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RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE L'ÉCOLOGIE,
DU DÉVELOPPEMENT
DURABLE
ET DE L'ÉNERGIE

Stratégie NATIONALE BAS-CARBONE

"An opportunity to create jobs and make tangible improvements to daily life while taking better care of our planet."

Ségolène Royal

Minister of Ecology, Sustainable Development and Energy

The French national low-carbon strategy (SNBC), established by the Energy Transition Act, defines how to reduce greenhouse gas (GHG) emissions at the national level. It orchestrates the implementation of the transition towards a low-carbon economy.

On November 18, the Government has adopted the first three carbon budgets to cover the 2015-2018, 2019-2023 and 2024-2028 periods. The strategy that was annexed, includes indicative targets by sectors of activity.
At the end of each period, an independent experts committee will assess the result.

At the grassroots level, territorial approaches (e.g. "Positive-energy territories for green growth" and "Zero waste, zero wastage territories", etc.) need to be supported and promoted, with the entire country being involved through the Regional and local climate, air and energy plans, which are efficient ways to adapt the SNBC.

DEFINITION

CARBON BUDGETS: *they define the upper limits for greenhouse gas emissions that should not be exceeded on average at the national level.*

WHAT HAS BEEN THE FRENCH *policy until now?*

Due to the large share of nuclear and hydraulic production of electricity in particular, France has one of the lowest per capita CO_2 emission rates of any developed country.

Despite the national greenhouse gas emissions in 2013 being 11 % below the 1990 level, the carbon footprint from French citizens' consumption could only be stabilized. This can be explained by the concurrent rise in emissions associated with imports.

The policies implemented thus far to combat climate change should allow us to achieve our targets in 2020.

HOW IS FRANCE PLANNING TO REDUCE ITS *greenhouse gas emissions?*

Beyond 2020, France has set itself even more ambitious greenhouse gas reduction targets, through the Energy Transition Act in particular:
- - 40 % of its total emissions in 2030 compared to 1990
- - 75 % of its total emissions in 2050 compared to 1990 ("factor 4" scenarios)

Although the current greenhouse gas reduction rate (approximately -8 Mt of emissions per year between 2005 and 2013) is heading in the right direction, even greater reductions in emissions will be required —corresponding to 9-10 Mt per year over the next 35 years—in order to achieve the Factor 4 target by 2050.

The rate of reduction must be stepped up, without jeopardising the economic development of France, or merely exporting these emissions by relocating the most emission-intensive activities. The key issue at stake here is France's carbon footprint.

Huge investments are required and it is essential to rethink our modes of production and consumption.

HOW CAN WE ACHIEVE A LOW-CAR

IN TRANSPORT

28 %* Share of transport in greenhouse gas (GHG) emissions.

The target

- **Reduce GHG emissions by 29 %** by the 3rd carbon budget period (2024-2028) compared to 2013 and by at least two-thirds between now and 2050.

How?

- **Improve the energy efficiency of vehicles** (achieve an average fuel economy of 2 litres /100 kilometres for vehicles sold in 2030).
- **Speed-up the development of energy vectors** with the lowest GHG emissions intensity: implementation of low-emission vehicle quotas in public fleets, including buses, and a development strategy for recharging infrastructures (electric recharging terminals, gas delivery units, etc.).
- **Curb the demand for mobility** (town planning, teleworking, carpooling, etc.).
- **Promote alternatives to the private car** (tax incentives for cycling mobility, development of public transport).
- **Encourage modal shift** for freight toward train and ship.

DEFINITION

QUOTAS IN PUBLIC FLEETS: *the renewal of public transport vehicle fleets must include at least 50% of low-emission coaches and buses from 2020 and from 2018 for the RATP (Paris public transport system).*

IN THE BUILDING SECTOR

20 % Share of the building sector in greenhouse gas (GHG) emissions. **25%** if we include associated emissions (production of electricity and heat for buildings).

Objectives

- **Reduce emissions by 54 %** by the 3rd carbon budget period (2024-2028) compared to 2013 and by at least 87% by 2050.
- **Cut energy consumption by 28 %** by 2030 compared to 2010.

How?

- **Implement the 2012 thermal regulation** and in a few year the next regulation which will take into acount impacts on the environment based on life-cycle analyses.
- **Renovate entirely the stock of buildings to high standards of efficiency** in 2050.
- **Speed up the management of energy consumption** (implementation of eco-design, information about hidden energy consumption, identification of the least efficient appliances, development of connected smart meters, etc.).

DEFINITION

LIFE-CYCLE ANALYSIS: *analysis of the environmental impacts (including greenhouse gas emissions) of a product during its life cycle, from the extraction of the raw materials through to its end-of-life processing (landfilling, recycling, etc.).*

IN AGRICULTURE AND FORESTRY

19 % Share of agriculture in greenhouse gas emissions. Also France will not neglect to take into account CO_2 emissions associated with changes in agricultural land use. The forestry and timber sector is unusual in that capture and substitution effects allow for the offsetting of **15 to 20%** of the national emissions.

Objectives

- **Reduce agricultural emissions by more than 12 % by the 3rd carbon budget period compared to 2013 and by half** by 2050 through the agro-ecology project.
- **Store and conserve carbon** in soils and biomass.
- **Consolidate** material and energy substitution effects.

How?

- **Step up the implementation of the agro-ecology project:**
  > develop crop-growing and livestock-rearing practices with lower emissions per unit of value (reduce the national nitrogen surplus by optimising the use of synthetic nitrogen fertilisers, recover energy from effluents, etc.)
  > deploy production techniques that are adapted to climate change (soil coverage and development of agroforestry, etc.).
- **Promote a very significant increase in the amount of wood harvested** to support the development of biosourced products while carefully monitoring its sustainability and the impacts on biodiversity, soils, the air, water and landscapes.

DEFINITIONS

SUBSTITUTION EFFECTS: *emission reductions obtained by using biosourced products to replace products whose production or use emits high levels of GHGs.*

BIOSOURCED PRODUCTS: *industrial non-food products obtained from renewable raw materials derived from biomass (plants in particular).*

*rounded-off **shares** of emissions for 2013 in Metropolitan France and in French Overseas *départements* in the "Climate Plan" format.
The sum of the exact shares of sectoral emissions is equal to 100%.

RBON ECONOMY IN EACH SECTOR?

IN INDUSTRY

18 % Share of industry in greenhouse gas emissions, **75 %** of these emissions are subject to the European Union emissions trading scheme (EU ETS).

The target

- **Cut emissions by 24 %** by the 3rd carbon budget period (2024-2028) and by 75% between now and 2050.

How?

- **Control the demand for energy and materials** per product, particularly through profitable investments and recognised, high-quality energy efficiency services.
- **Promote the circular economy** (re-use, recycling and energy recovery) and the use of materials that generate fewer greenhouse gas emissions, such as biosourced materials.
- **Reduce the share of energy sources** with high GHG intensity.

DEFINITION

EUROPEAN UNION EMISSIONS TRADING SCHEME (EU ETS): *a system for limiting and exchanging GHG emission rights, which entered into force within the European Union in 2005 in the context of the ratification of the Kyoto Protocol. It covers the electricity sector and the main industrial sectors.*

IN ENERGY

12 % Share of energy production in greenhouse gas emissions.

The target

- **Keep emissions below the 2013 level** during the first three carbon budget periods (-4 % on average) and **reduce energy production-related emissions** by 96% between now and 2050, compared to the 1990 level.

How?

- **Speed up improvements in energy efficiency** (Factor 2) by reducing the carbon footprint of the energy mix by 2050.
- **Develop renewable energy sources and avoid investing in new thermal plants** which would be contrary to this policy in the medium term.
- **Improve the flexibility of the system** in order to increase the share of renewable energy sources.

DEFINITION

ENERGY MIX: *breakdown of the energy production by primary energy sources (nuclear, coal, oil, wind energy, etc.), generally expressed as a percentage.*

IN WASTE

4 % Share of waste in greenhouse gas emissions.

The target

- **Reduce emissions by 33 %** by the 3rd carbon budget period (2024-2028).

How?

- **Reduce food waste** in order to limit indirect GHG emissions.
- **Prevent the production of waste** (eco-design, extension of product life spans, re-use, reduction of wastefulness, etc.).
- **Increase the ressource recovery through the recycling of waste** and the generalisation of the sorting of biowaste at the source by 2025.
- **Reduce diffuse methane emissions** from landfill sites and purification plants.
- **Ultimately stop incineration** without energy recovery.

DEFINITION

ECO-DESIGN: *incorporation of environmental protection from the outset in the design of goods or services. Its aim is to reduce the environmental impacts of products throughout their life cycle, from the extraction of raw materials to their production, distribution, use and end of life.*

WHAT ARE THE BENEFITS *of a low-carbon economy?*

THE NATIONAL LOW-CARBON STRATEGY HAS TWO MAJOR GOALS.

1. To make the reduction of the carbon footprint a key consideration in economic decisions.
This means taking account of life cycle analyses in order to limit the environmental impacts of the production and consumption of goods, and promoting an approach that favours "GHG emission-neutral" territories .

2. To redirect investments in support of energy transition.
To support this transition, the public authorities are taking action at many levels:

- **by developing quality labels** and indices relating to key environmental issues;
- **by guaranteeing the use of public funds** (Energy Transition Fund, etc.) and the savings of French citizens (Sustainable development savings account, etc.) in support of the energy transition;
- **by gradually increasing the share of carbon in domestic** taxes on energy consumption without increasing the overall tax burden.

WHAT WILL BE THE ECONOMIC IMPACTS FOR FRANCE?

Energy transition and the development of a low-carbon economy will allow France to:

- **support growth and consequently the GDP** throughout the next two decades;
- **increase the number of jobs** (creation of between 100,000 and 350,000 additional jobs on average between 2015 and 2035).

DEFINITION

CARBON FOOTPRINT: ***this index defines the greenhouse gas emissions linked to goods consumed in France (whether produced in France or imported from abroad). This approach complements the monitoring of emissions directly generated by activities within the national territory (the latter being covered in the carbon budgets).***

In short, THE TRANSITION TOWARD A LOW-CARBON ECONOMY MEANS:

- **obtaining energy saving** in all sectors
- **developing the use of renewable energy sources**
- **turning towards the bio-economy** (efficient use of wood and agricultural residues)
- **boosting the circular economy** (eco-design, recycling and re-use).

THE ENERGY TRANSITION for the GREEN GROWTH

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