



**FONROCHE**  
*énergies renouvelables*

# Fonroche Géothermie : Finance for innovation ETS Fund – WorkShop April 6th 2017



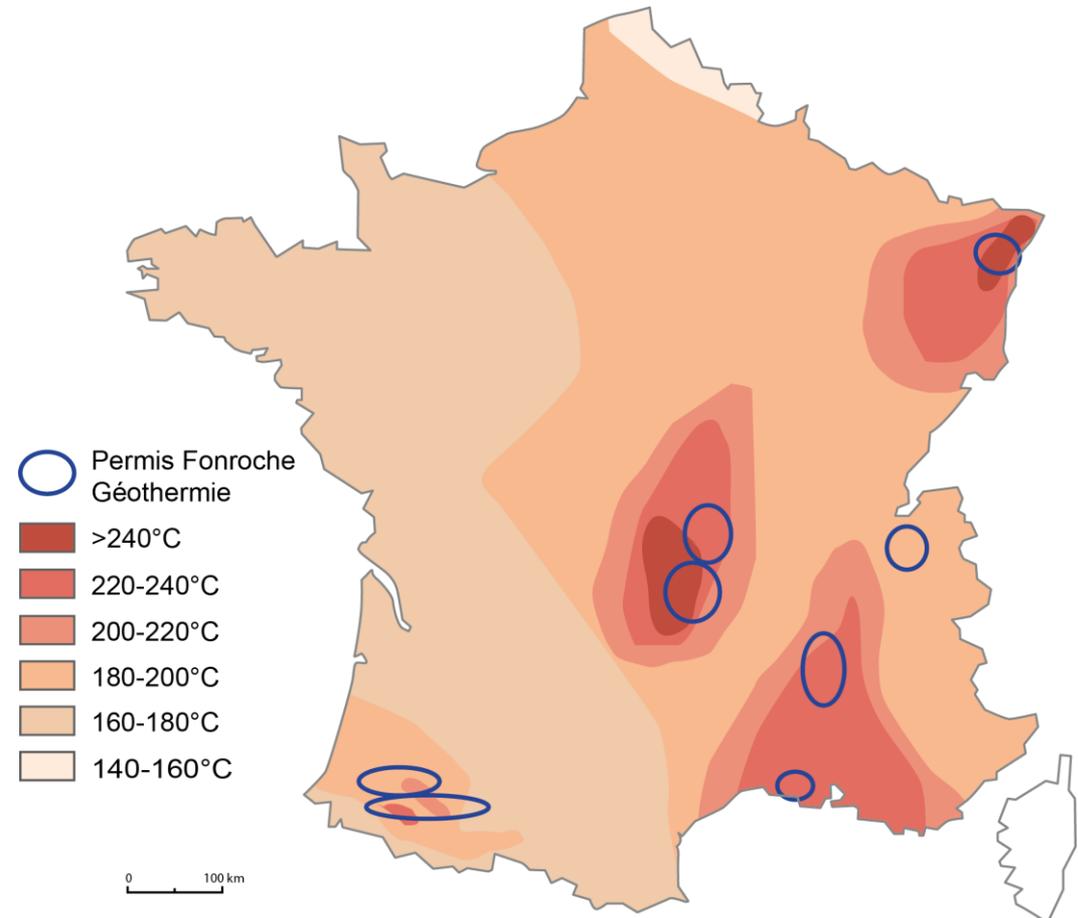
[www.fonroche.fr](http://www.fonroche.fr)

## In France

### 5 big regions:

- Le Bassin Aquitain
- L'Alsace
- Le Bassin de Genève
- Le Massif Central
- Le Bassin du Sud-Est

Geothermal is the 3rd renewable energy in France for Heat & Cold production.



Carte de France des températures à – 5000 m de profondeur en France Métropolitaine

## A French Actor on Geothermal Development involved in several R&D projects

### ✓ FONGEOSEC

- ✓ PIA program
- ✓ Collaborative projects
- ✓ 10 partners

### ✓ DEEPEGS

- ✓ Horizon 2020 program
- ✓ 10 partners from 5 countries

### ✓ GEODENERGIES (Scientific Association)

- ✓ National Research Agency funded
  - ✓ 3 projects started
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## ✓ Focused on drilling phase

- Different tool bit to be implemented
  - DT Hammer-Water hammer (pressure loss)
  - Electromagnetic Hammer (bobbin percussion)
- Development of geothermal doublet (semi open loop)

## ✓ Focused on reservoir production increasement

- Use of multi-drain technology
- Knowledge of geothermal water circulation by tracers

## ✓ Focused on exploration phase

- Micro-seismic studies
- Global reservoir characterization
- New soft stimulation methods
- Work on high thermal tools (*in situ* sampling)

## ✓ Focused on valorization tool

- Development of ORC in parallel for increasing available time of production
- Work for increasing fluids work on ORC and production rates