

The Carnot Institute "Energies du futur" gathers French research laboratories dedicated to low-carbon energy technologies and energy efficiency.

Across the innovation value chain, the laboratories and platforms of "Energies du futur", provide a wide range of skills and experimental means to companies of all sizes, from energy production and conversion to uses optimisation, smart grids and transversal technologies.

https://www.energiesdufutur.eu/

## Design the future of energy, from materials to systems, more efficiency, less carbon impact on the planet

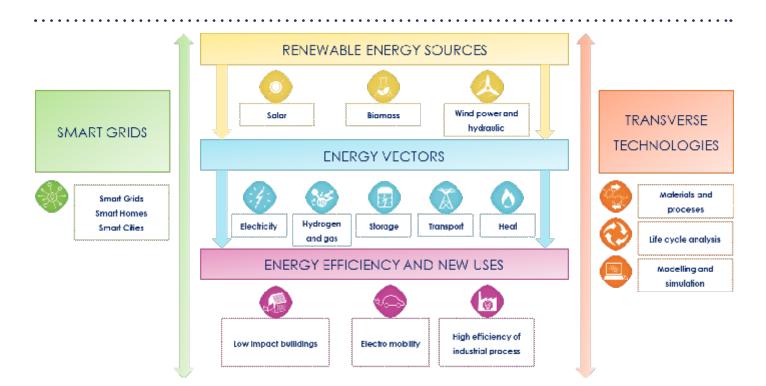
#### Research for the future of energy:

The Carnot institute "Energies du futur" research activities are distributed over five main topics:

- **)** Low-carbon energy production (solar photovoltaic and thermal systems, bio-resources, hydraulic power...)
- Storage, conversion and energy vectors (various energy vectors)
- Smart grids
- ➤ High efficiency new uses (low-impact building, mobility, industry)
- Transversal technologies (modelling and simulation, life cycle analysis, materials and energy management and economy)

#### **Target Makets**

- Low-carbon impact energies
- Energy efficiency
- New uses of energy :
  - Grids
  - Transport
  - Building
  - Industry





#### Main equipment and platforms for energy:

- Materials processes
- Functional materials
- Nano-characterization
- Hydraulic and marine energy
- Bio-resources
- Energy recovery
- Hydrogen production and storage
- « Power to gas »
- > Fuel cells
- Batteries
- Electric mobility
- Economy and energy management
- Smart grids and distribution grids

# The Carnot institute "Energies du futur" offers a wide range of technological platforms with key benefits:

To develop technologies from proof-of-concept to prototypes in order to push forward innovation and access to the market

To develop, to measure and characterize innovative solutions, thanks to cutting-edge equipment.

To imagine new solutions and test technologies before transferring them into the market.

### Key figures

Permanent staff (full-time equivalent): 1000

PhD Students: 500

Partnership incomes with industry: €40M Global budget: €170M

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