

PRODUCTION

STORAGE/DISTRIBUTION

USE

SUSTAINABLE DEVELOPMENT



• Biomass gasification
• Biogas reforming

RAPSODEE

• Compression and distribution: simulation

RAPSODEE

• Fisher-Tropsch synthesis
• Methanation

RAPSODEE



• PEMFC membrane materials: functionalization of clays
• Biological methanation

LGEI/ISR

• Risk analysis
• Eco-industrial synergy

LGEI/ISR



• Purification (PSA, membrane, absorption)

GEPEA

• Porous materials
• Solid storage tank

GEPEA

• Power to gas platform: methanation, CO₂ capture

GEPEA



• Modeling & Optimization: Porous media, Adsorption, Storage, topology optimization

CERI EE



• Electrolysis PEM
• Plasma cracking, reforming
• Electrochemical purification LT
• Photocatalysis

PERSEE

• Electrochemical compression
• Porous materials

PERSEE

• PEMFC : MEA materials (catalysts and composite membranes), system studies (Transport, stationary, H₂ recirculation)
• CO₂ retroconversion (syngas)
• Renewable Energy coupling
• Multi-energy systems

PERSEE

• Future energy systems and markets

PERSEE

• Life cycle analysis

OIE

• Socio-technical controversies

CSI

• Process economics

CES

• Territorial planning and public policies in energy transition

ISIGE

• Underground storage environmental impact

GÉOSCIENCES



• Gas sensors: CO, H₂, safety/process control

SPIN

• Environmental analysis: qualitative assessment and absolute sustainability evaluation

FAYOL

• Pipeline embrittlement

SMS

• SOFC single chamber

SPIN



• Biomass flash pyrolysis

UCP

• Doped MOFs (C, metal, metal+C)
• Liquid carriers (LOHC)
• Hydrides

UCP

• Combustion
• Reactivity/Risk

UCP

• Tech-eco evaluation of the distribution chain

UCP



• Solar photoreactive processes

I. PASCAL

