



# French energy plans and the carbon tax

Eric Vial  
Propellet France / European Pellet Council

## Propellet France

- French wood pellet heating association :
  - Pellet producers and distributors, boiler and stove suppliers, installers, chimney suppliers, ...
- Actions
  - Federation and structuration of French pellet industry
  - Communication
  - Economic information
  - Quality of pellet industry

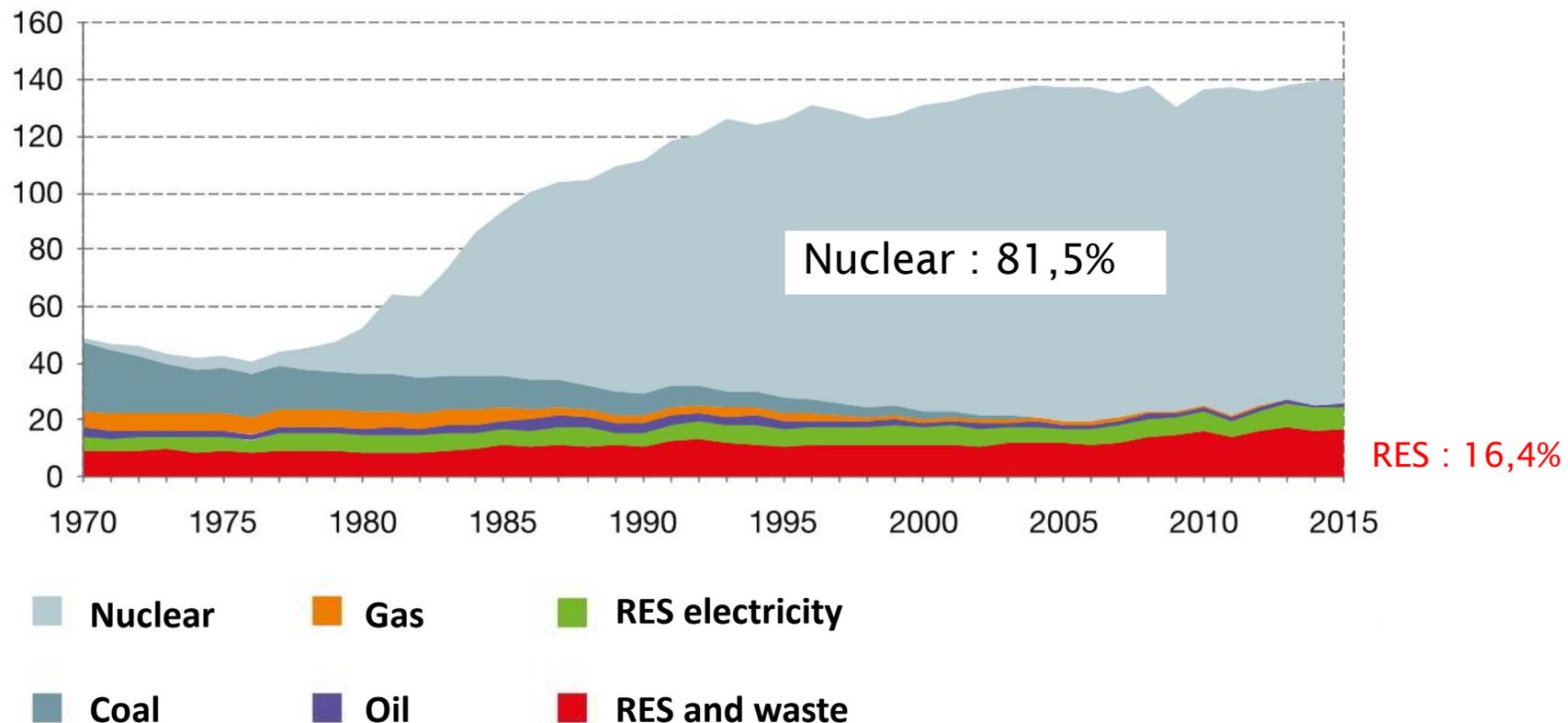
Propellet France is member of the European Pellet Council, a network of AEBIOM



- French energy picture
- President Macron Climate Plan (and poverty)
- French carbon tax
- Ecological and economical effects of the carbon tax

# French energy picture

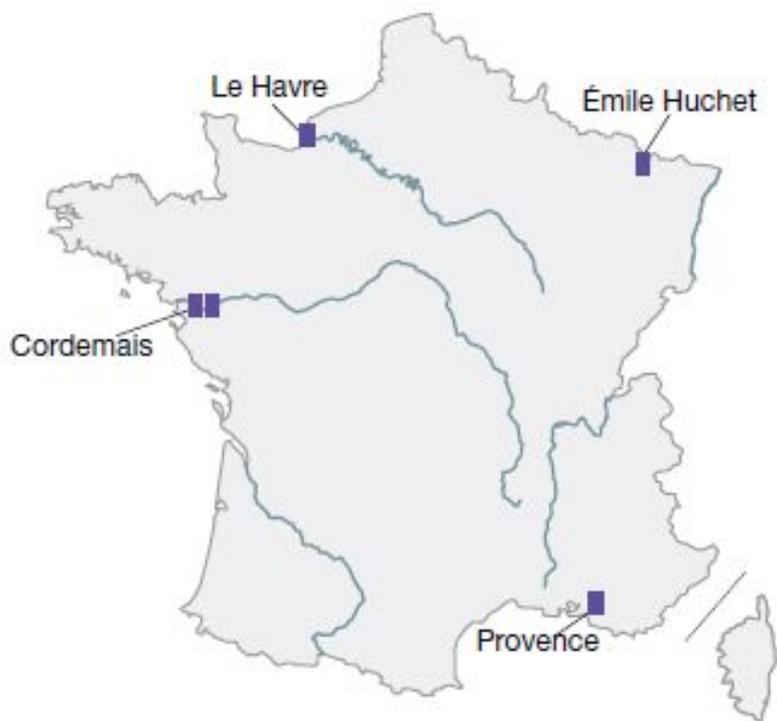
Primary energy production : 140 M TOE in 2015



# French energy picture

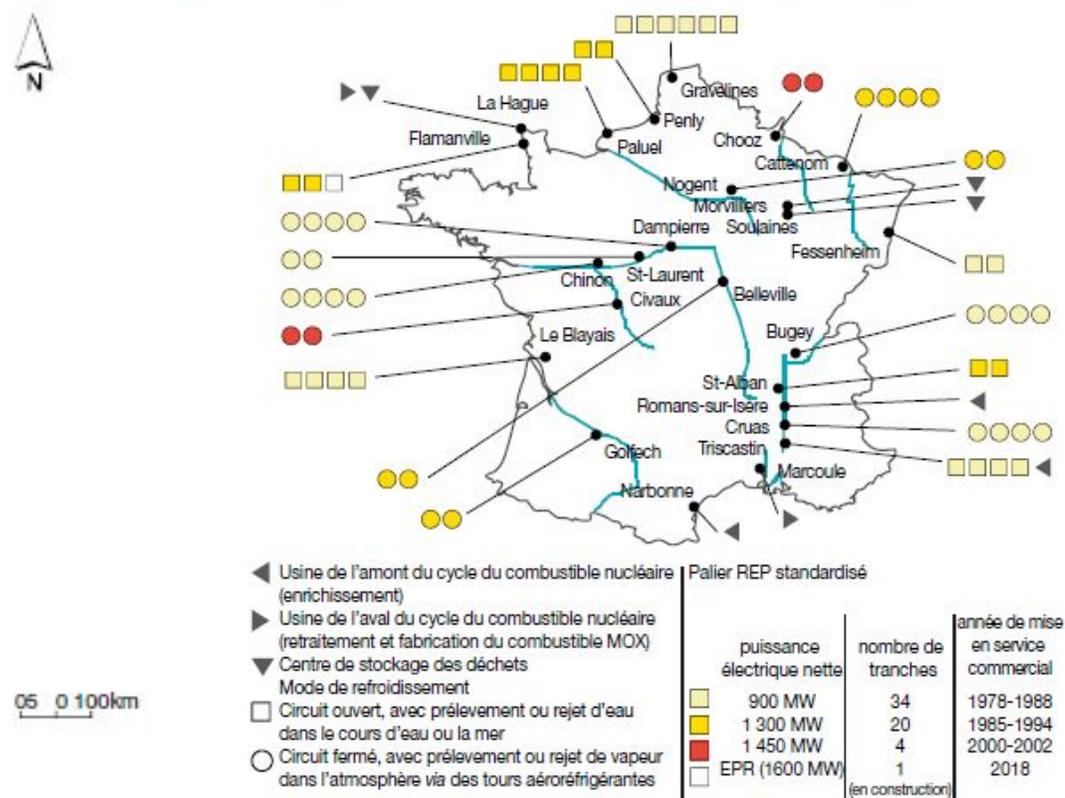
5 coal power plants (2016)

Plans to reduce coal consumption (pellets)



58 nuclear power plants' reactors

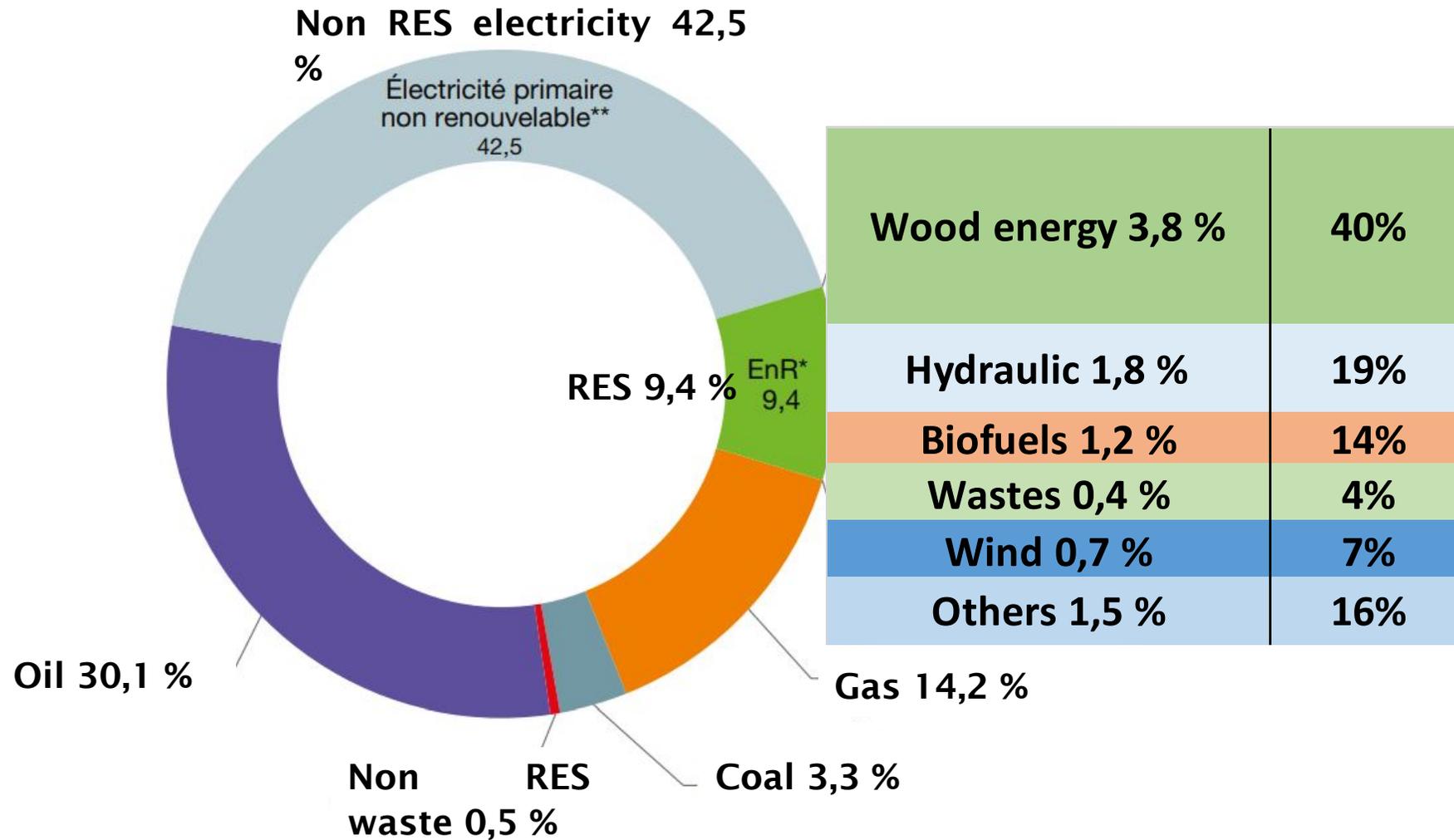
Only one to perhaps be stopped



# French energy picture



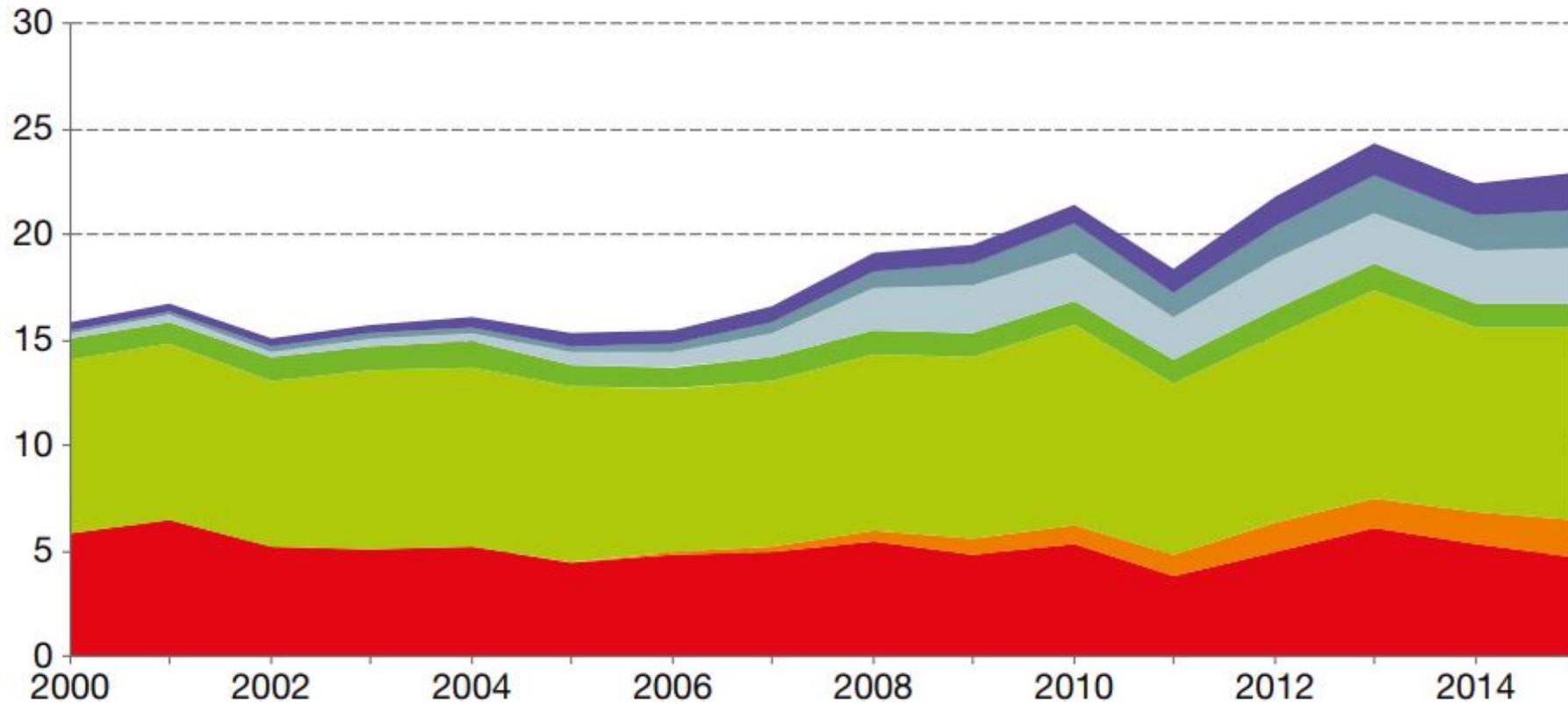
Consumption of primary energy 257 MTOE in % (2015)



# French energy picture



Primary renewable energy production : 23 M TOE in 2015



- Other renewables
- Biofuels
- Wood
- Hydro RES
- Heat pumps
- Renewable wastes
- Wind

- French energy picture
- President Macron Climate Plan (and poverty)
- French carbon tax
- Ecological and economical effects of the carbon tax

## President Macron Climate Plan

- VAT : still lower than normal rate for Renewable Energy Sources (20%)
  - 5,5% for renovations
  - 10% for fuel
- Energy check : automatic bonus for households in energy poverty (4 millions)
  - Example : a family of 4 persons with less than 16 600 € per year
  - 2018 : 48 to 227 € per year / 2019 : increase of 50 €
- CITE : Tax Credit for Energy Transition
  - 30% of costs of equipment (boiler, isolation,...) reimbursed when annual income tax payment
  - 2017 : RES, oil and gas were benefiting from this measure
  - 2018 : oil is out, RES and efficient gas remain
  - 2019 : fix bonus given when paying the bill to the installer

## President Macron Climate Plan

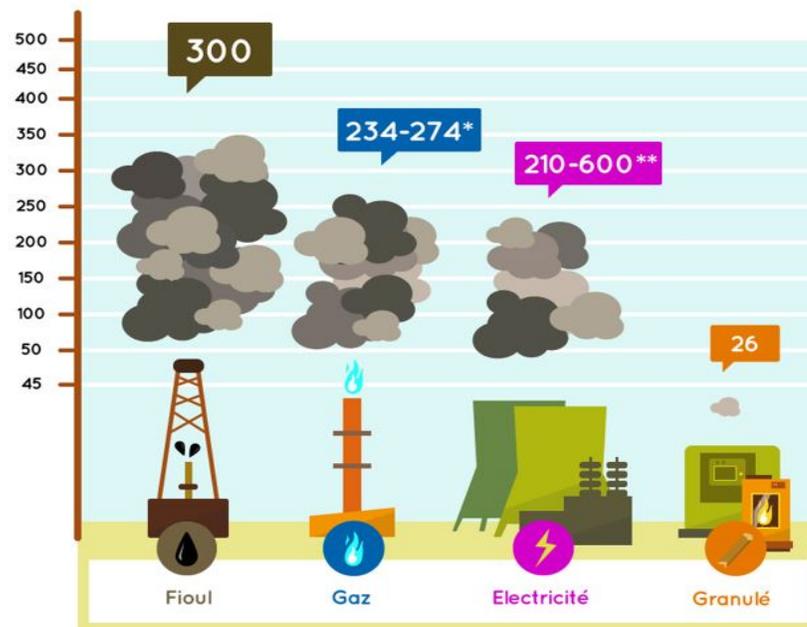
- **CEE : Energy Saving Certificate**
  - Obligation for energy suppliers to make or support energy savings and investment in RES
  - Amount of savings determines price of CEE / A part of money goes to the customer
  - 2018 : start of the 5<sup>th</sup> period with a doubling of objectives
- **Boost for Energy Saving Certificate on replacement of oil boiler by RES**
  - 2017 : 1300 € per boiler for low revenues
  - 2018 : 2000 to 3000 € per boiler depending on revenues (for 25000 households)
  - It will involve 3 millions domestic and 0,6 million collective housings (28 millions total)
- **Evolution of carbon tax**

- French energy picture
- President Macron Climate Plan (and poverty)
- French carbon tax
- Ecological and economical effects of the carbon tax

## Carbon taxation :

- It aims at mitigating global warming
- By reducing carbon emissions (Art. 6 of Paris Agreement)
- Price according to carbon content of fuel

Carbon emissions of energies



\*234 pour le gaz naturel et 274 pour le propane \*\* 600 en période de forte demande (hiver)  
source: ADEME 2014 - SNPGB



## France : carbon tax

2000 : 1<sup>st</sup> trial – Improving French national budget (Prime Minister Jospin)

2009 : 2<sup>nd</sup> trial – Ecology (Prime Minister Fillon)

2014 : Last trial – Ecology (Prime Minister Ayrault)

- Changing mentalities to prepare decrease of fossil resources
- Not a carbon tax but an “**Energy Climate Contribution**” (dedicated uses)
- Carbon tax is based on material cost and VAT is added on top



## France : carbon tax

All fossil fuels are concerned but not :

- Companies involved in European Trading System for carbon (ETS)
- Transportation (road, public, sea, agriculture, ...)
- Electricity

LPG is only taxed since 2018 (new government)

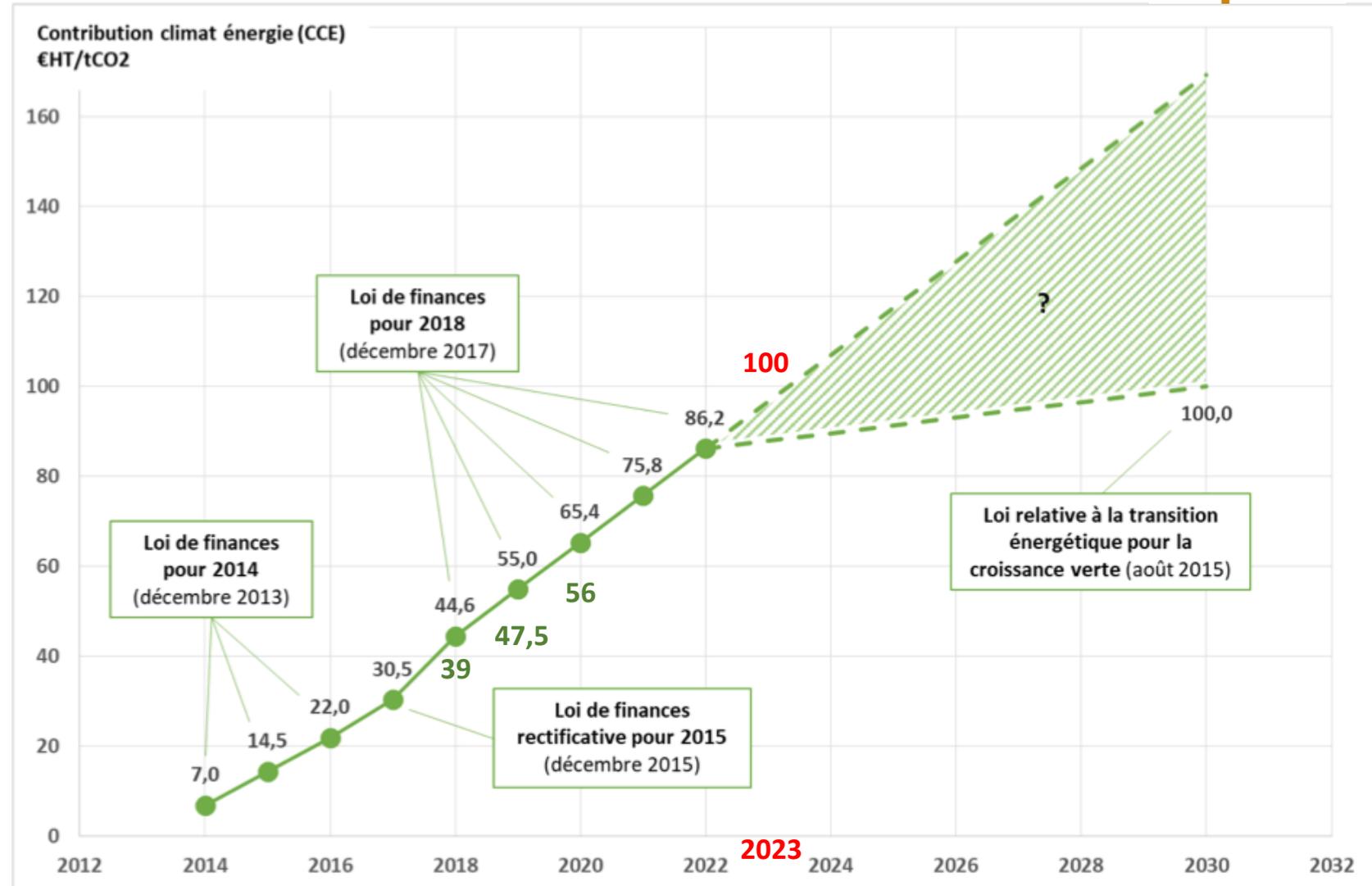
At least for heat, fuel alternatives to gas and oil are cheaper : chips, pellets, logs.

# France

Evolution of French carbon tax in €/tec

Because of fossils price decrease since 2013, this tax was not visible for end users.

It has changed in 2018



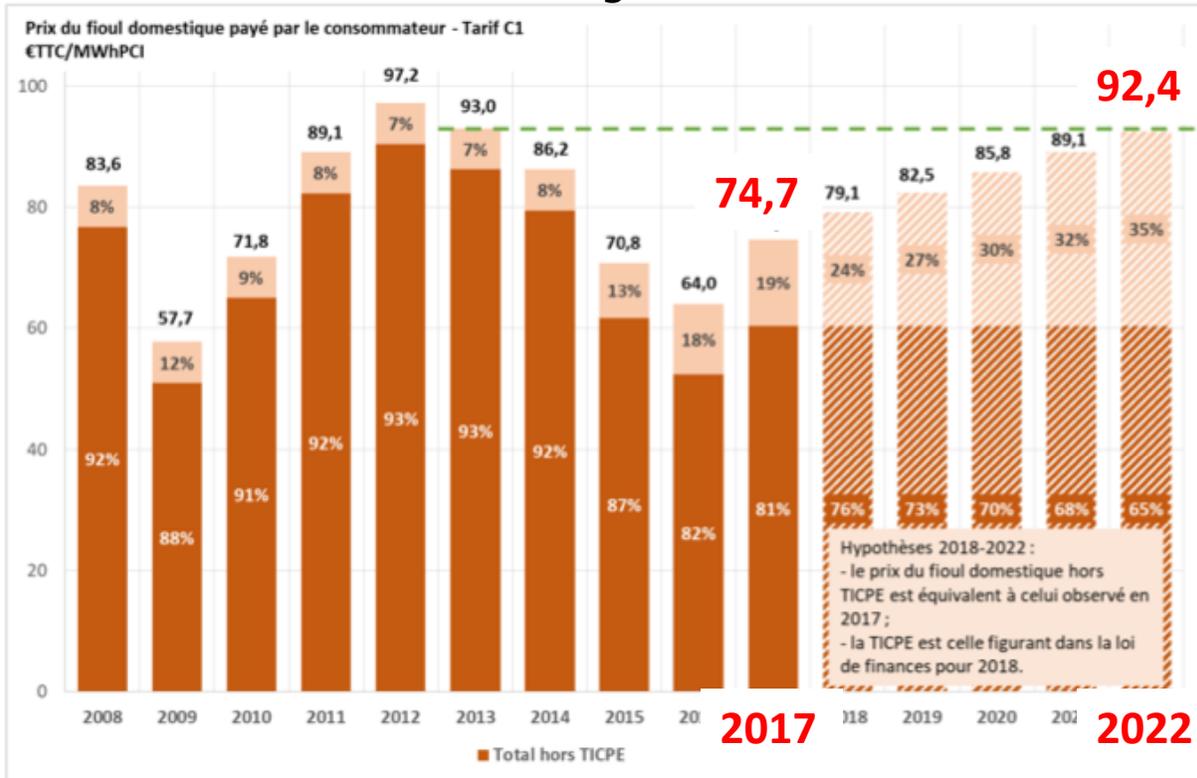


Propellet

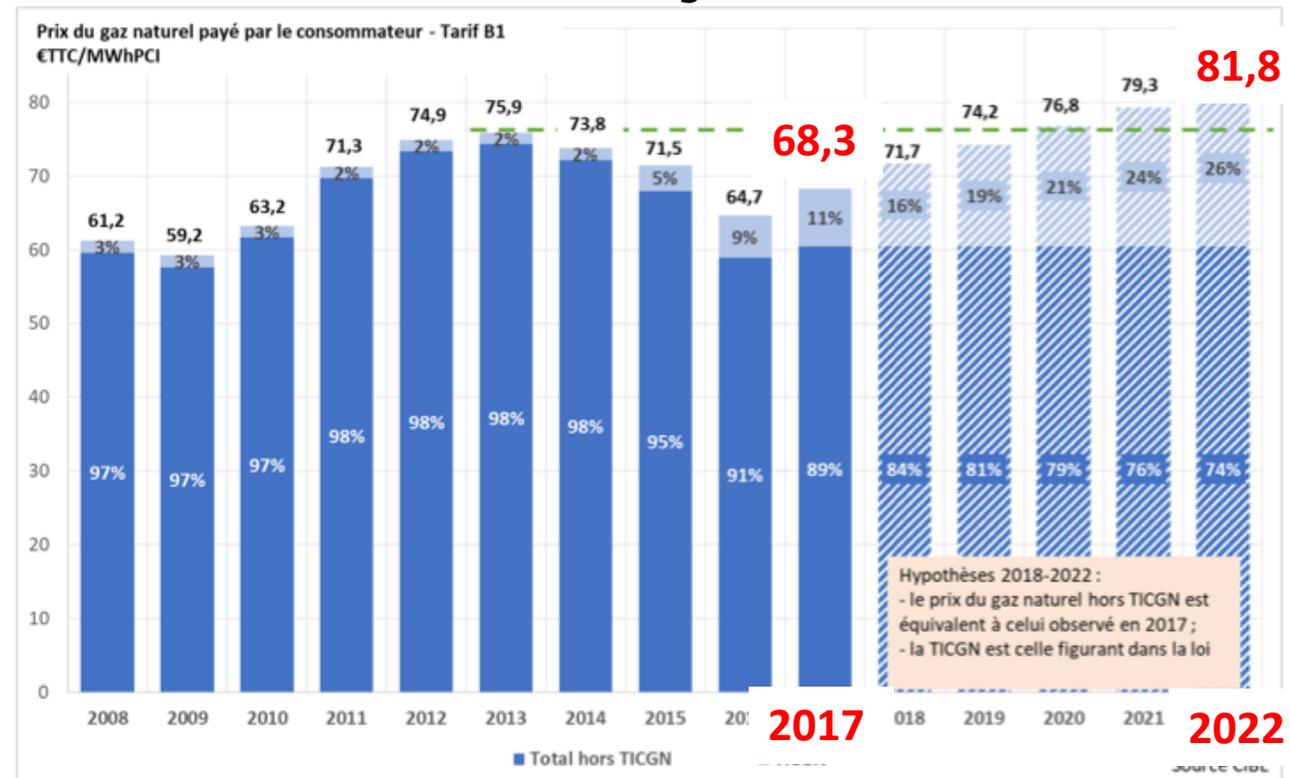
# Carbon tax : a huge economic driver for pellets

Evolution of domestic heating oil and gas price in France due to carbon tax (€/MWhPCI incl.VAT)

### Heating oil



### Natural gas



## Carbon tax : a huge economic driver for RES and pellets

### In France in 2022 :

Carbon tax will be 86,2 € / T eq. C and price of :

- Heating oil : 9,24 cts €/kWh
- Gas : 8,18 cts €/kWh
- Pellets : 5,7 cts €/kWh

Heating oil : **62%** more expensive than pellets

Gas : **44%** more expensive than pellets

More attractive ROI

## France : use of tax income

Aim : economic tax neutrality

- 75 % : tax reduction for employment and competitiveness (CICE)
- 25 % : tax reduction for low income households

In 2017, carbon tax was used to reduce costs of electricity public service.

Compensation to electricity suppliers for their obligation of public service = 16% of electricity bill for households

From 2018 :

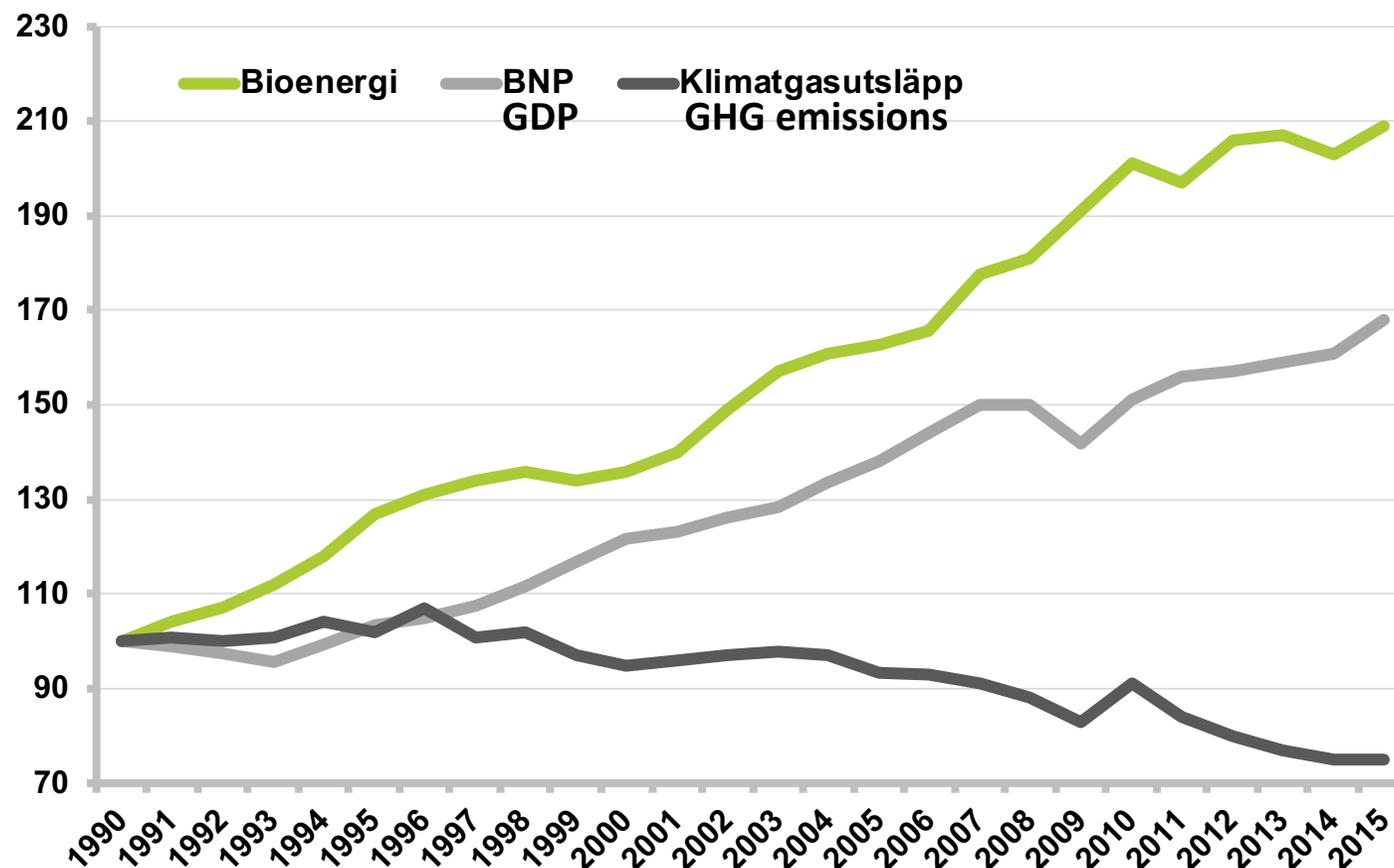
- Still tax reduction for employment and competitiveness
- Reduced VAT rate for energy renovation of building and social housing

- French energy picture
- President Macron Climate Plan (and poverty)
- French carbon tax
- Ecological and economical effects of the carbon tax

## The carbon tax doesn't destroy the economy

From 1990 to 2014 in Sweden :

- GDP increased by 60 percent in real terms.
  - Greenhouse gas emissions decreased by 25 percent
  - Use of bioenergy doubled.
- (1990 = 100 percent)





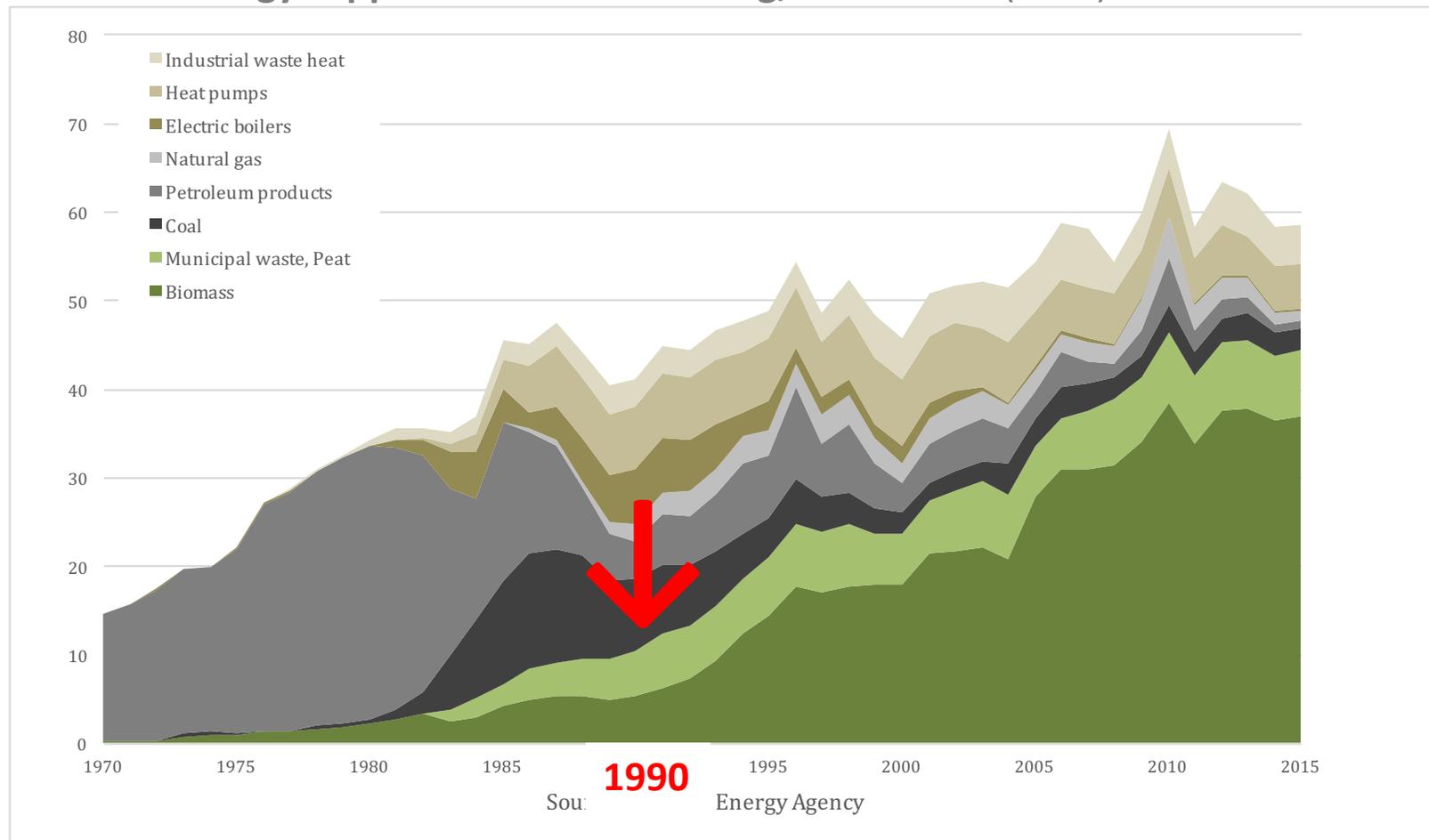
Propellet

## Carbon tax : An economic driver to move from fossil to RES

Increase of bioenergy use in Sweden :

- From implementation of carbon tax in the 1990's, it is clear that there was a boom for biomass.
- During the previous 30 years, biomass has taken over the place of fossil fuels in Swedish district heating. Today, RES account for 75 percent of consumed fuels.

Energy supplied to district heating, 1970–2015 (TWh)



## Limits to the carbon tax

- In case of not enough pedagogic communication, people don't know benefits of the carbon tax (ecology, use of income,...) and may consider it as an additional tax only.
- The return of money to majority of people is not important enough. It is then an immediate reduction of their purchasing power : less money to invest in a new pellet boiler for instance.
- For companies, the carbon tax allow reduction of social costs or other taxation but amount is far from the additional costs.

## Conclusion

- France is still strongly depending on nuclear energy
- French new government took strong position to :
  - Make energy savings
  - Reduce carbon emissions
  - Make it available for everybody, also low income households
- The carbon tax can be implemented at a low price at first to make it acceptable but there is a minimum level to reach for a real impact on the market. In France, it seems to be 40 to 50€/t eq. C.
- Income from CO2 tax should not be bound to a use for a long period because revenues may drop substantially if the carbon tax is a success.
- Even without the carbon tax, alternatives to fossil fuel are often cheaper. Using alternatives is not an economic disadvantage.
- The carbon tax is a very effective way of :
  - developing RES
  - increasing state income to support various kinds of policies

# Thank you !

WE'RE SOCIAL follow us on your favorite social media sites.



Eric Vial  
[eric.vial@propellet.fr](mailto:eric.vial@propellet.fr)

[@Pellets4Europe](https://twitter.com/Pellets4Europe)

# Thank you !

WE'RE SOCIAL follow us on your favorite social media sites.



Eric Vial  
[eric.vial@propellet.fr](mailto:eric.vial@propellet.fr)

[@Pellets4Europe](https://twitter.com/Pellets4Europe)

## Carbon tax : An effective way to reduce GHG emissions

Study in **Switzerland** (DETEC) on effect of carbon tax implementation :

- Announcement : important psychologic effect
- Analysis of contribution to GHG emissions : even small contributors did it (companies).
- From 2005 to 2015 :  
Emission reduction 8,6 Mt CO<sub>2</sub>  
-9%

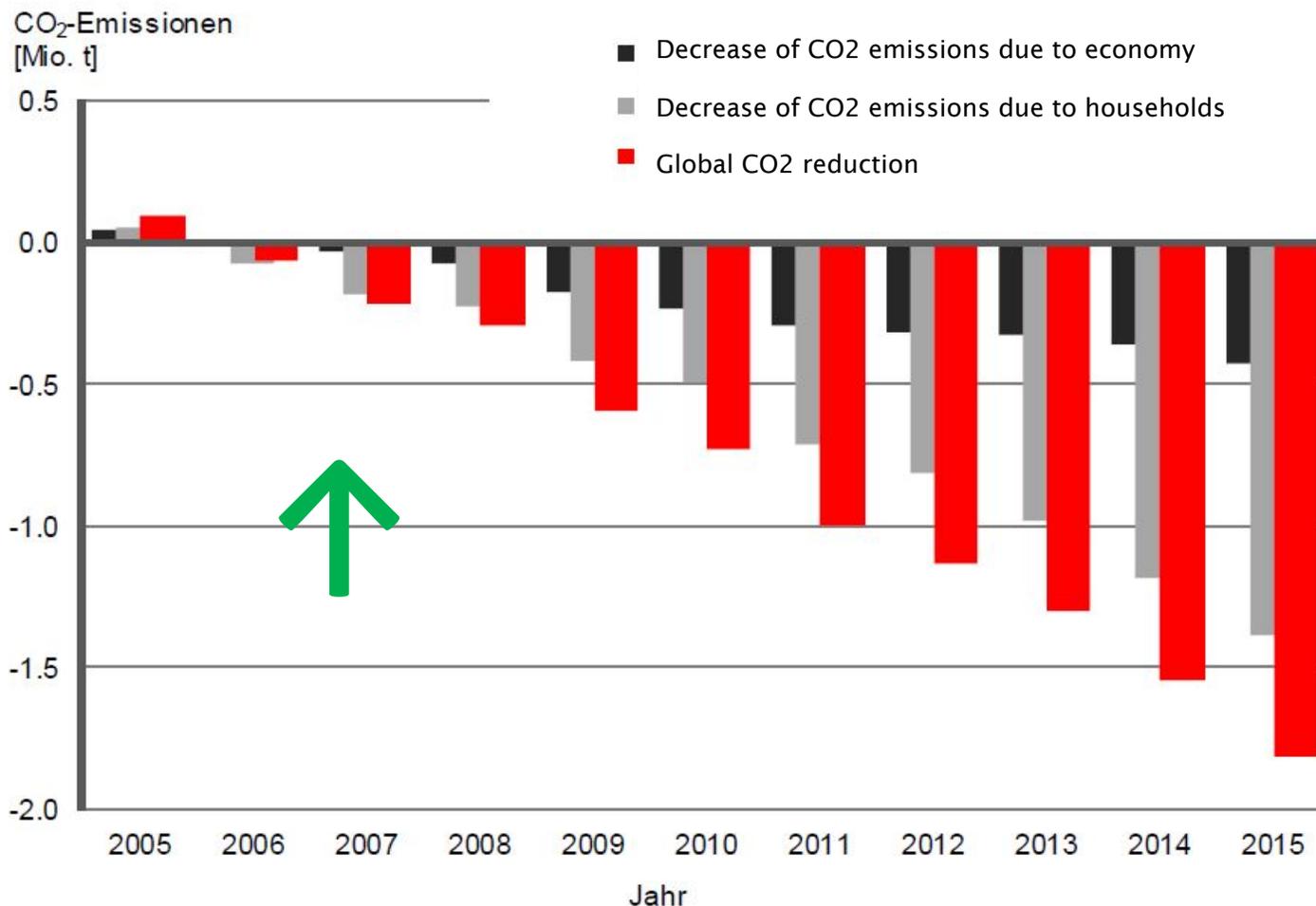


Figure 1 : Effet de la taxe sur le CO<sub>2</sub> (source : Ecoplan 2017, modèle économétrique)

# French energy picture

Primary energy consumption : 256M TOE in 2015

CONSOMMATION D'ÉNERGIE PRIMAIRE (CORRIGÉE DES VARIATIONS CLIMATIQUES)  
PAR ÉNERGIE : 256,7 MTEP EN 2015

En Mtep

