



This factsheet gives an overview of the French bioeconomy innovation technology system. It includes the key government interventions, research initiatives, networks and finance instruments, in France.

## Bioeconomy Governance

The key **government bodies** are the:

- Ministry of Economy, Industry, and Digital Technology (**MEIN**)
- Ministry of Food, Agriculture, and Forestry (**MAAF**)
- Ministry of Ecology, Sustainable Development, and Energy (**MEDDE**)
- Ministry of National Education, Higher Education, and Research (**MESR**)



## Bioenergy and Biofuels

Key policies support bioenergy and biofuel development:

- The **Green Chemistry and Biofuels Roadmap** 2014 plans the development of 45 industrial biofuel projects, especially from biomass
- **Biofuels plans** (2004, 2005 and Farm bill 2006)
- **Biomass and Plant chemistry plans** (Strategic Value-chains Plans, 2006)
- The **"POPE" law** 2005, setting the direction of energy policy, was a GHG emissions reduction commitment with strong impact on biomass development

## Bioeconomy Strategies

France currently has no bioeconomy roadmap, but the subject is on the political agenda, and there are several government policies and national strategies related to bioeconomy, including:

- The **National Strategy for Research and Innovation** 2015 includes among its themes: fossil carbon substitutes for energy and chemistry; from production to diversified uses of biomass.
- The **New Industrial France Policy** 2013 is implemented through 34 industrial plans, with several related to bioeconomy, among them:
  - Green chemistry and biofuels
  - Wood industries
  - Recycling and green materials
- **National Waste Plan** 2014-2020
- **Forest Orientation Law** 2001
- **French chemical industry Roadmap** 2013
- **National Strategy for Sustainable Development** 2003 with objectives about renewable energy development, biofuels, and waste reduction
- The Ministry of Agriculture has published two notebooks from the **Council on Food, Agriculture and Rural Areas** about "*Biomass – Energy – Climate*" (2011) : *Land Energy (Vol 1)* and *Wood Energy (Vol 2)* and a paper about *Sea Energy* (2011)
- The **"Grenelle de l'Environnement"** 2007 has induced focus on "green growth" value-chains, especially carbon-free ones





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## Climate Change Policy

The **Energy Transition Law** 2014 sets voluntary objectives to cut greenhouse gases and increase the proportion of renewable energy. The **Climate plan** 2004 was the first French action plan to address cutting carbon emission, which was updated in 2006, 2009, and 2011.



## Technology Commercialisation Centres

- The **Institutes for Energy Transition (ITE)** are interdisciplinary carbon-free energy platforms with shared funding and research to strengthen innovation ecosystems in competitiveness clusters, including:
  - **PIVERT** *Picardie plant-based innovations, technological training and research*
  - **INDEED** *National Institute for Carbon-free Energies and Ecotechnologies Development*
  - **IFMAS** *French Plant-based Materials Institute*
- **Toulouse White Biotechnology** pre-industrial demonstrator
- A dozen **Shared Innovative Platforms**, including: **IMPROVE**, **Eco-Ex**, **Axel'One**



## Research & Technology Funding

The main R&D funding bodies are:

- The France public investments Bank (**BpiFrance**), including special funding (FUI) for Competitiveness Clusters
- The French Agency for Environment and Energy Management (**ADEME**)
- The National Research Agency (**ANR**) - sharing the management of several funding programs, including:



- The **Investing for the Future Program (PIA)** €35B 2010 – 2016 to modernize and enhance French competitiveness, by promoting investment and innovation in research, energy, and industry, through Big Projects, Carnot Institutes, Institutes for Energy Transition, Innovative Platforms, including themes related to carbon-free energies, and circular economy



- The **Worldwide 2030 Innovation Challenge**, includes a strategic goal in **Plant proteins and plant chemistry**

## Finance

Investment funds for bioeconomy projects are available from:

- The France public investments Bank (**BpiFrance**)
- The French Agency for Environment and Energy Management (**ADEME**)
- The **Cap Agro Innovation** Investment fund





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### Networks

Many active networks are related to bioeconomy:

- **Thematic Research Alliances** to develop the coordination of research institutions, including **ALLENVI** – National Research Alliance for Environment and **ANCRE** – National Research Alliance for Energy
- The Scientific Group of Interest **Plant Biotechnologies** 2011 - 2021 to develop public-private research projects
- **Suschem France**
- The **Association of Plant Chemistry** uniting stakeholders from chemistry and agro-industries
- The **Carnot Institutes** - networks of public research laboratories, including: 3BCar, ICEEL, IC Energies du Futur
- **Biomass for the Future** €38M project (2012-2020)

There are also dozens of **Competitiveness Clusters** with activities related to bioeconomy, such as Agri Sud-Ouest Innovation, Aquimer, Axelera, Céréales Vallée, DERBI, Matikem, MER Méditerranée, Plastipolis, FIBRES, TRIMATEC, Up-Text,,Végépolys, Xylofutur



### Biohorizons

The Biohorizons project and survey focused on consulting stakeholders across the bioeconomy, to identify areas for growth, opportunity, and barriers to innovation.

**Biohorizons Project:** <http://www.climate-kic.org/projects/biohorizons/>  
**LinkedIn:** <http://linkd.in/1dPjX7R>



### Bio Base NWE

The Bio Base NWE network represents leading biobased economy experts, advising entrepreneurs from across Europe on how to develop new ideas into marketable products, from the first feasibility study or market analysis up to funding and investment scenarios.

**BioBase NWE Project:** <http://www.biobasenwe.org/en/home/>



This factsheet was produced by Biohorizons and Bio Base NWE partners



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