



**IEA Bioenergy**  
Technology Collaboration Programme



# FRANCE Country Report IEA Task 33 Meeting

June 11, 2024

Chourouk NAIT SAIDI

ATEE

Karlsruhe, Germany

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**Technology Collaboration Programme**

by **iea**

# Funding mechanisms in France

## Syngaz direct usage in industry financial support systems

- The eligibility of the pyro-gasification sector for the "DECARB IND" call for projects in 2023/2024 with the modification of the specifications to include pyrolysis and gasification installations.
  - Call published on march 2024
  - Open to all types of biomass inputs and wood-derived solid recovered fuels (biomass SRF).
  - Ongoing discussions with the Ministry of Industry for a second call for projects in 2024.

### Main topics:

- Energy efficiency
- Modification of the energy mix
- Modification of the material mix
- **Gasification and pyrolysis** for on-site industrial consumption
- CO2 capture, storage, and utilization

- Pyro-gasification for pyrolysis and gasification projects for the production of syngas for direct use in an industrial furnace.
- Pyrolysis is aimed at producing biocarbon to substitute the material mix for an industrial user.
- Pyrolysis projects for the production of charcoal (biochar) to substitute the energy mix for the industrial user are also eligible for funding under this call for projects.



APPELS À PROJETS - EN COURS  
(jusqu'au 07/03/2024 - 15:00 - Heure de Paris)

## Décarbonation de l'industrie - DECARB IND

☆ Ajouter aux favoris

L'Appel à projets (AAP) DECARB IND vise à diminuer les émissions de gaz à effet de serre (GES) des sites industriels via les thématiques suivantes : efficacité énergétique, modification des mix énergétique et matière, captage, valorisation et stockage du carbone.

ADEME, the french ecological transition agency, offers financial assistance for ecological transition projects via several financing levers such as Fonds Chaleur, Fonds Économie Circulaire, Fonds Air Bois and France 2030.

# Funding mechanisms in France

## Hydrogen financial support systems



### 1. ADEME call for projects Écosystèmes territoriaux hydrogène - EcosysH<sub>2</sub> (2023/2024)

Call for projects “Hydrogen Territorial Ecosystems” for the production of hydrogen by pyrolysis/gasification of biomass, on an exploratory basis. Plant capacities must be less than 10,000 tons/year.

The admissibility of applications will be assessed by ADEME. Capex financial support will be given for the accepted candidate.

### 2. ADEME call for projects Technology bricks and hydrogen demonstrators (2023/2024)

Technology building blocks: innovative components and systems

Projects can focus on any link in the hydrogen technology chain, from production to end use, for applications in industry, transport and mobility, energy or networks (non-exhaustive list, given by way of illustration):

- Components and systems linked to hydrogen production: electrolysis, methane pyrolysis, thermochemical processes (pyrolysis and gasification) using biomass without conflict of use, justifying the absence of local pressure on the resource

# Research on gasification

## University of Lorraine's LERMAB ERBE laboratory

- Development of detailed engineering for O<sub>2</sub>/H<sub>2</sub>O gasification as part of the European POLYGEN project with CEA Grenoble's LITEN laboratory in 2016.
- Commissioning of an O<sub>2</sub>/H<sub>2</sub>O gasification unit at the University of Lorraine's LERMAB ERBE laboratory in July 2022.
  - successful syngas production tests (syngas stream composed of H<sub>2</sub>, CO, C<sub>2</sub>H<sub>4</sub>, C<sub>2</sub>H<sub>2</sub> and CO<sub>2</sub> without N<sub>2</sub>)
- Development of gasification projects for biomethane for grid injection.
  - on going gasification coupled to biological methanation tests (plain energy project) with Lermab, EQTEC and ENOSIS

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# Hydrothermal gasification

## Call for Statements of Interest (SOI) for hydrothermal gasification project

A Call for statements of Interest (SOI) for Hydrothermal Gasification will be open to all project developers from September 2 to October 31, 2024, whether they are at the preliminary study stage or more advanced stages.

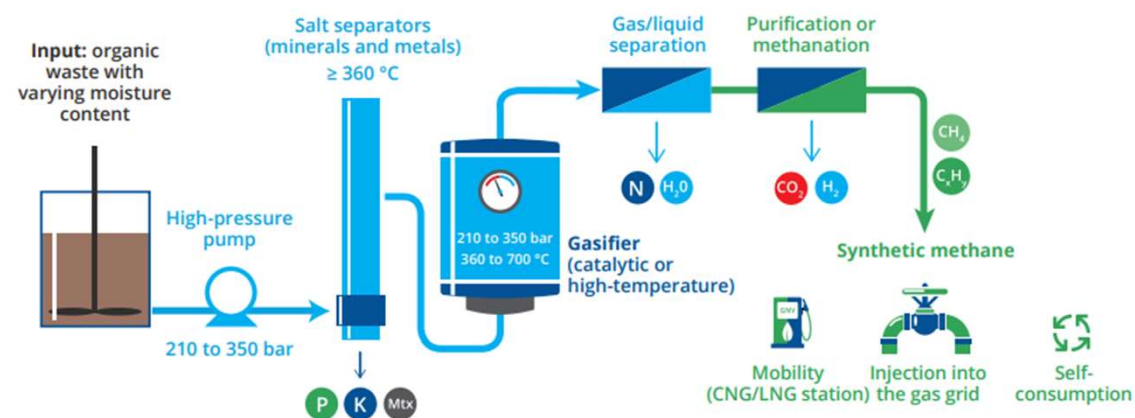
- Two webinars will be organized for project developers who have registered in advance:
  - Tuesday, July 9, 2024, at 2:00 PM: a launch webinar presenting the content and process of the HTG EOI and including a Q&A session
  - Monday, September 2, 2024, at 2:00 PM: an opening webinar for the submission period, reiterating the content of the EOI and including a Q&A session
- Furthermore, GRTgaz, the leader of the national working group on Hydrothermal Gasification, is committed to supporting project developers in their response to the EOI throughout the entire process.

Learn more: [Call for Expressions of Interest \(EOI\) for Hydrothermal Gasification](#)

GRTgaz with national working group on Hydrothermal Gasification produced a White Paper on hydrothermal gasification.

Link :

<https://www.grtgaz.com/sites/default/files/2024-01/hydrothermal-gasification-white-paper.pdf>

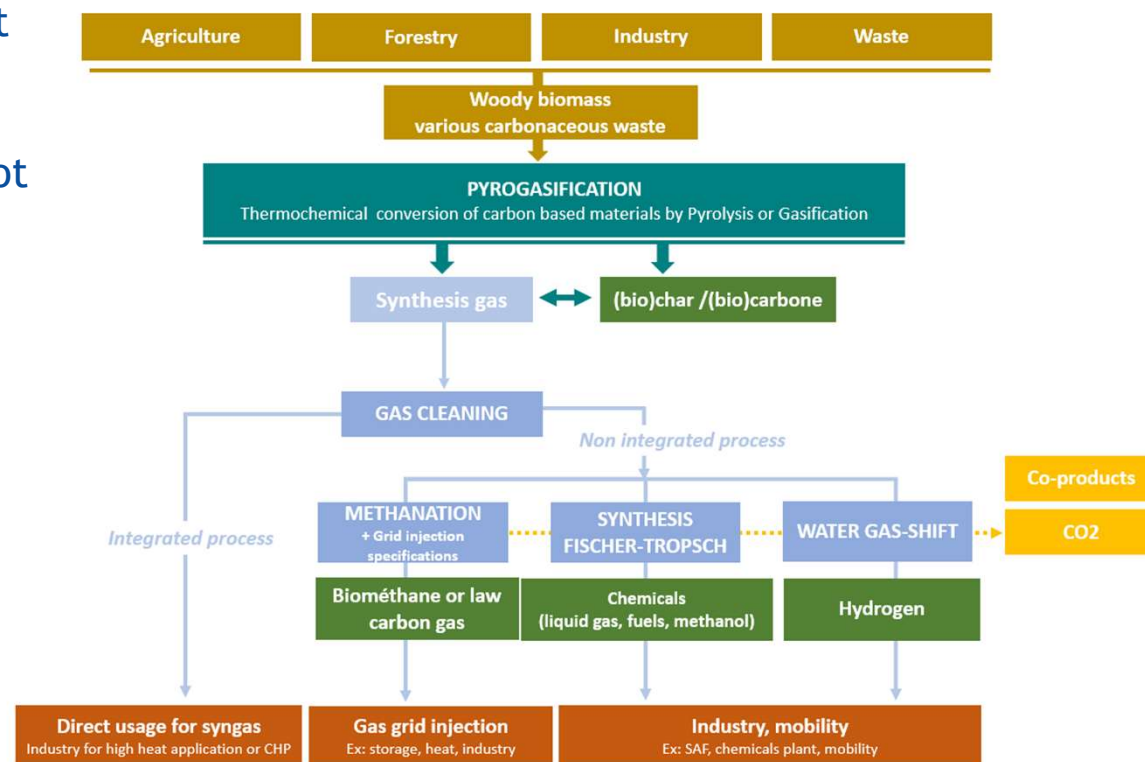


# What are the “pyrogasification” technologies definition in France?

The gasification sector is attracting interest because it responds to two issues

- A new alternative energy production
- Waste management: an outlet for waste that can not be recycled

1. **PYROLYSIS** (400°C - 800°C) is a thermal treatment of dry carbonaceous materials, in the absence of oxygen, producing a gaseous (“syngas”), liquid (oil) and solid (bio)char phase.
2. **GASIFICATION** (900°C - 1400°C) is the process of transforming a solid carbonaceous material into syngas by adding a small amount of oxygen or steam.
3. **PYRO-GASIFICATION** is a process of pyrolysis followed by gasification.



Thank you

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