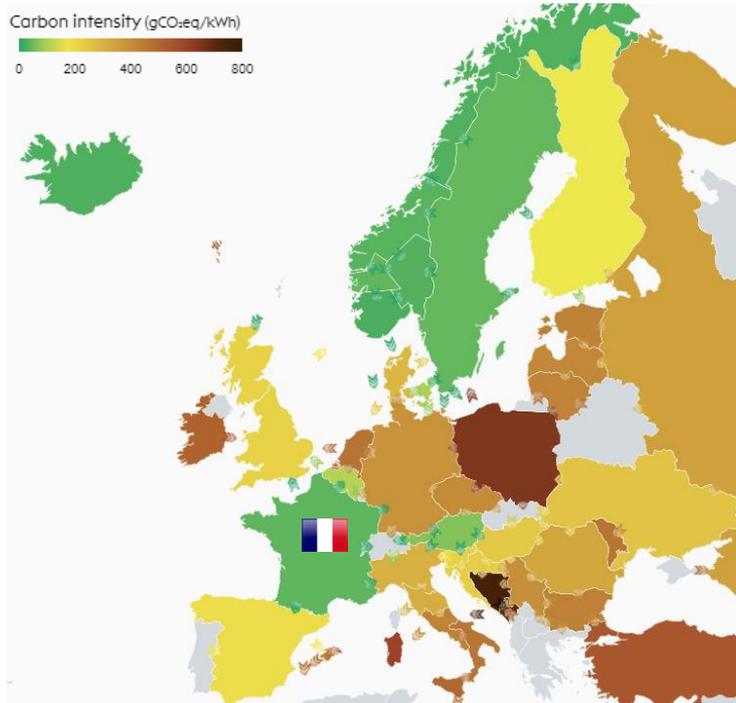


# An overview of EV development and policy in France



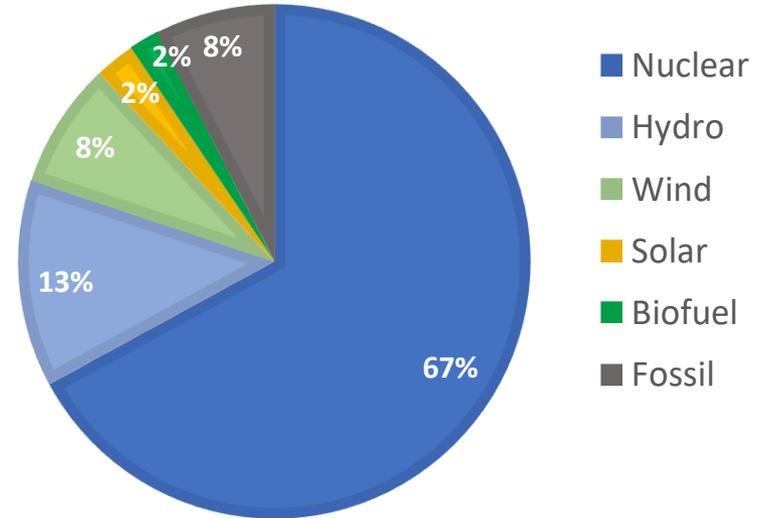
# France : a low carbon power backbone

## Carbon intensity of power production in Europe



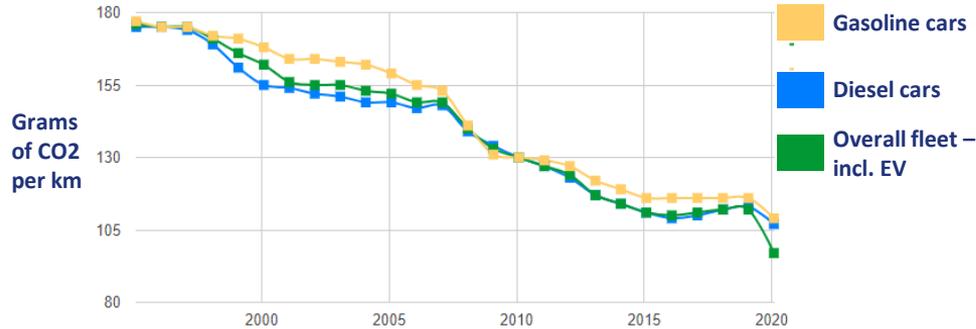
Courtesy of [Electricitymap.org](http://Electricitymap.org)

## France power mix : 92% low carbon production

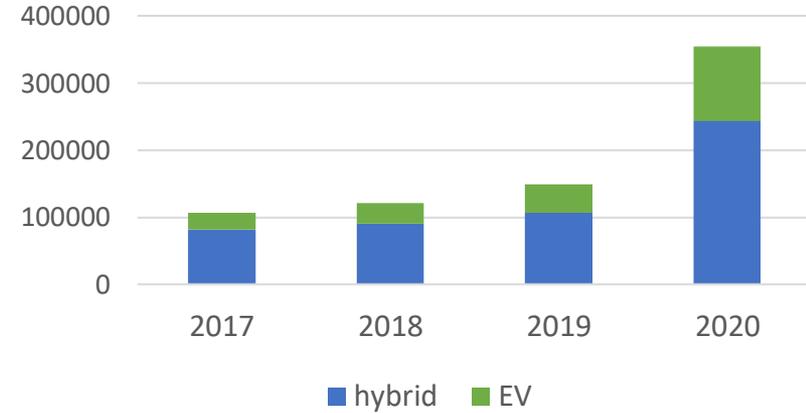


# France : current status of carbon reduction in mobility

## CO2 intensity of French car fleet



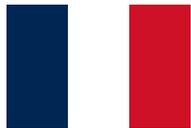
## France low emissions vehicle sales



## France's automotive fleet

- ▶ Diesel – 23,24 M vehicles
- ▶ Gasoline – 16,56M vehicles
- ▶ Hybrid – 730k vehicles
- ▶ EV – 248k vehicles

# France & Europe : plans for 2050 low carbon society



## OBJECTIVES AND MEANS

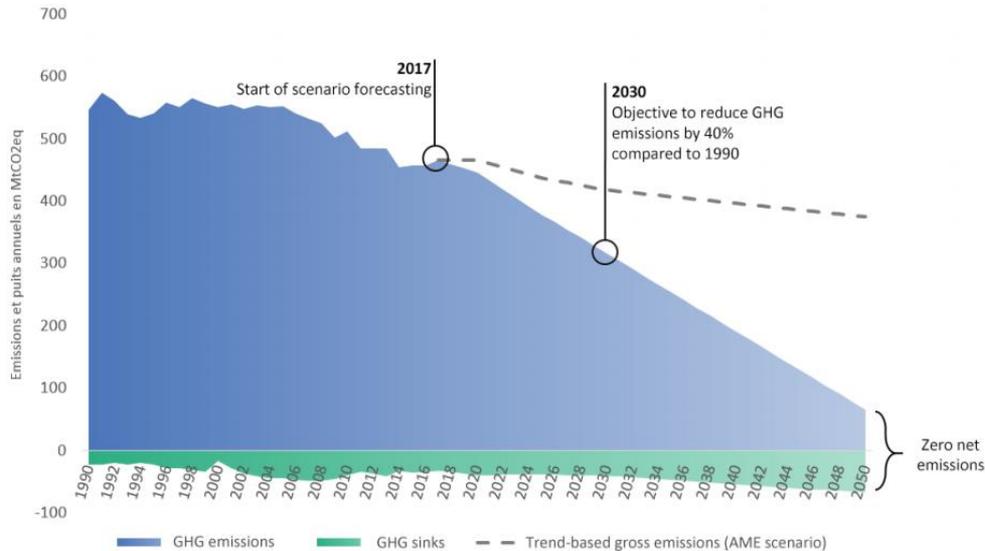
- ▶ At least -85% GHG emissions nationwide by 2050
- ▶ Goals for the transport sector :
  - -28% GHG emissions by 2030 / 35% of EV & FCEV in new car sales
  - Carbon neutral by 2050 / 100% of EV and FCEV in new car sales
- ▶ 2023 onward : \$45 Bn annual investments
- ▶ 300,000 to 500,000 new jobs by 2030

## OBJECTIVES AND MEANS

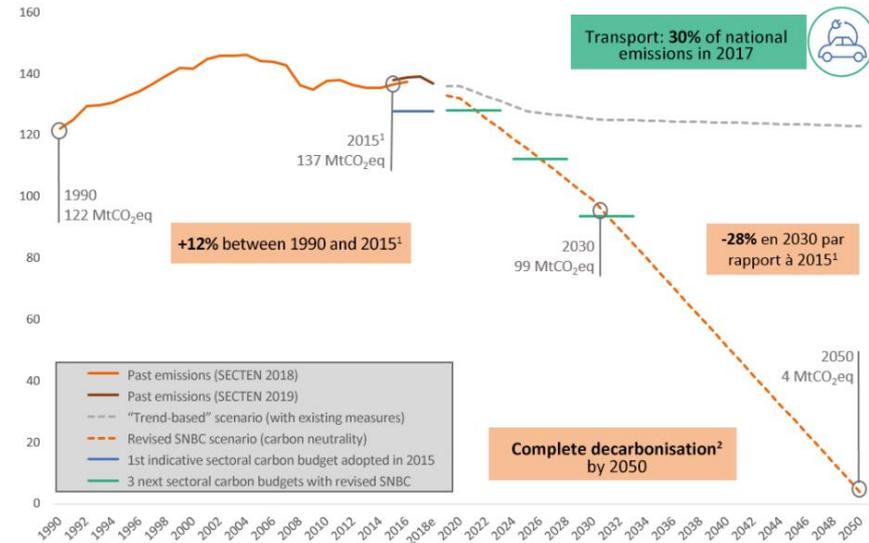
- -40% GHG emissions by 2030 / at least -80% by 2050
- Goals for the transport sector :
  - -55% GHG emissions by 2030 / 30M zero carbon cars on the roads
  - -90% GHG emissions by 2050 / 100% of zero emissions new car sales

# France plans for 2050 low carbon society

## Nationwide roadmap



## Transport sector roadmap



# EV technology and industry in France



## RENAULT-NISSAN ALLIANCE

- ▶ 6th largest EV maker in the world
- ▶ 10 new EV models by 2025 / 1M EV produced by 2030
- ▶ Vertical integration - in-house manufacturing for batteries & motors
- ▶ First French gigafactory in 2024
- ▶ 2025 : 65% of electrified vehicles in EU sales / 2030 : 90% of EVs in EU sales

## PEUGEOT - CITROEN - STELLANTIS

- ▶ 4th largest EV maker in the world
- ▶ Vertical integration roadmap - 80% of added value in-house : battery cells & packs, motors, software, AS services
- ▶ Two gigafactories by 2023 (France & Germany)
- ▶ 2025 : 38% of electrified vehicles in global sales / 2030 : 70% of electrified vehicles in global sales

# EV technology and industry in France



4,000 companies



\$7 Bn annual R&D

## FRENCH EV SUPPLY CHAIN



Nickel,  
Manganese  
mining & refining



Cells &  
batteries  
manufacturing



EV grade  
tires



Weight  
reduction  
technology



Powertrain,  
inverter,  
converter, BMS,



Vehicle  
assembly

# French-Korean partnerships in EV



STELLANTIS

SAMSUNG

SAMSUNG SDI



LG Energy Solution

POSCO eramet

Twizy model  
assembled at  
Renault Busan plant

On-going battery  
supply deal

Battery core  
materials supply



감사합니다!!

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