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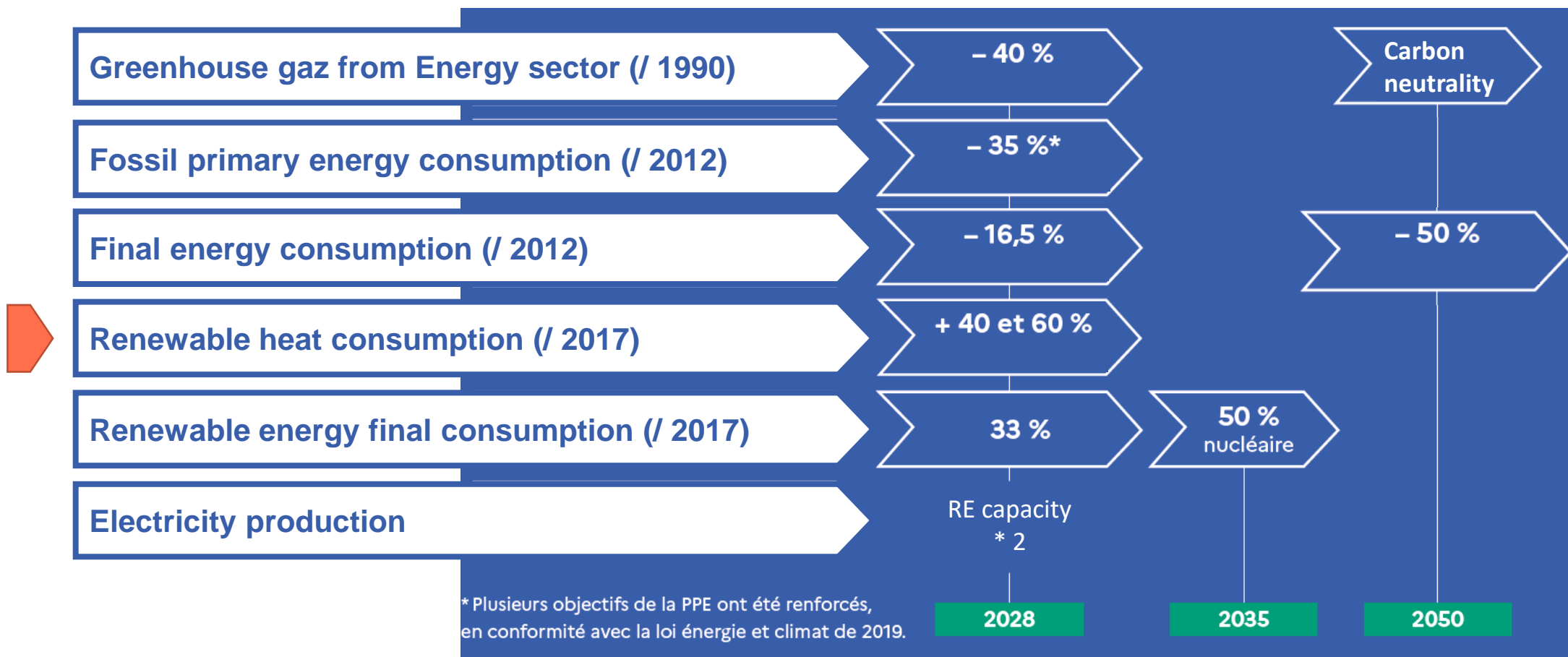
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# The French biomass policy framework

with focus on **ADEME funding schemes**

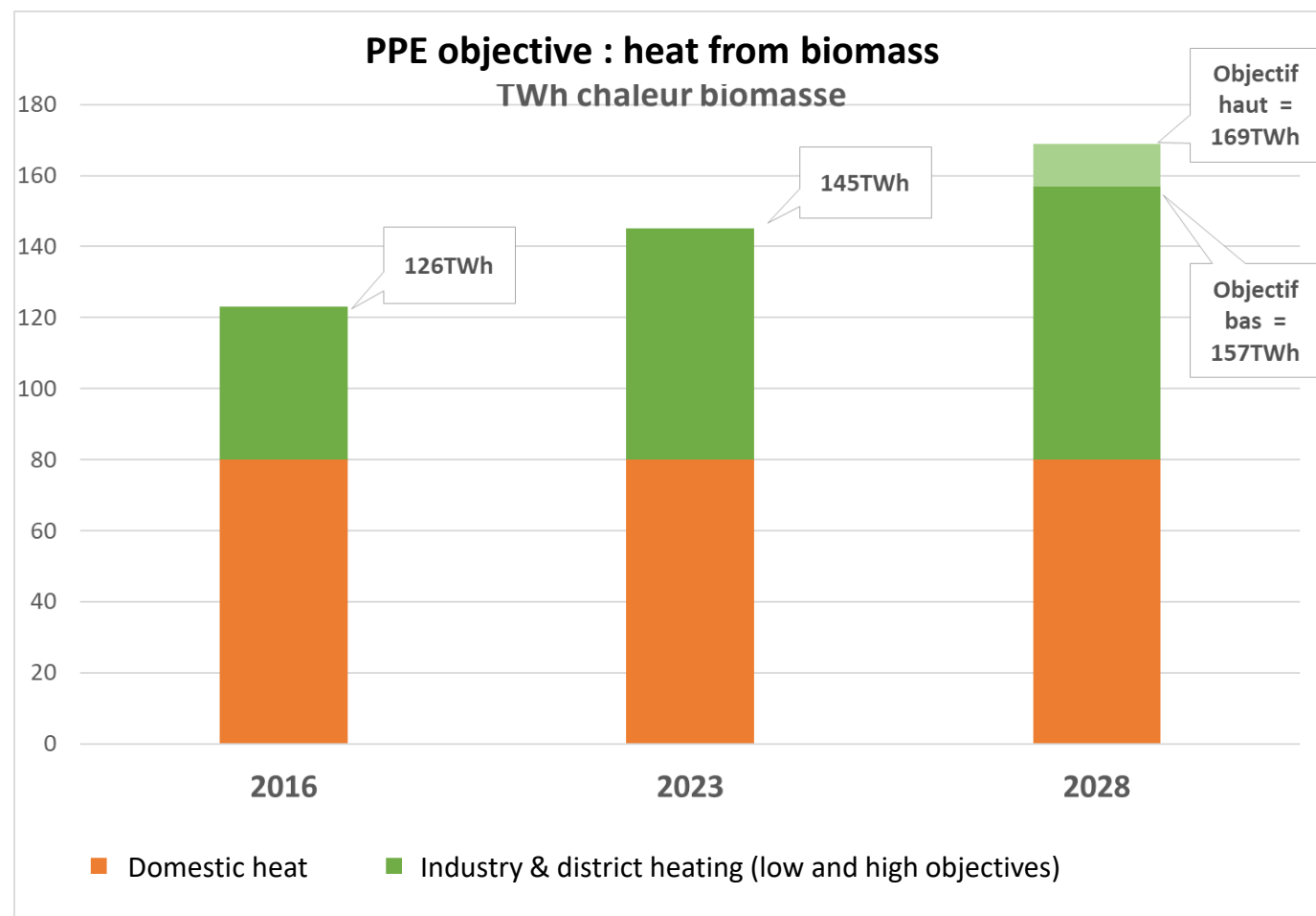
# French climate and energy framework



# Biomass objectives in French 10-years Energy Plan (PPE)

- **Heat and cold production from biomass: + 36%**
  - From 120 TWh (2016) to 145 TWh (2023); 157 up to 169 TWh (2028)
- **Biofuel:**
  - Advanced biofuels: 3,6% (energy) in gasoline pool and 2,8% (energy) in diesel pool in 2028
  - Biofuels for aviation: 5% (energy) in 2030
- **Biogas : +500%**
  - Mainly for biogas injection
  - 0,4TWh (2017) → [ 24 - 32 TWh] (14 up to 22 TWh in gas grid)

# Biomass energy: a strategic issue for energy transition

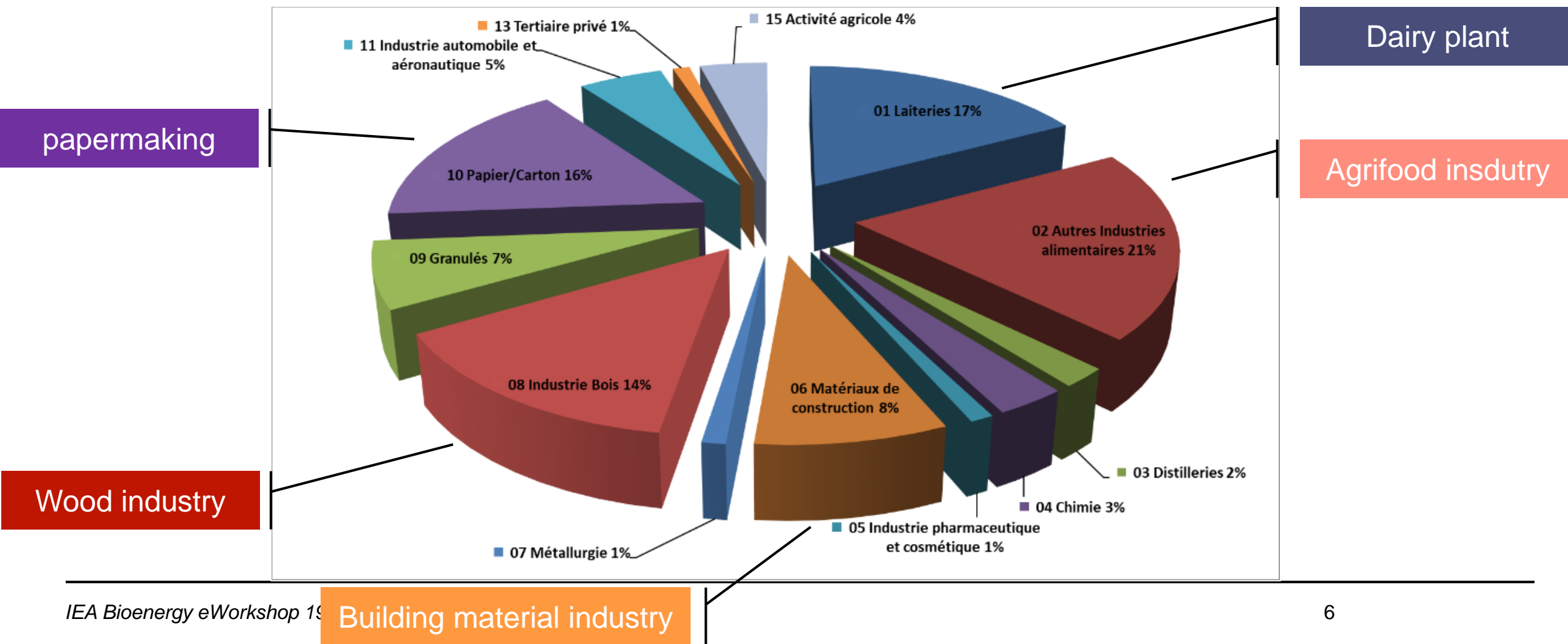


- **First Renewable Energy (RE) for heat production**
- Increase of **3.1 TWh/year** needed to reach **2023 target**
- Industry & Collective housing sectors: very strong development expected – **Heat Fund & reduced VAT**
- Household sector: challenge to maintain current production level → credit tax & white certificates

# The Heat Fund : an efficient tool !

- implemented by ADEME since 2009
- **What ?**
  - Biomass, geothermal energy and heat pumps, solar thermal, waste heat from industry and waste, biogas
  - For RRE-based heating projects (in industry, public and tertiary buildings, collective housings...)
  - District heating with at least 65% RRE
- **How much ? 2,3 b€ subsidies 2009-2019,**
  - “Custom-made” subsidies for largest projects : to reach competitiveness of the RE compared with fossil fuels
  - Fixed subsidy /MWh for smaller projects
  - Average “public cost” of 3,8 €/MWh (over 20 years) ; “payback time” vs avoided fossil fuel importations 3-4 years
  - 200 M€/year from 2009 to 2017, 350 M€ in 2020, 350 M€ in 2021
- **How many ?**
  - 5350 projects funded so far, 2,7 Mtoe each year ; average funding level 30%
  - Biomass : 1050 thermal plants, 300 supply projects, 65% of projected energy production

# Heat Fund: focus on Industry



# Example of heat plant in agrofood industry



- Investments: 5.2 million €
- Funding : 48% of eligible investments

## Performance

- Annual biomass production 55 GWh
- 80% of steam production is provided by biomass.
- 20 tons provided for biomass supply : 80% of forest chips

## Environment

- 13 tons of CO<sub>2</sub> avoided per year



# New program « Decarbonization Fund for industry »

- Part of French Recovery Plan
- Time frame: 2020 – 2021 – 2022
- Global budget for 3 years : **1,2 billions €**

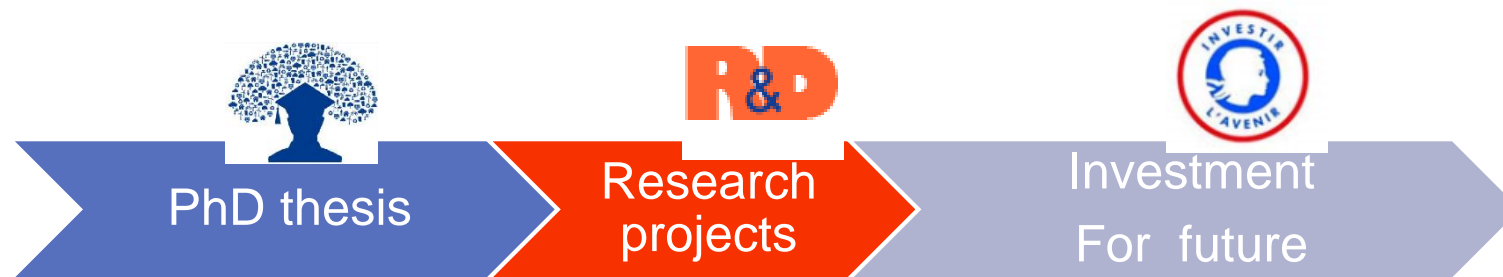


## Dedicated support schemes and funds :

- **Heat from biomass energy in industry : OPEX subsidy « contract for difference »**
  - In addition to CAPEX subsidies; subsidies for OPEX during 15 years
  - Secure financial package : taking account of gas and avoided t CO<sub>2</sub> prices
  - for energy needs above **12 GWh/an** ;
- Support for actions towards energy efficiency and adaptation of industrial processes



# Financial support scheme to innovate and prepare the future



<b>Programs</b>	<b>Grants for Doctoral fellowships</b>	<b>Calls for research proposals</b>	<b>Wide scale innovation demonstrators</b>	<b>Innovation contest</b>
<b>TRL</b>	TRL 3 to 4	TRL 4 to 7	TRL 6 to 9+	TRL 6 to 9+
<b>Indicative amount of fundings</b>	Half a grant	50 to 400 k€	>2 M€	600 k€ to 5 M€

## Current call: Bioeconomy and environment

- Eco-efficient **Agriculture and agrifood industries**
- Mobilisation of biomass and production of new **biomass** re
- **Bio-based Materials and Chemistry**, advanced **biofuels**
- **Renewable energy**

# Example of project supported by Investment for Future



**Company :** Compte R (Main french boilermaker)

**Objectives :**

Design a NO<sub>x</sub> treatment system, suitable for small and medium biomass boilers

An Effective, Punctual & Economic treatment system



**Total Investment: 424k€**

**ADEME Funding : 200k€**

# To sum up

- A biomass policy framework with two levels:
  - ⇒ Quantitative planned and ambitious targets for 2028
  - ⇒ Adapted financial support policies
- Main actions on bioenergies, especially **heat production**
- Dedicated schemes for **industry sectors**:
  - ⇒ Existing schemes already providing promising results
  - ⇒ Enhancement with OPEX support to accelerate and compensate for low gas prices
- Other bioeconomy sectors also covered with **innovation support to develop biobased sustainable chemistry**