

# Renewable heat in France

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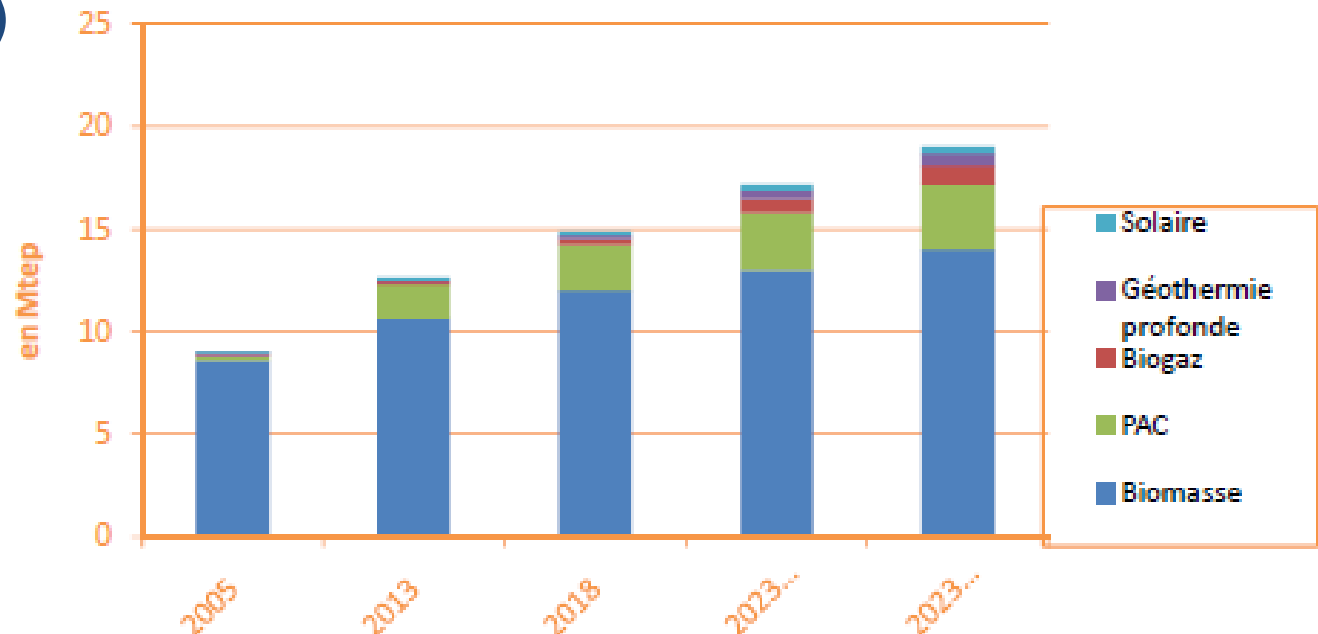
## Ren. heat : french targets

### • Energy Transition Law (2015)

- 32% RE in 2030 french global mix (23% in 2020 ; today 15%)
- 38% RE in heat, 2030 (today around 18%)
- X 5 renewable heat / cold in district heating / cooling in 2030
- CEC : 56 €/T CO2 in 2020, 100 €/T 2030 (other taxes decrease)
- Regional Plans for Biomass mobilization

### • PPE (2016)

Programmation  
Pluriannuelle de  
L'Energie



# Incentives for ren. heat in France

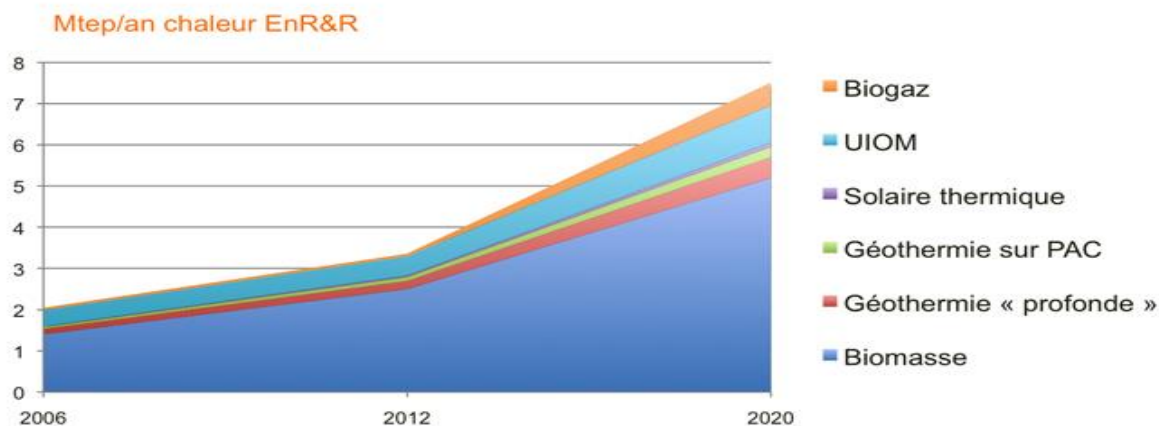
- **Heat Fund (implemented by ADEME)**
  - 1,4 b€ subsidies 2009-2015, for RE-based heating projects (in industry, public and tertiary buildings, collective housings...)
  - biomass, geothermal energy and heat pumps, solar thermal, waste heat from industry and waste treatment, biogas
  - district heating with at least 50% RE (+ lowered VAT : 5,5%)
  - 3 600 projects funded so far, 1,8 Mtoe each year (70% from solid biomass, waste heat, geothermal energy heat pumps, biogas)
  - average “public cost” of 40€/Toe ; “payback time” vs avoided fossil fuel importations 3-4 years
  - “custom-made” subsidies : economic analysis for every project, subsidy designed to allow competitiveness of the REN solution
- **Tax credit (30%) for private housing**
  - particularly effective in domestic wood heating
- **R&D funding, “Investment for the Future” Program**

## Achievements / Issues...

- 110 large biomass heaters in industry (call for tenders) : “first client” agri-food industry : rural areas, constant energy needs
- 670 district heating projects, (synergy w. VAT) : biomass, waste heat, geothermal energy (Paris) ; + 1700 km ; global Ren share 30 (2008) => 50% (2015)
- Domestic wood : 6 (2000) to 7,5 (2012) millions households, 30 to 50% using wood as main heating source, same energy consumption, due to development / renewal with high efficiency equipment, through tax credit policy
- But...
  - Solar thermal doesn't reach targets : cost, reliability, ...?
  - Biomass supply, in the next years : the 4th forest in Europe... but only 50% of annual biological growth harvested ; a rather weak wood industry, specifically « first transformation » (sawmill) ; necessity to develop all wood uses (building, furniture, paper... and energy), and support efficient forestry

## • But...

- The growth isn't (still) strong enough : + 250 Ktoe / year, 600 needed



- Strong decrease of fossile fuels price : affects REN competitiveness (especially biomass) : less projects / needing more subsidies
- ... the exact opposite of what was expected when building this incentives program (and happened during the first few years)
- carbon price / carbon tax...