NOTRE EUROPE – Jacques Delors Institute
EUROPEAN ELECTIONS
June 6-9, 2024

Towards climate neutrality: what transformations by 2030 under the FitFor55?

dec. 2019

EUROPEAN GREEN DEAL

▶ aims to transform the EU into a fair and prosperous society, with a modern, ressource efficient and competitive economy*

Make Europe the first continent to achieve **climate neutrality by 2050**, as set out in the European climate law, while preserving ecosystems and reducing pollution.

▶ Reforming all sectors of the European economy (transport, energy, construction, industry, etc.) through more than **75 pieces of sectoral legislation** designed to completely rethink the way we produce, consume and travel.

The European Commission has presented the so-called:

July 14th 2021

FITFOR55 PACKAGE

a series of **13 interdependent legislative proposals**

▶ To enable the European Union to **reduce its netgreenhouse gas emissions by at least 55% by 2030** compared with 1990.

Broadly speaking, the FitFor55 has several pillars:
1. renewable energies and energy efficiency
2. emissions reduction and carbon pricing
3. sector-specific regulations

*Communication from the Commission, "The Green Deal for Europe", 11 December 2019.

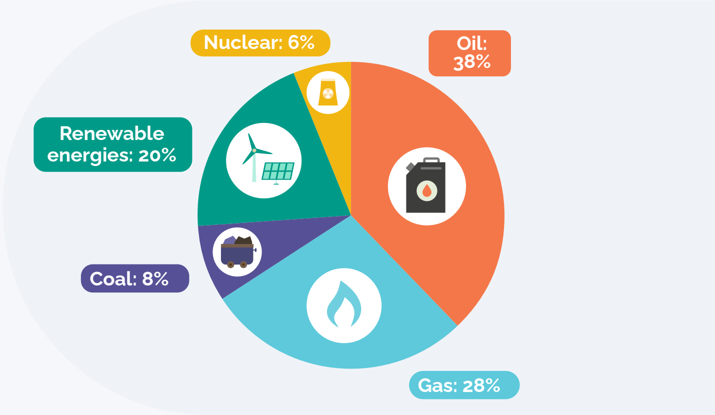
1 Renewable energies and energy efficiency

RENEWABLE ENERGY DIRECTIVE

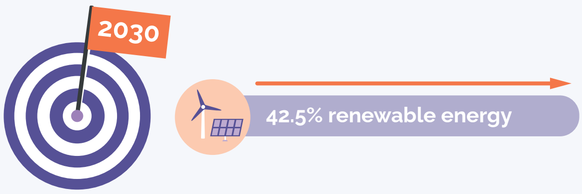
2019

Fossil fuels (oil, gas and coal) still dominate the EU's energy mix. To replace them, it is necessary, among other measures, to **double the current share of renewable energy sources by 2030**.
(22% of the energy mix in 2021)

"European Environmental Agency, 2023. European energy mix", Infography.



A binding European target of **42.5% renewables in gross final energy consumption by 2030**, covering the following sectors:



Electricity generation
e.g. solar, wind, hydro...

Renewable heat
e.g. heat pumps, solar thermal energy

District heating and cooling which provides for a gradual increase in the supply of renewable energies

Transport
e.g. advanced biofuels, biogas... with either 29% of final energy consumption or a reduction in the share share of its carbon intensity by 14.5%.

Industry, where 40% of the hydrogen consumed will have to be renewable (less for Member States with an electricity mixthat is already low-carbon via nuclear power).

Buildings, with a target of 49% renewable energy in the sector by 2030

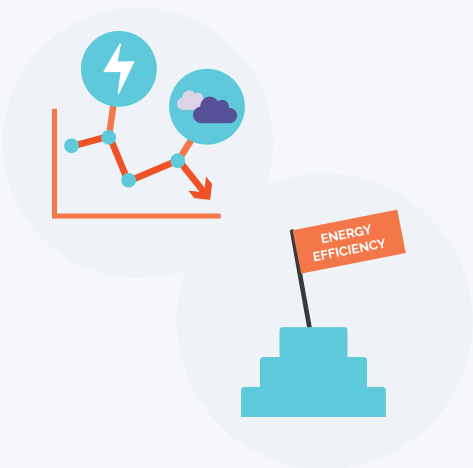
For its part, France is the only EU Member State that did not meet its 23 renewable energy target in 2020 (19,1%) and will need to accelerate to catch up (20.7% by 2022).

ENERGY EFFICIENCY DIRECTIVE

Reducing energy consumption by using energy more efficiently:

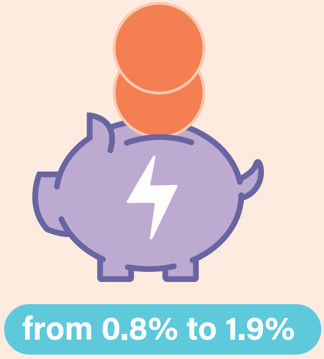
The revision of the Energy Efficiency Directive establishes for the first time the principle of "**Energy efficiency first**" as a fundamental pillar of European energy policy, giving it legal force.

- This means giving priority to energy efficiency options in elevant decisions (policies, investments).



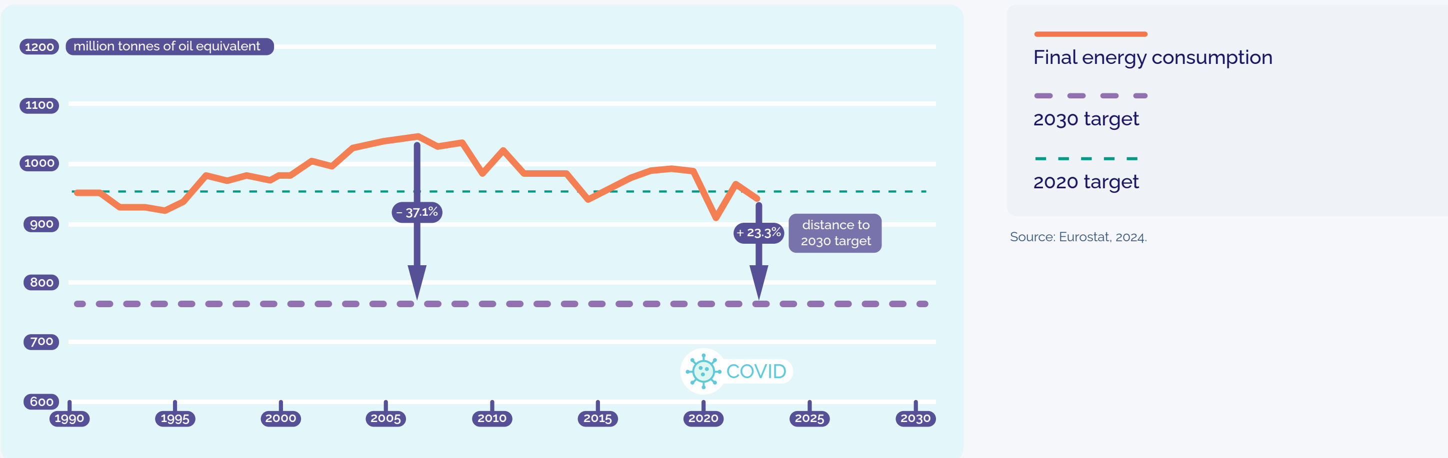
Binding EU target for 2030: to reduce final energy consumption by 11.7% by 2030 compared to projections in the 2020 scenario, with indicative national targets.

Annual national energy savings obligations **will double** between 2021 - 2023 and 2028 - 2030



Member States are **encouraged** to provide technical and financial support to facilitate energy efficiency actions aimed at protecting people facing fuel poverty, vulnerable people and people living in low-income households.

Gap between 2030 EU final energy consumption target

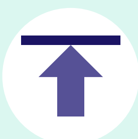


Source: Eurostat, 2024.

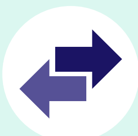
2 European carbon markets and related instruments

EUROPE'S FIRST CARBON MARKET (ETS1)

The EU carbon market is a system for trading rights to pollute.
Based on the "**polluter pays**" principle, it relies on :



A cap that decreases over time and sets the amount of greenhouse effet gases that can be emitted by the 10,000 companies concerned (energy production, energy-intensive industry, intra-European commercial aviation).



The trading of emission allowances on the market at a carbon price defined by the market, which forces producers to integrate the cost of CO_2 into their production costs.

Emissions reduction target covered

2005 — CO_2 -62% — 2030

Gradual reduction in free allowances emissions in the following sectors covered by the carbon border adjustment mechanism.

Compared with 2005, an increase in allowances (around 3%) from the current carbon market allocated to the Innovation Fund, which finances innovation projects in low-carbon technologies.

Progressive extension of the current carbon market to maritime transport emissions

2024 - 2026

Further reading:
Lehne J., Moro E., Nguyen PV., Pellerin-Carlin T., "The EU ETS: from cornerstone to catalys - the role of carbon pricing in driving green innovation" 2021. Jacques Delors Institute.
Kumar P., Vangenechten D., Pellerin-Carlin T., Nguyen PV., Besnainou J., "Can a minimum price on carbon accelerate the adoption of clean technologies?", 2022. Jacques Delors Institute.

CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

Often shortened to "carbon border tax", the CBAM is a new mechanism that adds a CO_2 price to certain foreign imports that will eventually be aligned with that of the EU ETS.

Objective: to prevent the relocation of European companies (carbon leakage) whose carbonbased production is subject to an additional cost based on greenhouse gas emissions, unlike their third countries competitors. The mechanism concerns imports from:

Electricity

Hydrogen

Cement
- TURKEY 37%
- UKRAINE 8%
- BELARUS 8%

Fertilizer
- RUSSIA 36%
- EGYPT 11%
- ALGERIA 10%

Iron and steel
- CHINA 14%
- RUSSIA 13%
- TURKEY 9%

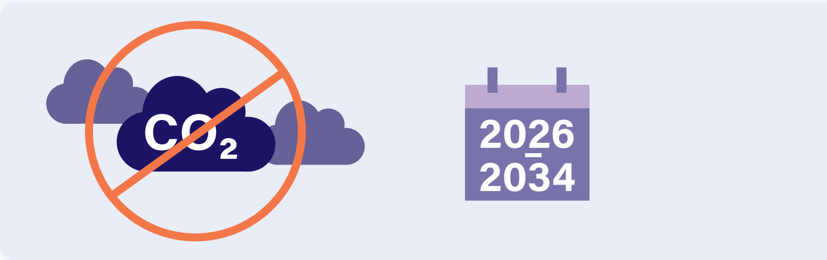
Aluminium
- NORWAY 18%
- RUSSIA 14%
- CHINA 9%

To remain competitive in the face of international competition:

- companies benefited from free allowances on the first carbon market (ETS1) which were rights to pollute. They will gradually disappear between 2026 and 2034.

The CBAM aims to :

- foster third countries (such as those listed above) to set up a similar system such as the future CBAM in the United Kingdom (2027) or the carbon price in China (2021).



Further reading: Pellerin-Carlin T., Vangenechten D., Lamy P. G Pons G. 2022. "No more free lunch. Ending free allowances in the EU ETS to the benefit of innovation", Policy brief, Jacques Delors Institute, E3G G Europe Jacques Delors, February 2022.

SECOND EUROPEAN CARBON MARKET (ETS2) AND SOCIAL CLIMATE FUND

2027: launch of a new carbon market

*as well as small industry not covered by the first carbon market

Buildings (residential and commercial heating)*

Road transport (cars, buses, company fleets)

Several safeguards:

In the event of high energy

- launch would be postponed to 2028.

A mechanism is intended to limit the price of CO_2 emissions to around €45/tCO2 until 2030. Member States with an equivalent national carbon price will be able to apply to the Commission for an exemption from this mechanism until 2030.

The first valuation is scheduled for January 1st 2028:

- paves the way for a possible revision.

Part of the revenue will fuel a new **Social Climate Fund**

Launched in 2026

Aim: to help vulnerable households

Member States must develop specific plans (Social Climate Plans) and submit them to the Commission by 2025 for assessment and validation.

€65 billion

Budget 2026-2032

Social compensation measures (energy bills support) or green investments (renovation subsidies).

SOCIAL CLIMATE FUND IN FRANCE

1 billion euros a year

10% of the total envelope

2 FRANCE

1 POLAND

3 ITALY

Further reading: Defard C., Thalberg K.. 2022. "An inclusive social climate fund for the just transition", Policy brief, Jacques Delors Institute, January 2022.

3 Sector-specific regulations (mobility, buildings, land use)

EFFORT SHARING REGULATION (ESR)

National emission reduction targets for sectors initially not covered by the carbon market

60% of European domestic emissions

Domestic transport (excluding aviation)

Buildings

Agriculture

Small-scale industry

Waste

2030

-40%

Binding national targets that are different for each Member State from -10 % to -50% reduction in emissions for the sectors covered

Member States are free to choose methods and priorities. Example: measures to promote public transport, renovate buildings, or improve the efficiency of heating systems.

-37% → -47.5% reduction in emissions

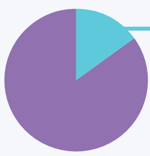
European legislation that will guide Member States' efforts in the areas of mobility, buildings and land use.

REGULATIONS ON CO_2 EMISSION PERFORMANCE STANDARDS FOR CARS AND VANS

CO_2 emission performance standards were introduced in:

2009

2011



Cars and vans are responsible for 15% of European emissions

New cars: a 55% emissions reduction target from 2030 to 2034 (compared to 2021 level) and 50% for new vans.

À pStarting 2035, no more new internal combustion vehicles or vans to be sold

- 5 years earlier compared to French current national regulation

Newly adopted regulation doesn't mean that internal combustion engines will disappear from the roads in 2035, as it will still be possible to drive an internal combustion engines or buy one on the second-hand

A review clause for 2026:

- the Commission shall review "the effectiveness and impact of the Regulation" and "assess the progress made (...) taking into account the technological developments". The aim is to assess whether the target date of 2035 is still relevant and, if not to propose amending the regulation.

REGULATION ON THE DEPLOYMENT OF AN ALTERNATIVE FUELS INFRASTRUCTURE (AFIR)

Support for the rapid deployment of electric, hydrogene or liquefied methane electric **charging points** for road vehicles, ships or aircraft is now in the form of a regulation.

EVERY 60 KM

Installation of fast charging stations (at least 150 kW) for cars, vans and heavy goods vehicles (at least 350 kW) along the main transport corridors.

From 2025

EVERY 200 KM

H_2

Deployment of hydrogen refuelling stations with an easy payment system.

Starting 2030

- **Maritime port**: shore-side electricity for boats.
- **Airports**: electricity to all parked aircraft, irrelevant of their distance

Until 2030

Review of the regulations:

- no later than December 31, 2026 and every 5 years thereafter.

FRANCE

MAY 2023

100,000 public charging points (initially foreseen for end of 2022)

2030

Aims to have 400,000

DIRECTIVE ON THE ENERGY PERFORMANCE OF BUILDINGS

Buildings:

- Europe's largest energy-consuming sector (42%).

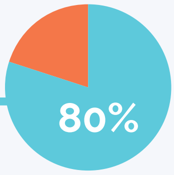
European real estate:

- ageing and overwhelmingly energy inefficient (75%)

Renovation:

- a key issue to improve the energy performance of buildings.

Consumption in buildings: mostly heating, air conditioning and hot water requirements.



Main changes in the revision of the Energy Performance of Buildings Directive:

➔ **Requires national targets to be set** to improve the average energy performance of the housing stock.

2030	– 16% consommation d'énergie primaire
2035	– 20 à 22% consommation d'énergie primaire

➔ Sets the 2050 target of a totally carbon-free building stock.

➔ **Requires the definition of a strategy for phasing out fossil fuel-based heating** (gas, coal, oil) by 2040.

FRANCE

Public energy renovation programmes have been stepped up thanks to funding from the European recovery plan.

➔ 7 billion euros

➔ Meeting France's national targets would require to:

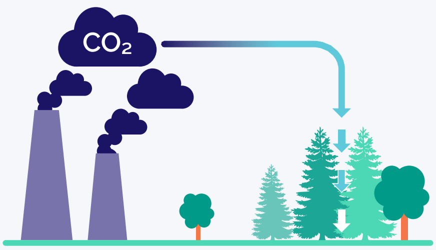
- mobilise an additional 20 to 30 billion euros investment by 2030
- create 170 to 250 000 new jobs

Further reading: Defard C. "Les normes minimales de performance énergétique: une réponse à l'urgence climatique et sociale". 2021. Jacques Delors Institute.
*https://www.strategie.gouv.fr/publications/renovation-energetique-batiments-besoins-de-main-doeuvre-2030

LAND USE, LAND USE CHANGE AND FORESTRY (LULUCF)

Regulation:

- covers greenhouse gas emissions and carbon removals in the land use sector, conversion and use of forestry will have to be offset by equivalent removals of CO_2 from the atmosphere.



Under cover of flexibilities*, each Member State has a binding target in a context where the absorption capacity of Europe's carbon sinks has fallen over the last 10 years.

FRANCE

Absorption of carbon skins are below the levels expected in the French Low Carbon Strategy

- particular vigilance with regard to our ability to meet our targets.

Until 2030

-310 Mt of CO_2 per year

(currently -225 Mt)

-57% de greenhouse gas emissions reduction

* For example, the use of surplus ESR allocations or the purchase by a State that has not met its statistical targets from a State that has exceeded its targets.

ReFuelEU aviation and FuelEU maritime

ReFuelEU Aviation Initiative :

- promote the use of sustainable fuels (synthetic or advanced biofuels) in aviation.

0.05% of total jet fuel consumption

5 times more expensive than kerosene

The sector is responsible for around 3% of total greenhouse gas emissions, the initiative aims to reduce CO2 emissions from aviation by introducing:

From 2025

- A minimum of 2% sustainable aviation fuel must be made available to aircraft operators at airports.
- From 2030 for synthetic fuels.

- The percentage of sustainable fuel to replace kerosene will gradually increase over time.

2030 +6%

2040 +34%

2050 +70%

- **From 2025, a European ecolabel will make it possible to determine the environmental performance of a flight, i.e.,** its carbon footprint.

By 2027 and then every 4 years, the Commission issues a report on the application of the regulation, assessing in particular the need to review its scope of application.

Maritime transport: 13.5% of transport emissions in the EU

The regulation on the use of renewable and low-carbon fuels in maritime transport (**FuelEU Maritime**) aims to:

For ships over 5,000 tonnes

90% des émissions de CO_2 du secteur

A review clause scheduled for 2028

- assess whether smaller vessels should also be concerned.

Every 5 years

gradual reduction in emission intensity of greenhouse gases

From 2025	2030	2040	2050*
2%	6%	31%	80%

*Compared with the 2020 average

4 Text under discussion

ENERGY TAXATION DIRECTIVE

The only piece of the FitFor55 package that was not conclusive yet. Last revised in 2003, the directive:

- Aims to **harmonise energy taxation and ensure the smooth operation of the internal market.**
- it "*sets minimum rates for the taxation of electricity and energy products*", i.e. the conditions under which Member States can take advantage of exemptions (compulsory or optional) and reductions in standard rates.

The proposed revision will extend the scope of the directive over ten years:

maritime sector (heavy oil)

air sector (kerosene)

According to the proposal, taxation could now take into account the **energy content** (of the product, of the electricity) as well as "**environmental performance**", which will replace taxation on volumes consumed.

However, its adoption is subject to unanimity (fiscal issue) within the Council of the EU, with the European Parliament onlyhaving a consultative role.

In the wake of the energy crisis*, many Member States* had lowered their energy prices by reducing the level of taxation on fossil fuels.

FRANCE

Temporarily reduced its excise duty on electricity in 2021 (tariff shield) from €32/MWh to the minimum allowed in the directive (€0.5/MWh for professionals). and €1/MWh for residential customers) before raising them again (2024).

*Nguyen, P. Pellerin-Carlin, T. 2021 Soaring energy prices in Europe. How to overcome the fossil fuel crisis? Institut Jacques Delors. Policy Brief. October 2021.
*Sgaravatti, G., S. Tagliapietra, C. Trasi and G. Zachmann (2021) 'National policies to shield consumers from rising energy prices', Bruegel Datasets, first published 4 November 2021.

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