



National Low Carbon Strategy

The National Low Carbon Strategy (Stratégie Nationale Bas-Carbone SNBC) outlines the French roadmap for reducing greenhouse gas emissions (GHG). It concerns all sectors of activity and must be endorsed by everyone: citizens, communities and businesses.

- Two goals:
 - Achieving **carbon neutrality** by 2050;
 - **Reducing the French people's carbon footprint.**
- It provides guidelines to **enable the transition to a low carbon economy** in all sectors of activity.
- It sets carbon budgets, emission caps not to be exceeded per period of five years until 2033.



Carbon neutrality

It is a balance between:

- **GHG emissions throughout the country;**
- **carbon absorption:**
 - by the ecosystems managed by people (forests, agricultural soils, etc.);
 - by industrial processes (carbon capture and storage or reuse).



Factor 6

Carbon neutrality means dividing our GHG emissions by at least 6 by 2050, compared to 1990.



Why aim for carbon neutrality in 2050?

- **It is essential** to be consistent with France's commitments under the Paris Agreement and to ensure a healthy future for present and future generations. It is an objective enshrined in the law.
- **It is a desirable objective:** the low-carbon transition improves the quality of life (quality of the environment, health, etc.) and is positive for employment without altering economic growth.



Carbon footprint

This refers to the emissions associated with the consumption of the French people as a whole, including those related to the production and transport of imported goods and services.



The SNBC sector-based guidelines



BUILDING SECTOR

GHG EMISSIONS REDUCTION TARGETS COMPARED TO 2015
2030: -49%
2050: **Complete decarbonisation**

HOW?

- Use the most suitable carbon-free energy sources for each type of building.
- Improve the energy efficiency of buildings (shell and equipment): new environmental regulations for new buildings in 2020 and for the renovation of tertiary buildings; 500,000 renovations per year for the existing fleet, targeting energy sieves.
- Encourage behavioural shifts for more moderate use.
- Promote construction and renovation products and equipment with a lower carbon footprint (from the circular economy or bio-based) and high energy and environmental performance throughout their life cycle.



TRANSPORT

GHG EMISSIONS REDUCTION TARGETS COMPARED TO 2015
2030: -28%
2050: **Complete decarbonisation** (with the exception of domestic air transport).

HOW?

- Improve the energy performance of light and heavy vehicles, with a target of 4l/100 km in 2030 for private combustion vehicles.
- Decarbonize the energy consumed by vehicles and adapt infrastructures to reach 35% of sales of new electric or hydrogen-powered passenger cars in 2030 and 100% in 2040.
- Control the growth in demand for transportation by promoting telecommuting, car sharing, short routes and optimising the use of vehicles.
- Encourage a shift towards the least emitting modes of passenger and freight transport (public transport, train) and support active modes (cycling, etc.).



AGRICULTURE

GHG EMISSIONS REDUCTION TARGETS COMPARED TO 2015
2030: -19%
2050: -46%

HOW?

- Develop agro-ecology, agro-forestry and precision agriculture, in particular to reduce surpluses of nitrogen fertilizers to a minimum.
- Develop the bio-economy to provide energy and materials that emit less GHG to the French economy.
- Change the demand for food (better quality or organic products, taking into account nutritional recommendations) and reduce food waste.



FORESTRY AND SOILS

GOAL
2050: maximising carbon sinks (sequestration in soils, forests and wood products)

HOW?

- Increase carbon storage in agricultural soils through changes in practices.
- Develop active and sustainable forest management, allowing both the adaptation of the forest to climate change and the preservation of carbon stocks in the forest ecosystem.
- Expand afforestation and reduce land clearing.
- Maximise carbon storage in wood products and the use of wood products for long-life uses such as construction,
- Reduce land take (soil artificialisation)

What is a carbon sink?

It is a natural ecosystem (forests, agricultural land, etc.) or artificial system that captures a significant amount of carbon dioxide (CO₂).



PRODUCTION OF ENERGY

GHG EMISSIONS REDUCTION TARGETS COMPARED TO 2015
2030: -33%
2050: **Complete decarbonisation**

HOW?

- Managing energy demand through energy efficiency and moderation.
- Decarbonizing and diversifying the energy mix, in particular through the development of renewable energies and the phasing-out of coal in power generation (from 2022) and heat production.

The evolution of the energy mix and the energy efficiency objectives are determined in the Multi Annual Energy Plan (PPE). The PPE is based on the same baseline scenario as the SNBC and is compatible with its guidelines.



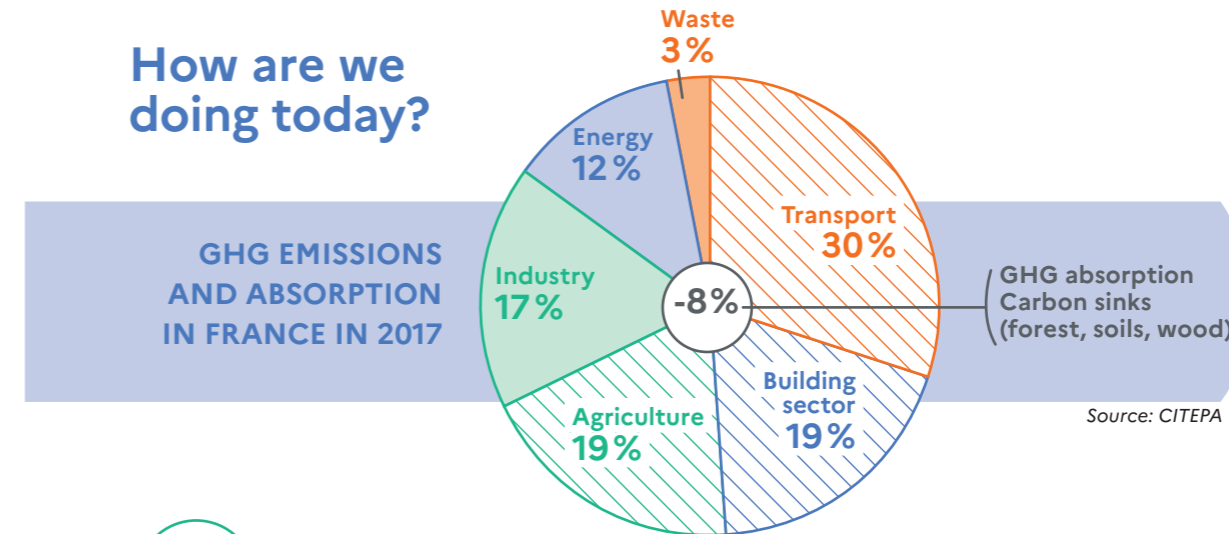
INDUSTRIAL SECTOR

GHG EMISSIONS REDUCTION TARGET COMPARED TO 2015
2030: -35%
2050: -81%

HOW?

- Support companies in their transition to low-carbon production systems (development of decarbonisation roadmaps, financing tools). Support the emergence of means of production of key technologies in the transition in France.
- Ramp up research and development of low-carbon manufacturing processes.
- Heavily improve energy efficiency and the use of carbon-free sources of energy.
- Manage demand in materials, by developing the circular economy.

How are we doing today?



WASTE

GHG EMISSIONS REDUCTION TARGETS COMPARED TO 2015
2030: -35%
2050: -66%

HOW?

- Prevent the generation of waste right from the product design phase (eco-design, polluter pays principle).
- Promote circular economy, reuse and repair of products among consumers.

- Improve waste collection and management by developing recovery (material then energy).
- Increase the efficiency of treatment systems, especially for wastewater and organic and non-hazardous waste.

For this sector, the strategy is the same as in the 2018 Circular Economy Roadmap. The anti-waste law for a circular economy, voted at the beginning of 2020, breaks this roadmap down and strengthens it with additional measures.

THE SNBC ALSO INCLUDES GOVERNANCE GUIDELINES AND CROSS-CUTTING GUIDELINES



National and territorial governance



Footprint carbon



Economy



Research and innovation



Urban planning and development



Education Legal commitment of citizens



Employment Education & Training



Carbon neutrality: how do we get there?

- 1. Making energy production fully carbon-free by 2050.**
- 2. Halving energy consumption through:**
 - the energy efficiency of installations;
 - more moderate lifestyles.
- 3. Heavily reduce non-energy emissions:**
 - in the farming sector (-38% compared to 2015);
 - in industrial processes (-60% compared to 2015).
- 4. Increase and safeguard carbon sinks:**
 - soils;
 - forests;
 - products from the bio-economy (straw, wood for construction, etc.);
 - carbon capture and storage technologies.



The carbon footprint: how to reduce it?

Better managing the carbon content in imported products:

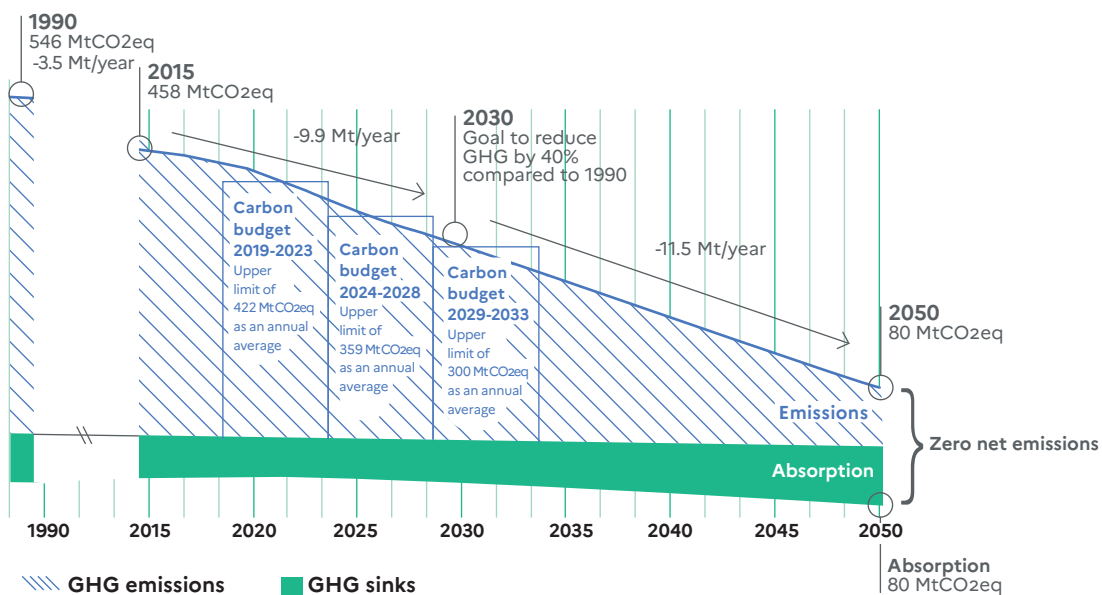
- by producing in France when this reduces greenhouse gas emissions;
- by consolidating standards and requirements at the international level (carbon pricing, etc.).

Standardising the calculation and display of the carbon footprint via:

- emission balances of products, services and organisations taking into account indirect emissions;
- the development of a low-carbon culture of all citizen-consumers and businesses.



Evolution of GHG emissions and sinks on French territory between 1990 and 2050 (in MtCO₂eq). CITEPA 2018 inventory and revised SNBC scenario (carbon neutrality)



The SNBC is based on a prospective scenario of achieving carbon neutrality by 2050, without making any technological bets. This makes it possible to define a credible path for the transition towards this objective, to identify technological obstacles and to anticipate innovation needs.

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