Climate action in France

Latest state of play

The EU’s binding climate and energy legislation for 2030 requires Member States to adopt national energy and climate plans (NECPs) for the 2021-2030 period. In October 2020, the European Commission published an assessment for each NECP. France submitted its final NECP in April 2020. A high proportion of French people (61%) expect national governments to tackle climate change.

In 2019, France accounted for 459 million tonnes of CO2-equivalent (MtCO2e) in total emissions excluding land use, land-use change and forestry (LULUCF) and including international aviation, generating 12% of the EU-27 total greenhouse gas (GHG) emissions. Since 2005, the country has reduced its emissions at the same pace as the EU average. Over the 2005-2019 period, French emissions per inhabitant decreased faster than the EU average. The carbon intensity of the economy fell by 32% and remained among the lowest in the EU while GDP increased by 17%. In 2019, the transport, residential, tertiary and agriculture sectors accounted for around 60% of France’s total emissions. In order to reduce its energy dependency, France still maintains a high share of nuclear energy in its national energy mix. However, between 2005 and 2019, the share of energy from renewable sources rose steadily, reaching 17% in 2019; this is still 16 percentage points (pp) below the 2030 national target of 33% however.

Energy efficiency, along with renewables, is a cornerstone of the French decarbonisation strategy, targeting in particular the buildings and transport sectors.

Emissions and demographics

In 2019, according to Eurostat, there were about 67177636 people living in France representing 13% of the EU-28 population.

Since 2005, total GHG emissions per inhabitant in France have been under EU average values. Between 2005 and 2019, they fell from 9.1 tonnes to 6.8 tonnes, a reduction of 25%, while in the EU-27 the average value decreased by 21%. In the same period, the French population grew by 7%.

Since 2005, the French population has been increasing steadily and this tendency is expected to continue in the long term. Given the country’s efforts to reduce its GHG emissions, per-capita emissions are expected to decline.

This briefing is one in a series which will cover all EU Member States.

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France’s progress so far

In 2019, France generated 459 MtCO₂e in total emissions (excluding LULUCF and including international aviation) representing 12.2% of the EU total emissions. Following the EU-27 trend, France’s emissions fell by 19.6% compared with 2005. Taking into account the sink functions of its LULUCF sectors, in 2019 the country had net emissions of 433 MtCO₂e – a reduction of 17.7% compared with 2005.

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

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

France has always reported net carbon removals from its LULUCF sectors, owing to forest management, but its LULUCF sink capacity reduced by 42% over the 2005-2019 period. The NECP identifies critical issues related to LULUCF, e.g. the impact of increased use of biomass on the carbon sink and forest adaptation to climate change. Several measures, including cross-sectoral ones, are planned, such as smart and sustainable forest management promoting carbon sequestration in forestry ecosystems and storage of carbon in wood and waste wood products. Although sink capacity from forest management is expected to further drop by 2030, France has long-term goals to increase carbon sinks across the whole sector by 2050. The reference scenario points to forests and wood products becoming the main GHG sinks in 2050.

Carbon intensity

In 2019, the carbon intensity of the French economy was among the lowest in the EU, remaining below the EU average. For each euro generated in the economy, the country emitted 195 g of CO₂ equivalent in 2019 against 285 g in 2005.

Between 2005 and 2019, the intensity of emissions per unit of GDP decreased by around 32%, following the EU trend. Over the same period, according to Eurostat, real GDP grew by about 18%, with fluctuating annual growth, while the GHG emissions decreased with slight variations.

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

Data source: Eurostat Nama_10_gdp [CLV15MEUR] and EEA (GHG trends, GHG estimates, UNFCCC reporting).
Emissions across the economy

The share of emissions from energy industries is low in France owing to its large nuclear electricity production capacity.

Transport is the largest emitting sector, with a share of total emissions of 29% in 2019. Adding emissions from agriculture (16%), the share of the two sectors represented nearly half of France’s emissions in 2019. According to projections, with existing policies and measures emissions from transport and agriculture will decrease progressively between 2020 and 2050.

In 2019, the residential buildings and tertiary sector, the main components of the ‘other emissions’ category, was the second largest emitter, with a 22% share of total emissions. Buildings’ GHG emissions come from heating, cooking, and hot water uses, for which gas and fuel oil are main sources of energy. Decarbonising this sector therefore involves energy efficiency improvements and enhanced use of renewables.

Figure 4 – Total GHG emissions by sector (MtCO₂) (rounded data)

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

Current policies and measures to decarbonise transport are geared towards improving the energy efficiency of road transport, encouraging the development of low-emission vehicles, promoting the development of biofuels and other alternative fuels (hydrogen and LNG), and supporting transport modal shifts. To achieve carbon neutrality by 2050, the NECP identifies additional measures to make this sector carbon-free, mainly through electromobility, and biofuels and biogas. The use of private electric and plug-in hybrid electric vehicles will be encouraged by tax incentives, a ‘bonus/penalty’ system and recharging facilities. A mix of renewable gas, electricity, and biofuels is envisaged for goods transport as well as a transition towards biofuels in aviation. The modal share of cycling and public transport is expected to increase strongly, along with carpooling.

In the agriculture sector, France is counting on better management of fertilisers, reduction of emissions from livestock manure, development of renewable energies of agricultural origin and bioenergy from forest residues, and improvement of the energy performance of agricultural holdings. Additional measures, such as applying an agro-ecological approach and high-precision agriculture, and acting on the carbon destocking of agricultural soils to reverse the trend, are also planned. In the forestry sector, the use of wood products with long lifetimes (e.g. in construction) and the production of biomass from end-of-life wood products are expected to increase by 2050.
Effort-sharing sectors

EU effort-sharing legislation covers emissions from sectors not included in the EU emissions trading system (ETS), such as transport, buildings, small industry, agriculture and waste. It establishes binding GHG emission targets for each Member State and sets up annual emissions allocations (AEAs). The Effort-sharing Decision (ESD) set the national targets up to 2020, while the Effort-sharing Regulation (ESR) sets them up to 2030. The aim is to achieve a collective reduction of 10 % by 2020 and 30 % by 2030 in non-ETS sectors (compared with 2005).

Figure 5 – France’s emissions under the Effort-sharing Decision/Regulation (MtCO2e)

Data source: Commission ESD allocation, EUR-Lex and EEA, figures display rounded data.

Under the ESD, France had to achieve a reduction of 14 % while under the ESR, the reduction has to be of 37 %. Since 2013, the country has remained within its AEAs and expects to meet the 2020 ESD commitments under the existing measures. As regards the ESR target, according to the Commission France will miss it by 11 pp. However, the country aims to over-achieve on its 2030 target by 4 pp, by applying additional measures, e.g. a tax on hydrofluorocarbons, applicable from 2023, and progressively increasing the carbon component of the energy cross-sectoral tax by 2030, which is still at its 2018 level, following a popular outcry.

France is planning to renovate 370 000 residential buildings a year between 2015 and 2030 by increasing the support for energy efficiency investments. It also plans annual energy savings for public buildings in the 2021-2030 period. From January 2022, a new regulation, RE2020, aiming to reduce the carbon impact of construction, will set up a GHG emissions threshold for new builds, based on the building’s entire lifecycle, and a voluntary label to encourage stakeholders to overachieve on the regulation’s objectives.

The EU law on CO2 emissions from new passenger cars sets targets for EU fleet-wide average CO2 emissions. Between 2007 and 2019, CO2 emissions from new cars in France decreased and since 2010, they have been below the EU target of 130 g CO2/km set in 2015 and applied until 2020. In 2019, average emissions were 20 % above the new EU-wide emissions target of 95 g CO2/km applied from 2021. Therefore, car manufacturers are required to comply with the new standard, while purchases of the most efficient vehicles are encouraged by various measures, for instance, ‘conversion premiums’.

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

Data source: EEA and Eurostat sdg_12_30.
Energy transition

Renewable energy

Between 2005 and 2019, the share of energy from renewable energy sources (RES) in France’s gross final consumption rose by 7.6 pp, reaching 17.2% in 2019 – 5.8 pp below the national 2020 target of 23%. The contribution of RES to energy needs over this period centred on the heating and cooling sector. In the electricity sector, the share of wind and solar energy grew slightly but steadily, hydropower remaining the main source. The contribution of transport biofuels, reported as sustainable since 2012 (France transposed the EU law in 2011), remained stable from 2014 to 2019.

Figure 7 – Renewable energy share of gross final energy consumption

The EU has set a binding target of a minimum 32% RES share by 2030. To achieve its contribution of 33%, France estimates that by 2030, renewables should account for at least 40% of electricity production, 38% of final heat consumption, 15% of final fuel consumption and 10% of gas consumption. The NECP outlines the cross-sector and specific measures envisaged.

Energy efficiency

In 2019, France’s primary and final energy consumption figures were still above the 2020 targets. The national contribution to the EU’s 2030 target is 202.2 Mtoe for primary energy and 120.9 Mtoe for final energy, considered by the Commission as modest and sufficient respectively. As regards its 2030 targets, France has to achieve a reduction of 14% for primary and of 17% for final energy consumption. The country has set a savings goal, 65.2 Mtoe for the 2021-2030 period, to be achieved through an energy efficiency obligation scheme, covering all end-user sectors.

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

Data source: Eurostat (shares tool), NECP 2030 targets and EEA.
Outlook: Plans and policies

By 2030, France aims to reduce its total GHG emissions (excluding LULUCF) by 40%, compared with 1990. The revised national low carbon strategy sets out the objective, enshrined in law, of achieving carbon neutrality (net zero emissions) by 2050. To this end, the strategy fixes GHG caps over five-year periods – carbon budgets – to define the target trajectory for emissions reductions and to fix sectoral targets. France has also adopted a multiannual energy plan identifying energy-related action to achieve its climate objectives. France has therefore planned two major cross-sector approaches and a range of measures in several sectors to reduce its final energy consumption.

France’s long-term renovation strategy for decarbonising the building stock sets out regulatory measures and economic incentives across all levels of governance. The main objective is to reduce buildings’ GHG emissions by 49% by 2030 compared with 2015 and to achieve carbon neutrality by 2050. The long-term renovation strategy establishes 10-year milestones to reduce energy consumption in both the residential and tertiary sectors. Over the past 10 years, 190 000 dwellings have been renovated to a ‘low-energy building’ standard fixed by law. By January 2028, all dwellings with a high energy consumption should have been renovated. By 2050, the aim is to achieve an energy performance in line with the standard across the entire building stock, by renovating 700 000 residential buildings per year. The Citizen’s Climate Convention even proposed energy renovation of all buildings by 2040, representing one million dwellings a year.

The Citizen’s Climate Convention brought together 150 people, chosen at random, to define a series of measures to achieve the above-mentioned target by 2030 in a spirit of social justice. The Convention held debates and hearings over eight months before making its 149 proposals to the government. The Convention’s proposals resulted in a draft law referred to as the ‘climate and resilience’ law, which has been voted in the French National Assembly. The debate in the Senate began on 14 June 2021.

MAIN REFERENCES


European Commission, Assessment of the final national energy and climate plan of France, SWD(2020) 909 final, October 2020.