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RÉPUBLIQUE FRANÇAISE

Multilateral assessment

France

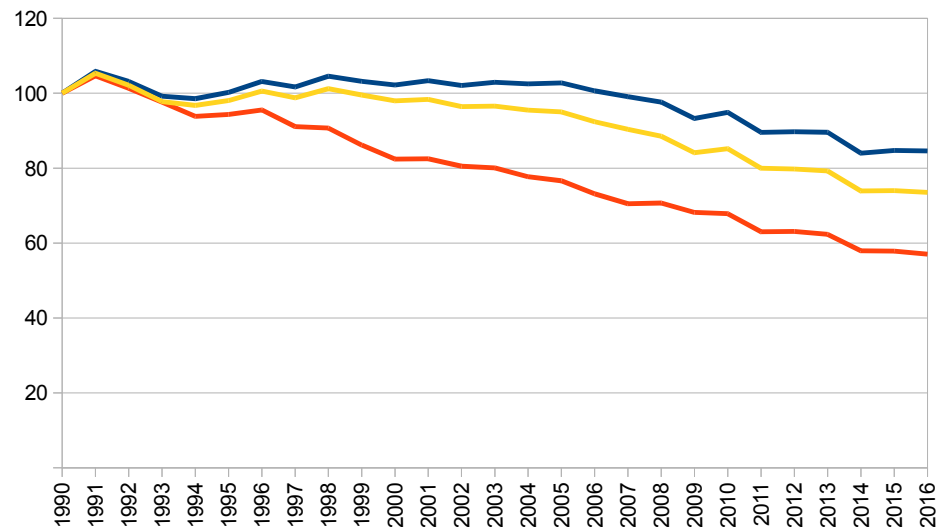
SBI 49 – 3rd December 2018



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Decoupling between economic growth and GHG emissions



France emissions in 2016 :

- ✓ **458,2 Mt CO₂ e**, 6,9 tons per capita (EU 8,4 tons per capita)
- ✓ Reduction of **16,1 %** compared to 1990

GHG emission intensity :

- ✓ GDP growth 1990-2016 : 48%
- ✓ Reduction of intensity by 43% over the period

GHG emission per capita :

- ✓ Population growth 1990-2016 : 15%
- ✓ Reduction of emissions per capita : 25,8 % over the period



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- GHG Emissions
- GHG Intensity
- GHG Emissions per capita

FRANCE target as EU Member State

EU commitments

EU 2020 Climate and Energy Package target : 20 % by 2020, compared to 1990 levels

- Emission-Trading Scheme (ETS) sector : 21 % reduction by 2020 from 2005 levels
- Non-ETS sector : 10 % reduction by 2020 from 2005 levels (**France target is 14%**)

EU 2030 Climate and Energy Framework : at least 40 % reduction by 2030 compared to 1990

- Emission-Trading Scheme (ETS) sector : 43 % reduction by 2030 from 2005 levels
- Non-ETS sector : 30 % reduction by 2030 from 2005 levels (**France target is 37%**)

Energy Transition for Green Growth Act of August 2015 :

- 40 % reduction by 2030, compared to 1990 levels
- 75 % reduction by 2050 compared to 1990 (written in French law since 2005)
- Carbon budgets (without LULUCF) to reach these targets : First National Low-Carbon Strategy in 2015 with carbon budgets for 2015-2018, 2019-2023 and 2024-2028

France national additional commitments

Climate Plan and the National Low-Carbon Strategy of July 2017

- Carbon neutrality : zero net GHG emissions by 2050

Our Low Carbon Strategy is under revision ; new budgets will be adopted at the beginning of 2019, covering a new period 2029-2033



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Biennial Report 3 - Policies and measures

TRANSPORT



Equipment targets/low emissions vehicles for State car fleet
Requirement to fit car parks in new buildings with recharging facilities for electric vehicles
Measures to foster cycling : bicycle bonus, bicycle mileage payments, tax reductions, regulations for road sharing, bicycle parks

BUILDING



Experiments with labelling as « Positive Energy and Carbon Reduction Buildings »
Obligation for thermal insulation when undertaking major building refurbishment work
Exemplary new Public Buildings

ENERGY



Multi-annual energy programme (French acronym : PPE)
Preferential pricing of electrical supply for power-intensive sites implementing an energy performance policy
Calls for tender for biogas



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Since BR3 – July 2017 climate plan

Accelerate energy and climate transition

Accelerate Paris Agreement implementation

Some measures and objectives :

- achieving net zero emissions by 2050
- focusing on the renovation of housings with very poor energy performances within 10 years
- putting an end to the sale of vehicles emitting greenhouse gases in 2040
- shutting down the last coal thermal plants before 2022
- gradually phasing out hydrocarbon production and exploration in France by 2040
- a faster increase in the price of carbon in energy taxes
- an expansion of pricing mechanisms for carbon and other greenhouse gases, in particular HFCs,
- redoubling of efforts in terms of publicly-funded energy transition research



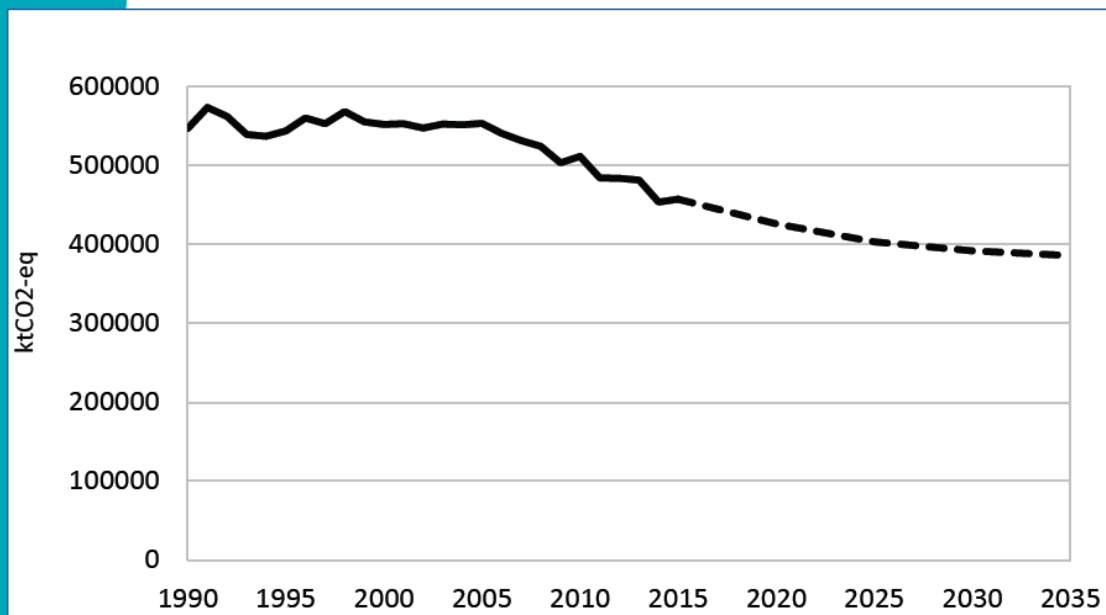
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Since BR3 – July 2017 climate plan

- **Mobility law project** emphasizing among others bicycle use, car sharing, development of alternative fuels and their infrastructures : presented the 26th of November
- **Plan for retrofiting buildings**
- **Circular economy plan**
- **Agriculture and Food Law** : enacted the 1st November 2018 after a public forum during the second semester 2017



Biennial Report 3 – Projected emissions



WEM : all policies and measures decided and implemented before 1st January 2016

France is on track to meet its target

●2020 projected emissions

-30% below 2005 for ETS emissions (more than the average reduction required at the EU level -21%)

-20% below 2005 for non ETS emissions (compared to the target of -14%)

●2030 projected emissions

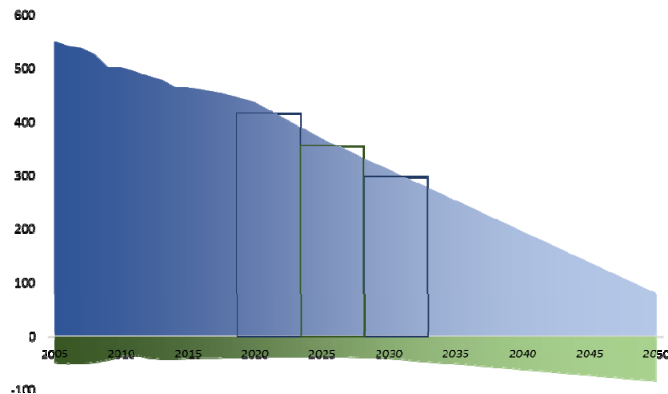
-31% below 2005 for ETS emissions (less than the average reduction required at the EU level -43%)

-28% below 2005 for non ETS emissions (compared to the target of -37%)



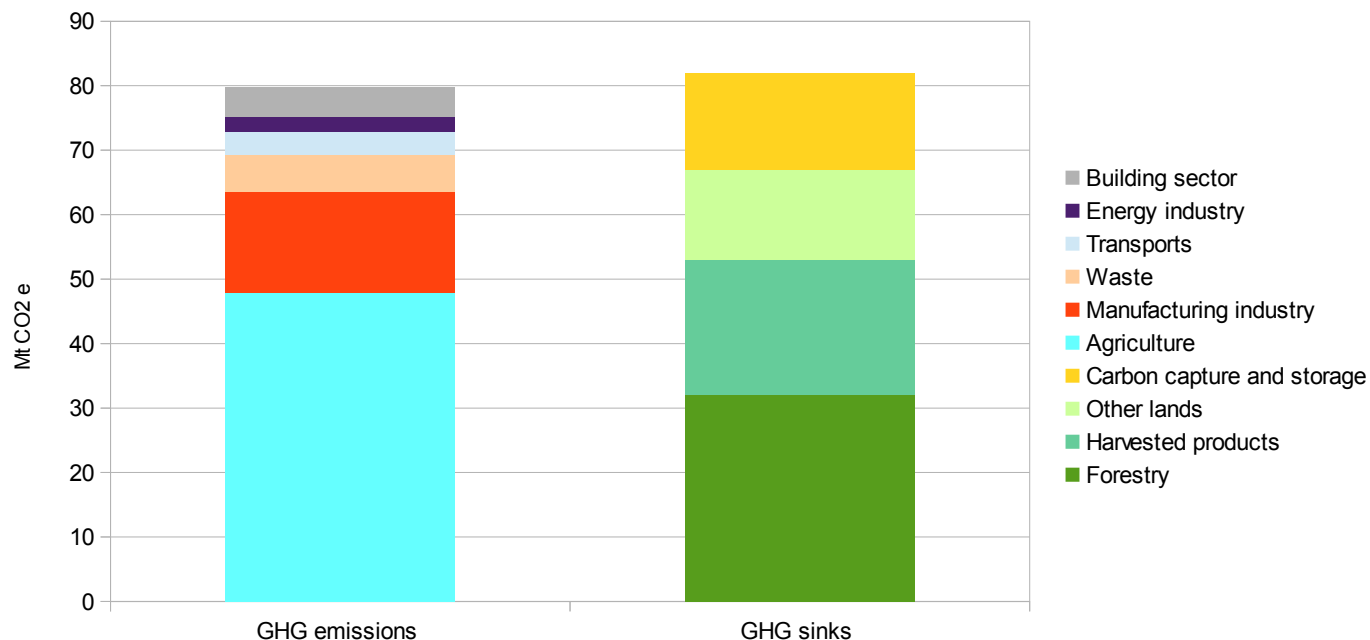
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The national low carbon strategy (LCS)



- Defines **carbon budgets on three 5-years periods**, with shares by sectors (transportation, building, industry...), **being consistent with France long term trajectory and international commitments**
- The LCS defines strategical main lines and cross-cutting and sectorial recommendations
- The 1st LCS, adopted in 2015, defines the first three carbon budgets for periods 2015-2018, 2019-2023 and 2024-2028. It aims the « Factor 4 » objective by 2050 (reduction of emissions by 75%)
- The **Revised LCS will extend the first carbon budgets** and will define a carbon budget for the periode **2029-2033**. It aims **zero net emissions by 2050 (Climate plan)**
- **Revision planned by 2015 Green Growth Act** at the latest in **June 2019**. Revision process under the supervision of stakeholders and ministries and after a national public consultation in November 2017 (**more than 13 000 proposals received**)
- Draft to be published this week

2050 Carbon-neutrality scenario

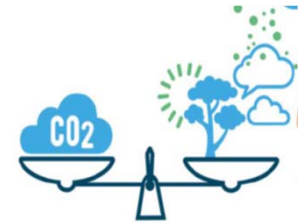


► **Carbon sink** better taking into account carbon stored in soils. Only sufficient to compensate for non energetical residual emissions.

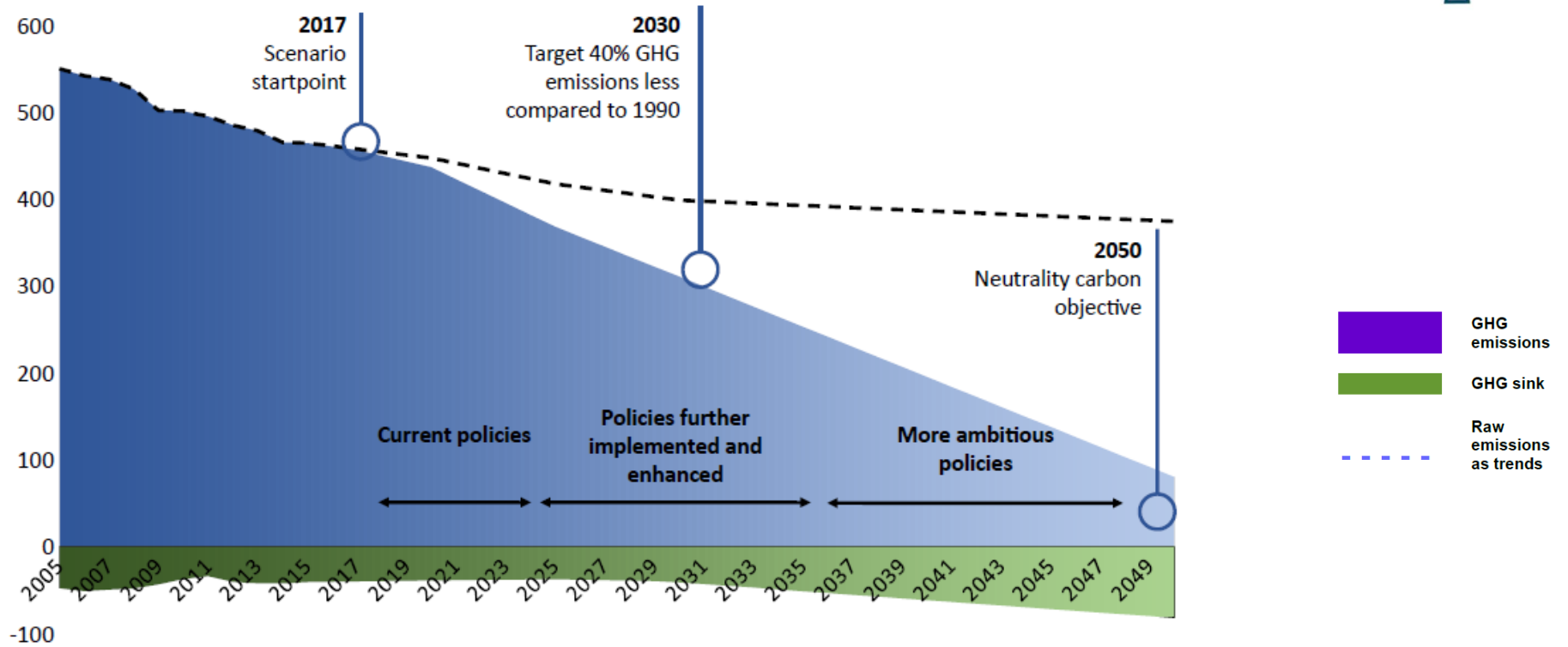
► **Non energetical residual emissions** mainly due to agriculture and industrial processes

► **Margin compensating Overseas emissions and energetical emissions** (national air transportation, biogaz leakages, biomass...)

2050 Carbon-neutrality scenario



GHG emissions and sinks between 2005 and 2050



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2050 Carbon-neutrality scenario

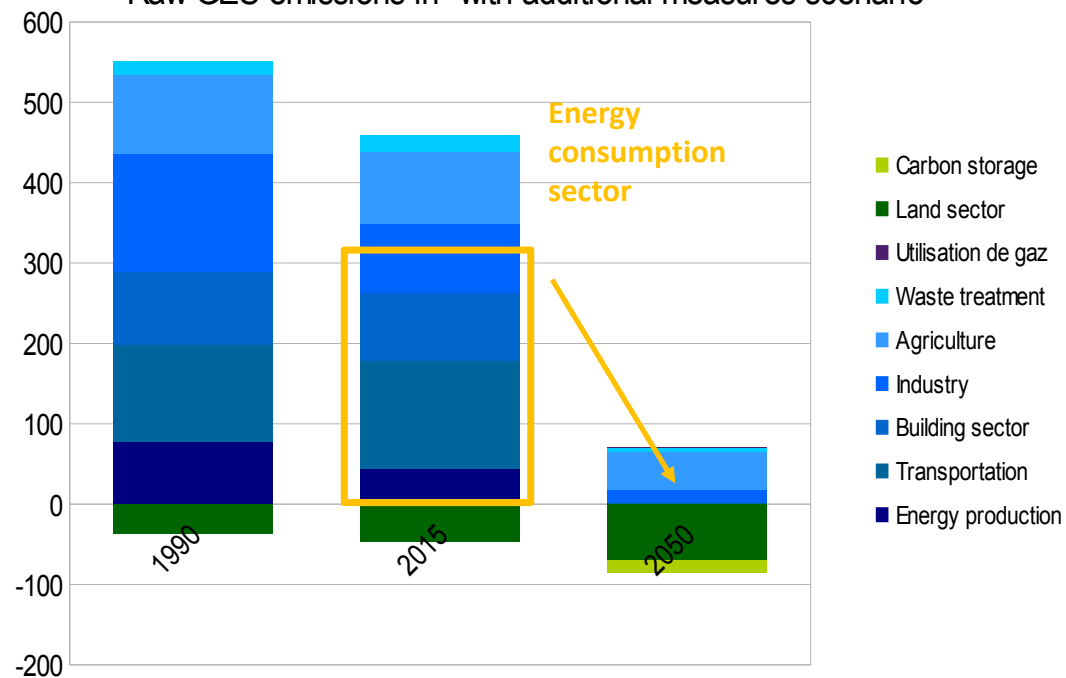


Strong energy consumption decreasing in every sector

An energy mix totally decarbonized (biomass+renewable heat+ decarbonated electricity)

Strong non energetical emissions reduction (agriculture, energy processes)

Raw GES emissions in "with additional measures scenario"

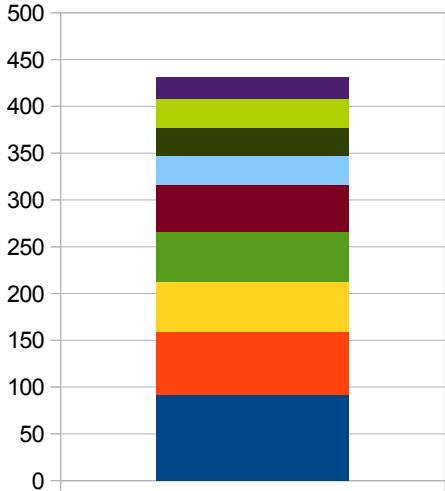


2050 Carbon neutrality scenario

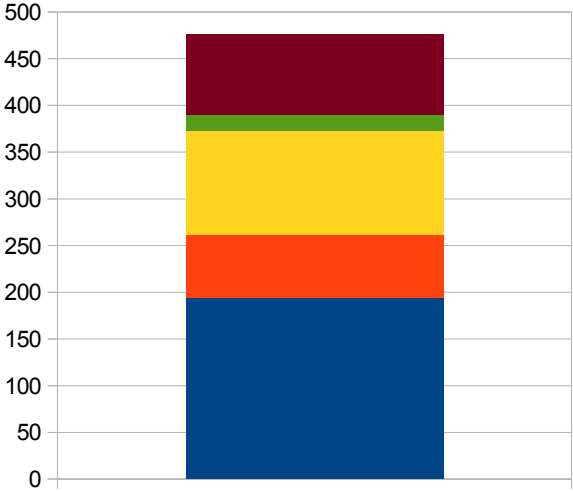
Energy supply constrained by biomass resources.
 Biomass resources are driven towards high added value uses as well as towards uses with low substitution possibilities.
 Therefore, on the long-term, gas consumption is going to decrease and electricity consumption is going to increase.



Biomass production (TWh)



Biomass consumption (TWh)



- Other wastes
- Effluents
- Crops residues and grassland surplus
- Agroforestry
- Biofuel raw materials 1st generation
- Crops
- Wood waste
- Lumber mill sector linked elements
- Wood primary resources

- Energy
- Agriculture
- Building sector
- Industry
- Transportation

2018-2028 - Energy Multi-Year Plan

OBJECTIVE N° 1 : turn our back on fossil energies

Lower fossil energy consumption by a third by 2028

(from 1412 TWh in 2017 to 940 TWh in 2028)

To achieve the objective – 40 % by 2030



| Coal | Oil | Gas |
|-------|-------|-------|
| ~ 80% | ~ 40% | ~ 25% |

2019

Credit evolving to include oil tank deposits

1 million

Oil boilers replaced by 2023

Zero

New fossil fuel plant allowed for electricity production during PPE period

2022

4 last coal plants stop

2028

End of coal for individuals and 75% consumption reduction for industrials (exc. Steel)



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2018-2028 - Energy Multi-Year Plan

PPE - OBJECTIVE N° 2 : Lower energy consumption

Energy efficient buildings thanks to retrofits and renewable energies integration

2020

New environment regulation with minimum renewable heat in new buildings

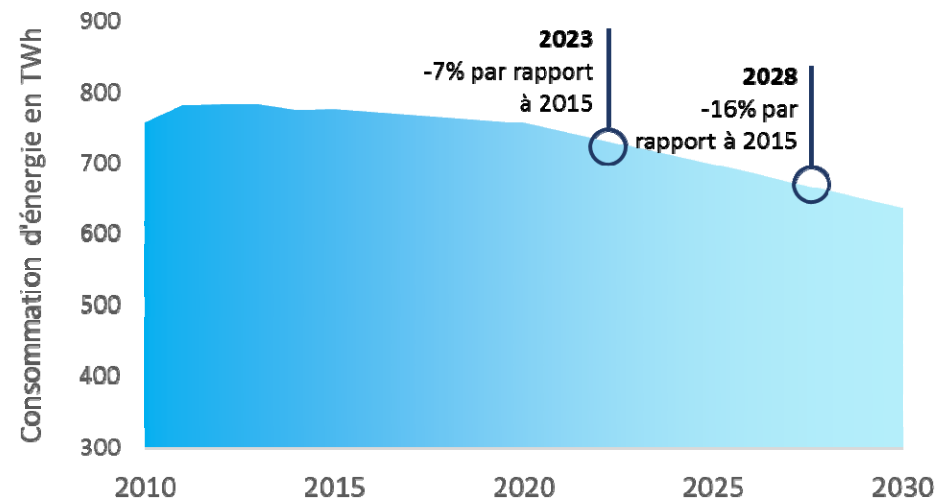
CITE

As soon as 2020, extended to lessor-owners and converted into bonus for low earners



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Consommation énergétique des bâtiments



Energetical audit

soon mandatory
Paid back to low earning owners of poorly thermally insulated buildings

500 000

Retrofits per year
(50% for low-earning people)

2018-2028 - Energy Multi-Year Plan

PPE - OBJECTIF N° 2 : Lower energy consumption
Towards decarbonated vehicles and changes of mobility

4,8 millions

Electric vehicle on the road by 2028

4L/100km

Target for personal thermal vehicles by 2030

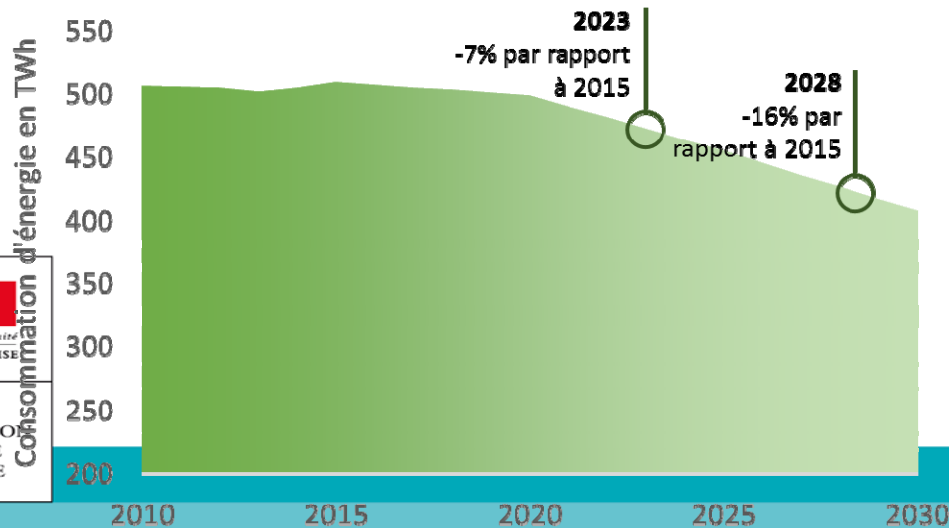
2040

Personal thermal vehicle end of sale

1 million

Recipients of a bonus in 2023 to replace their vehicles by less-emitting ones

Consommation énergétique des transports



Development of electric vehicle charging infrastructure

2018-2028 - Energy Multi-Year Plan

PPE - OBJECTIF N° 3 : Diversify the energy mix by developing renewables energies and reducing nuclear power's share

Thermal renewable energies : 38% of heat, 10% of gas by 2030

x 5

**Renewable gas production
by 2028**

**Level of support based on an ambitious
lower cost trajectory**

67 €/MWh PCS : purchase tariff target by 2023

10%

**Decarbonated hydrogen rate in
industrial hydrogen by 2023**

+40% Renewable
heat by
2028

to +59%

350 M€ : Heat fund budget in 2020

**Level of advanced biofuels
incorporated in 2028**

3,8% Within gasoline

3,2% Within diesel fuel



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Written questions issues deal with...

- 12 questions received
- **Targets** achievement and ambition enhancement : targets barriers, timeframe of policies, National Low-Carbon Strategy and targets, 2020 target
- Compliance, reporting **process** : use of relative or absolute emissions for 2020 accounting , quality control and CTF Tables
- **Sectoral** questions :



- Transportation sector : Methodologies used for the assessment of mitigation actions



- Agriculture : for projections, biomass sustainability criteria ; non-competitiveness with food, Agriculture and Forest



- Building : assessment of measures

Thank you for your attention

