

# Renewable heat in France

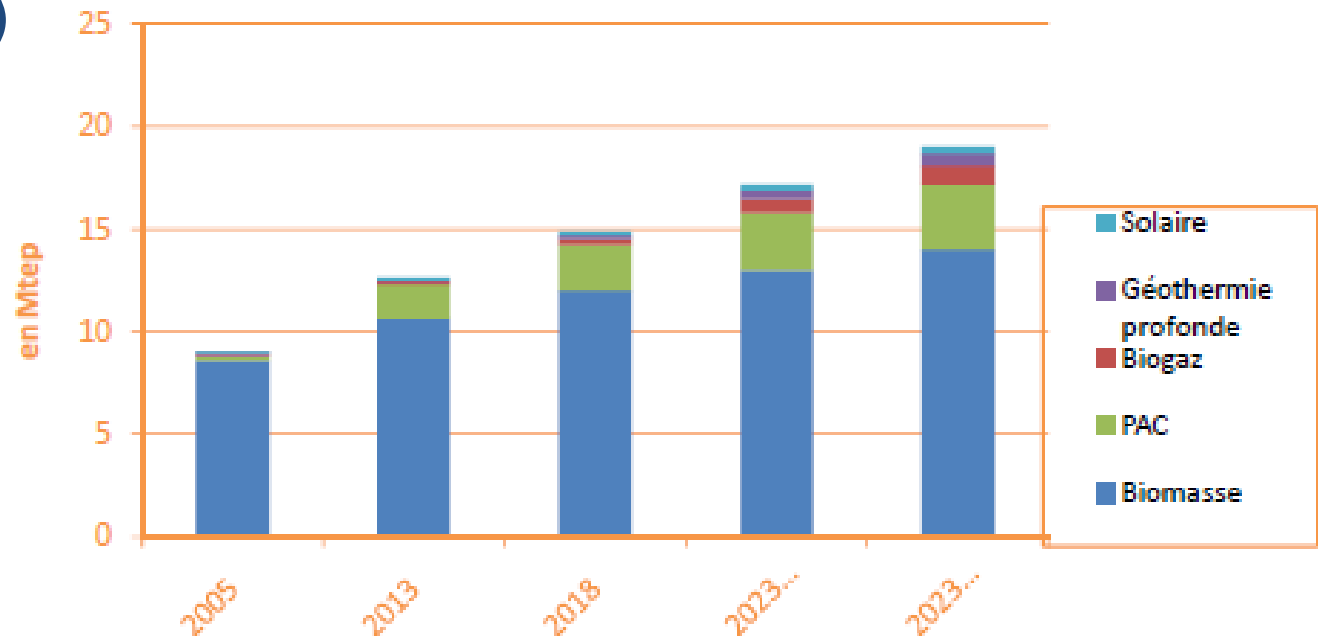
**OFATE – avril 2017**  
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## • Energy Transition Law (2015)

- 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'Énergie



# Incentives for ren. heat in France

- **Heat Fund (implemented by ADEME)**
  - 1,6 b€ subsidies 2009-2016, 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%)
  - 3 900 projects funded so far, 2 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**

# Heat Fund: user guide

## Initiatives eligible for subsidies:

### **Subsidies for project support:** (up to 40 - 80 %)

- field work structure, scoping study
- Feasibility study, blueprint for a heating network
- Management assistance

### **Subsidies for project execution:** (up to 25 - 80 %)

- **Renewable energy installations** (wood heating , geothermal system with or with out heat pump, solar thermal collectors, biogas plants, ...)
- **Heat recovery systems** (waste incineration plants, industrial process, ...)
- **Renewable heat recovery systems** : creation, extension, densification (heating network's energy mix to contain at least 50% heat from **Renewable heat recovery installations**)

# Heat Fund: user guide

## Financing aid calculation method

- For **small and middle-sized installations**, a **flatrate** subsidy (80 % of the projects examined within the heat fund scheme):
  - ❖ For **renewable heat recovery installations** (ENR&R): subsidy level is calculated in relation to the forecasted renewable energy production (toe/year) and multiplied by a technology specific rate (biomass, solar, geothermy)
  - ❖ For **district heating networks** under 500 toe/year, the subsidy's level is calculated in relation to the length and diameter of some network sections. In case of specific requirements (passing a highway, railway or waterway) an additional subsidy can be granted.
- For **large installations**, the level of the subsidy is **set by the ADEME** following an **installation-specific economic analysis** (not flatrate-scheme).
  - The aid is adjusted according to a “reference case” using fossil energy in order to enable competitive heat costs

***N.B : the total amount of support has to remain within the framework set at European level***

# Heat Fund: user guide

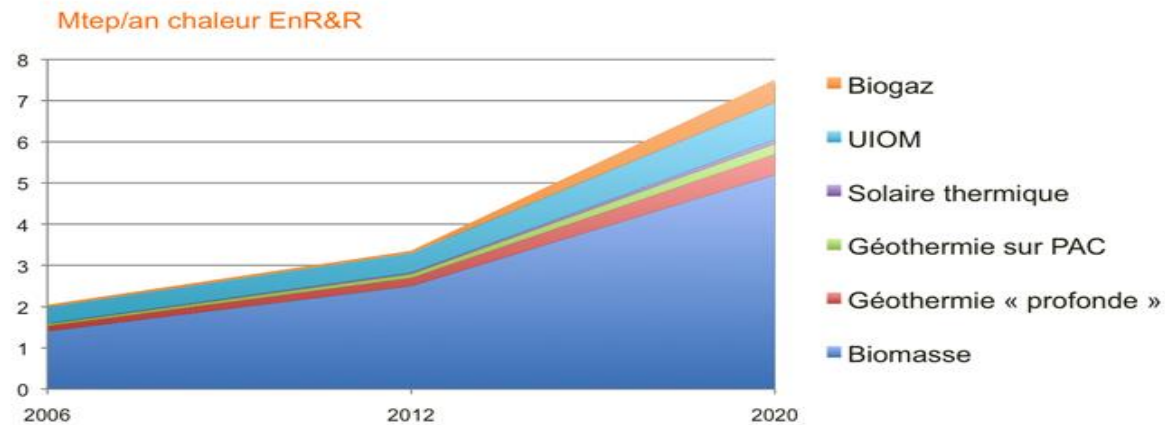
## Application process for financing aid

- *Within the scope of regional **calls for projects** (general case): Aim of the call for projects: mobilize project developers and provide visibility to funding partners (ADEME , regions , FEDER...) .  
Generally, two application deadlines per year*
- *« **Upon receipt** »: for specific cases such as highly complex applications or large application files.*
- *Within the scope of national calls for projects :  
for large size company biomass facilities, large size solar thermal power plants, certain emerging technologies*

- 120 large biomass heaters in industry (call for tenders) : “first client” agri-food industry : rural areas, constant energy needs
- 740 district heating projects, (synergy w. VAT) : biomass, waste heat, geothermal energy (Paris) ; + 1900 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...