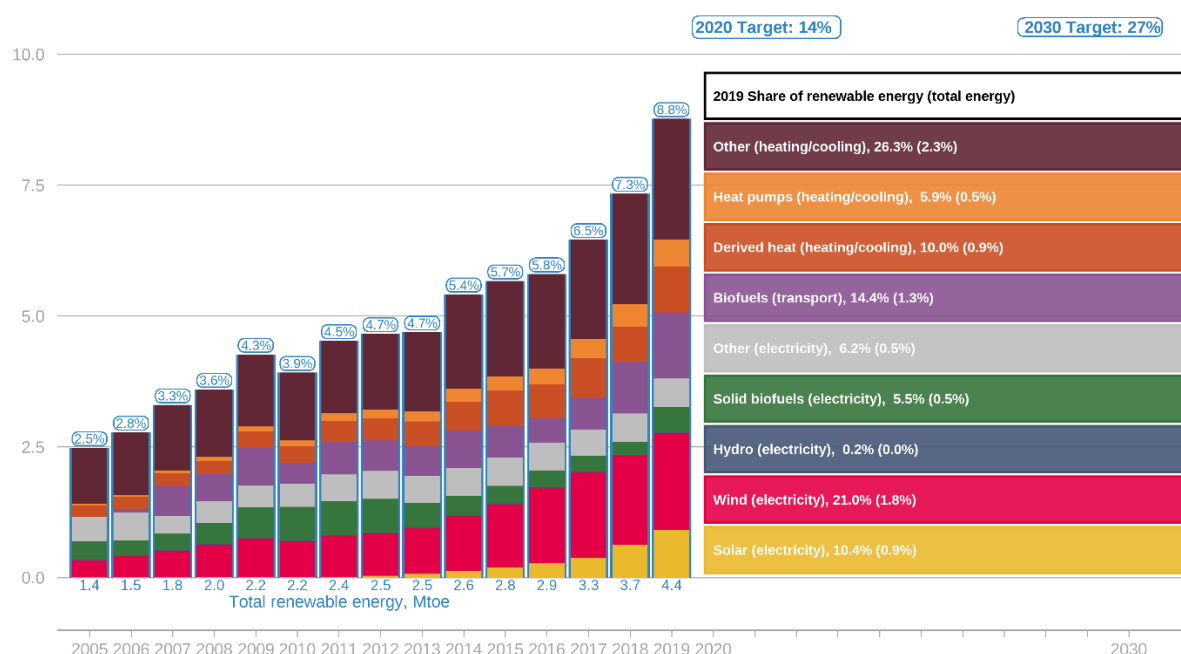
Data source: [EEA](#) and Eurostat sdg_12_30.

Energy transition

Renewable energy

The Netherlands increased its [renewable energy](#) share of gross final energy consumption by 6.3 percentage points between 2005 and 2019. To meet the 2030 target, the renewable energy share of gross energy consumption must rise from 8.8 % to 27 % in just over a decade. In its assessment of the country's NECP, the Commission finds the indicative target of 27 % renewable energy (RE) in the energy mix to be sufficiently ambitious, as it is 1 percentage point above the result from the Governance Regulation calculations.

Figure 7 – Renewable energy share of gross final energy consumption



Data source: Eurostat ([shares tool](#)), [NECP 2030 targets](#) and [EEA](#).

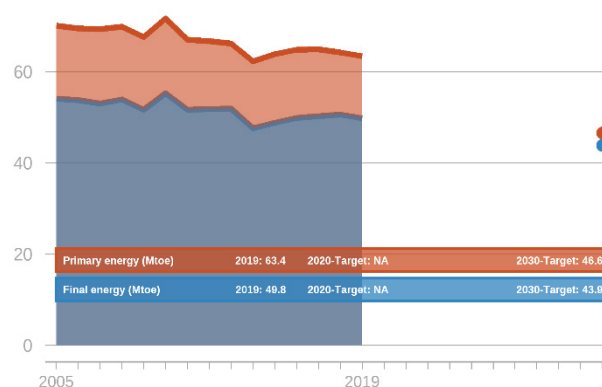
In order to reach the 2030 target, the Netherlands has set [objectives](#) for the minimum RE share in different sectors: 13 % in heating and cooling, 32 % in transport and 73 % in the electricity sector, where solar power and offshore and onshore wind farms are among the technologies set to grow.

Energy efficiency

The European Commission has assessed Dutch 2030 primary and final energy consumption targets as sufficient and modest in ambition, respectively.

The NECP focuses on a wide set of [measures](#) to address the issue throughout all sectors. The measures comprise energy taxation and development of financial instruments, energy savings requirements and information reporting for the industry sector, and addressing the sustainability of greenhouse horticulture.

Figure 8 – Energy efficiency: primary and final energy consumption (Mtoe)



Data source: Eurostat nrg_bal_s, [NECP 2020 + 2030 targets](#) and [EEA](#).

Outlook: Plans and policies

In June 2015 the District Court of The Hague ordered the government to cut the Netherlands' GHG emissions following a lawsuit put forward by a collective of citizens, known as the [Urgenda Climate Case](#). This judgment was appealed by the government, but in December 2019 the Dutch Supreme Court upheld the previous court ruling.

The [Dutch Climate Agreement](#), concluded in June 2019, reflects agreements made between the government and several sectors so that the climate targets set can be achieved. In July 2019, the [Dutch Climate Act](#) was passed. It mandates the government, through legally binding targets, to reduce GHG emissions by 95 % of 1990 levels by 2050.

In 2017, the former Dutch government, currently continuing in caretaker mode since the March 2021 elections, committed in its [2017–2021 Coalition Agreement](#) to phase out coal-fired power plants in two stages: by the end of 2024, coal power plants with efficiency below 44 % would be closed, and grants to co-firing biomass in coal-fired power plants would end. The remaining coal-fired power plants would be shut down in a second stage by 2030. The Dutch government is planning to establish a €22 million 'coal fund' in order to address the employment issues arising from the phasing-out.

[Almost every household](#) in the country uses natural gas extracted from the Groningen field, but this extraction is known to cause damage to nearby houses and buildings. The Netherlands is planning to end most natural gas extraction from the field by 2022. This closure will take place in stages, with a complete halt between mid-2025 and mid-2028. Nevertheless, there are [signs](#) that full closure of the fields could occur by 2023. In 2019, the cities of the northern Netherlands together with the Commission's Joint Research Centre [evaluated](#) the socio-economic impacts of the plan.

The Netherlands' [national hydrogen strategy](#) envisages the production of blue hydrogen from gas with carbon capture and storage. Nevertheless, the northern region of the country is aiming towards 100 % renewable hydrogen in its [regional strategy](#).

MAIN REFERENCES

Kingdom of the Netherlands, [Integrated national energy and climate plan](#), November 2019.

European Commission, Assessment of the final national energy and climate plan of the Netherlands, [SWD\(2020\) 918 final](#).

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