The anaerobic digestion market in France

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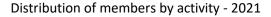


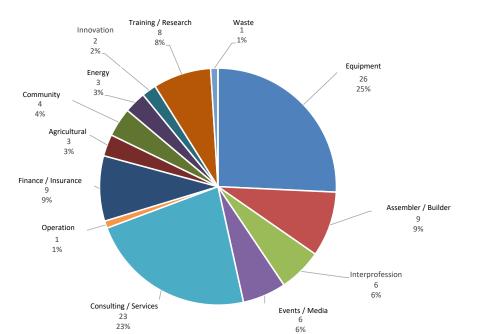


Biogaz Vallée®

Biogaz Vallée® is the network of biogas professionals in France whose dual objective is:

- Develop an industrial value-creating anaerobic digestion sector in France
- To be exempt, in the long term, from the public subsidy: to have a viable
 French economic model (multi actors and multi inputs)





101 members

including 18 partners

10 years of existence

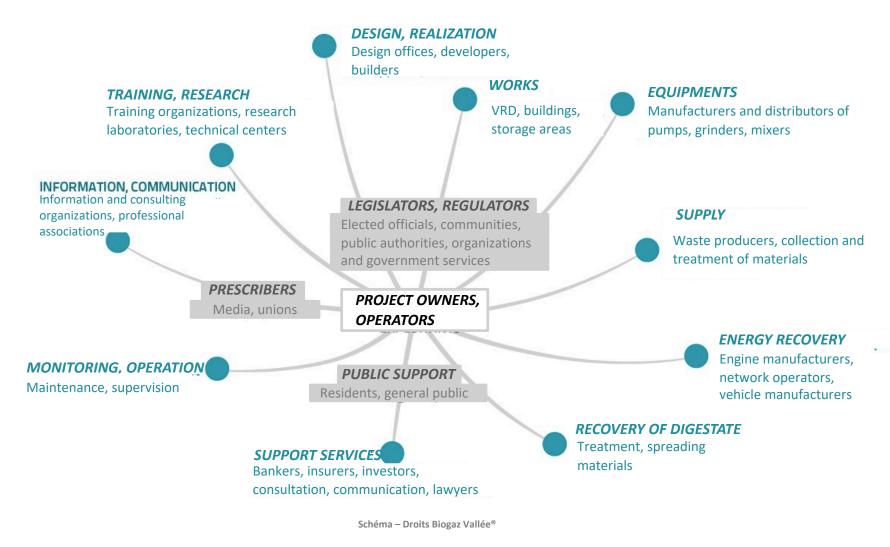
2,6 full-time equivalent

Members from 11 different metropolitan areas





Actors in the biogas sector



Actors of the methanization sector (in blue, typology of Biogaz Vallée members) (source: Biogaz Vallée*, 2018)



6 types of biogas project according to the materials recovered

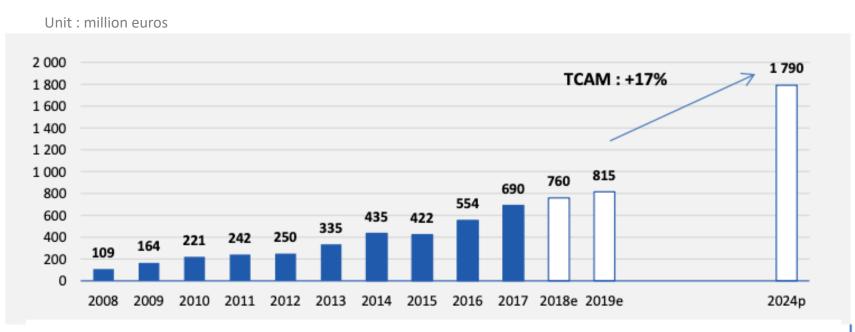
	Markets	Inputs	Types of actors
Waste storage -	ISDND ⁽¹⁾	Non-hazardous waste	Waste market players
Industrial ———	Industriel	Industrial waste (liquid and solid), source-separated household waste	Industrial, or even environmental services actors
Territorial ———	Territorial	Industrial waste Waste Waste Energy crops Agricultural waste Sludge & treatment Wastewater treatment	Industrial actors
Agricultural ———	Agricole	Agricultural Energy crops	Farmers, or even industrial actors (large projects)
Wastewater treatment sludge	STEP ⁽²⁾	Sludge & treatment Anaerobic wastewater treatment	Actors of the water market
Household waste ————————————————————————————————————	Tri Mécano- biologique	Household biowaste (and similar)	Actors of the waste market

Notes: (1) Non-hazardous waste storage facility (2) Wastewater treatment plant



Anaerobic digestion in France

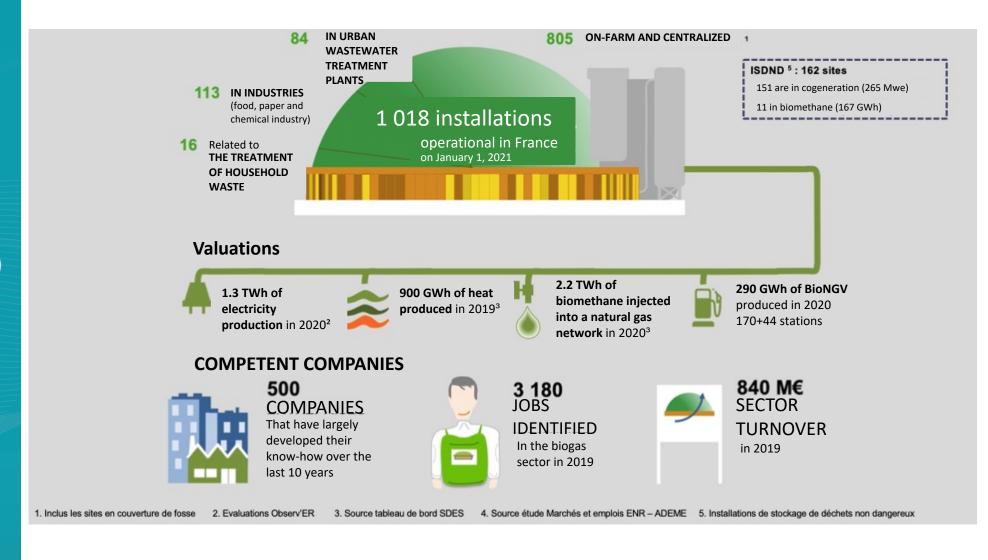
Turnover of the anaerobic digestion sector in France (*)



(*) Includes all players in the sector: consulting firms, developers, prime contractors, manufacturers, equipment suppliers and operators - The historical data has been significantly revised by Ademe compared to the previous edition / Processing, estimates and forecasts by **Xerfi** / Source: Observ'ER *via* Ademe

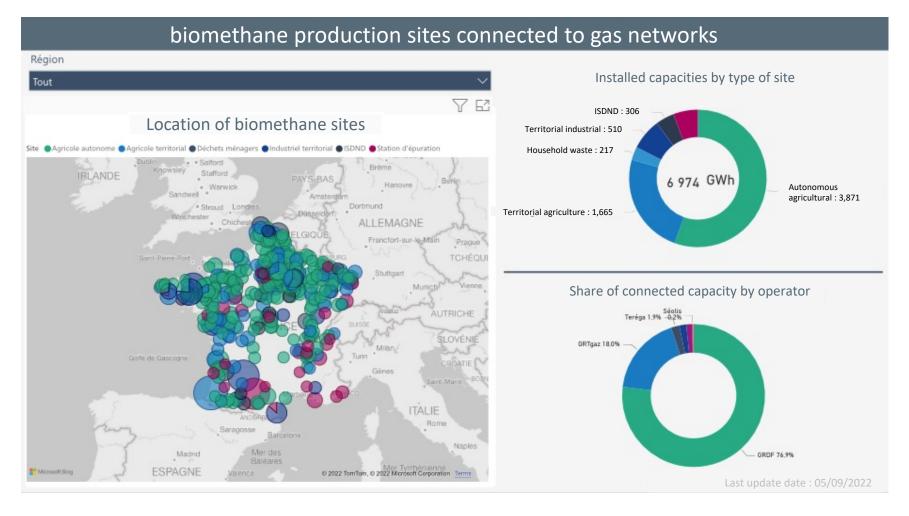


Anaerobic digestion in France





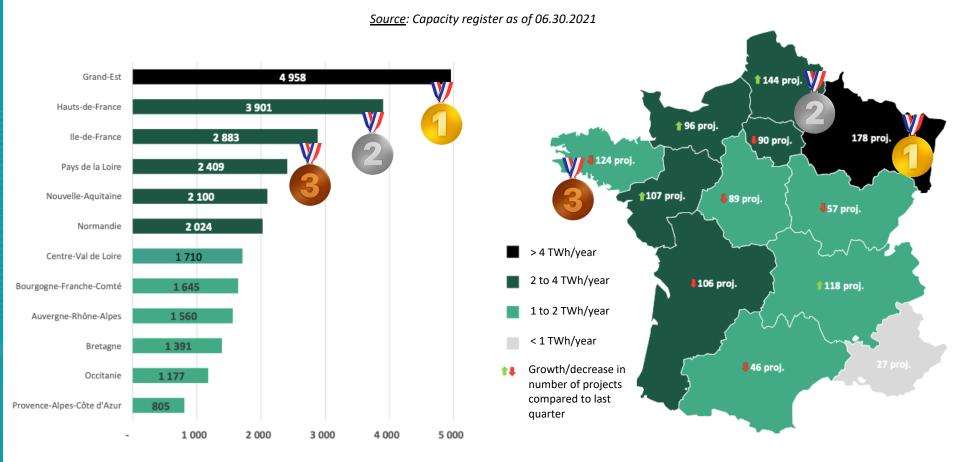
Biomethane in France: late development, exponential growth, waiting for new support systems





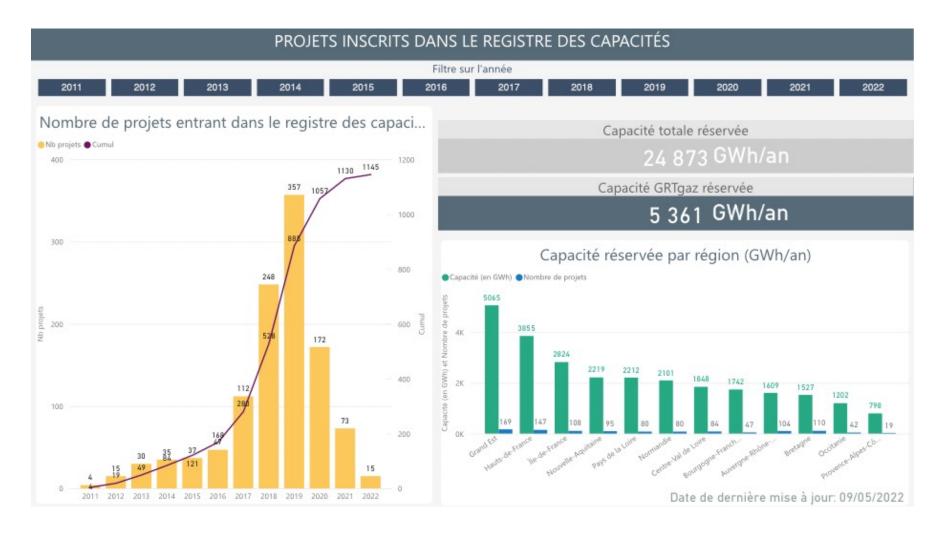
Biomethane injected in France

Numbers of projects and reserved capacities by region, expressed in GWh/year





Biomethane in France: late development, exponential growth, waiting for new support systems



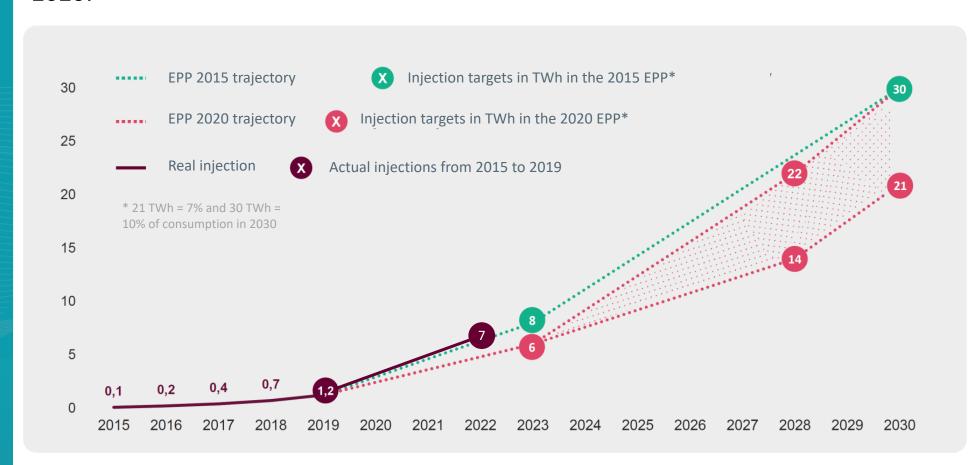
COMMITMENTS AND OUTLOOK





French commitments

New PPE (Multiannual Energy Program) published in the Official Journal on April 23rd 2020:





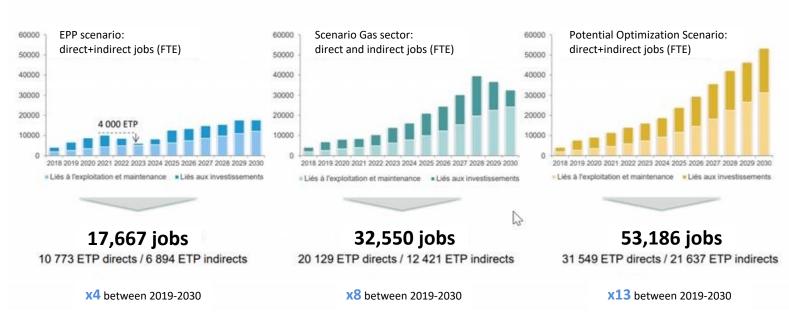
Jobs – biogas sector

Employment in the anaerobic digestion sector means:

- Local jobs that cannot be relocated
- Direct jobs linked to operations
- Indirect jobs (related to design, construction, energy)
- 4 000 jobs in 2022

Négawatt scenario: 10,000 direct jobs, 60,000 indirect jobs in 2030 New 2019 study on employment carried out by GRDF (available online):

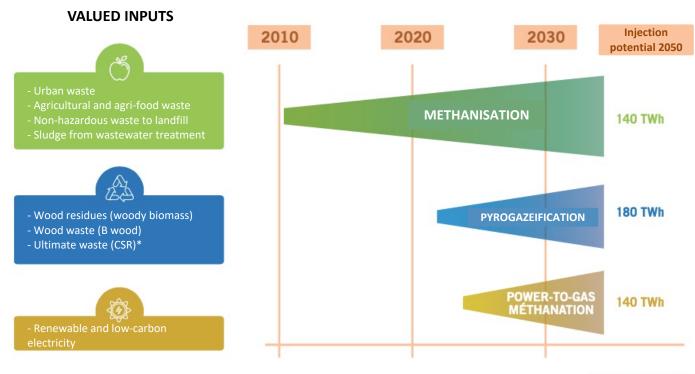
The biogas sector, from 17,000 to 53,000 jobs by 2030





Outlook

- Adaptation of networks: mesh, reverse, local storage, smartgrid
- The development of bioNGV for green mobility
- Renewable gases and CO₂ valorization



Soit 460 TWh

Source: "Green gases: Let's strengthen our synergies" - ATEE, March 2021

^{*}Solid Recovered Fuels - produced from non-hazardous waste that cannot be sorted or recycled Source: Study "A 100% renewable gas mix in 2050?", ADEME, 2018



Thank you for your attention!





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