| Climate, environment and circular economy | Energy storage |



## ENERGY STORAGE

## OUR STRENGTHS

**Expertise throughout the R&I chain:**

- Optimization, data sciences, computer engineering:
    - Cloud platform for battery management and control in the context of self-consumption, electricity grid services: planning according to price criteria, behavior monitoring during aging, etc.
    - Dimensioning tools incorporating technical and economic aspects and adjusted according to usage scenarios (power, energy, production and consumption profiles, services delivered to the network)
    - Real-time data management, optimization
- Mechanics, fluid mechanics, Electrochemistry and processes:
    - testing and characterization resources dedicated to Thermal Energy Storage (TES)
    - Mechanical resistance, aging, thermal effect of TES
    - Modeling in fluid and thermomechanics

- LCA and technical and economic analysis

**A demonstrator at our Lyon site**

A building equipped for self-consumption, with photovoltaic panels on the roof, stationary Li-ion batteries and inverters. The system has been piloted for over 3 years by EMS@ifpen in different configurations, enabling us to test our algorithms in real operating conditions.

## CONTACT



**Yannick Peysson**

Program manager

yannick.peysson@ifpen.fr

Energy storage : Our strengths

Link to the web page :