McPhy

**Founded in 2008, McPhy is a major player in the global hydrogen market.**
**McPhy helps European and international clients in industry, energy and mobility to reduce their carbon footprint.**

A «pure player» in the sector, McPhy designs and manufactures a range of equipment for the production and conversion of hydrogen, including electrolysers based on a robust and proven technology: high-pressure alkaline electrolysis.

A "European-native" company with design and production sites in France, Germany and Italy, McPhy has a European industrial and commercial base. Since 2021, the group has been scaling up to contribute industrially and competitively to the implementation of large-scale projects, in line with France's and the EU's ambitions for low-carbon hydrogen production.

Today, McPhy is accelerating this process by strengthening its technological leadership, consolidating its client portfolio, industrialising its production tools and strengthening its team of experts. Thanks to this move to an industrial scale and to the development of its technologies, McPhy is ready to meet the environmental, technological and commercial challenges of tomorrow.

# NEEDS & CHALLENGES

## CONTEXT

McPhy chose to build its electrolyser plant near Mulhouse because of the region's ecosystem of suppliers and potential partners.
The local and national authorities provided dedicated technical and administrative support to facilitate the project and harness a skilled workforce in a local labour pool with a strong tradition in industry and innovation.
Thanks to this plant, McPhy can now industrialise the production of large-scale electrolysers, meeting the needs of industrial companies wishing to produce their own green energy from renewable hydrogen obtained by the electrolysis of water.

## PROJECT

The 22,000 m² industrial facility, including 18,500 m² of production space, houses a factory manufacturing high-capacity electrolysers. It is scheduled to begin operating in the first half of 2024 – as Europe's largest electrolyser factory.

## TECHNICALS CHALLENGES

The project includes the installation of a hybrid gas/hydrogen boiler and solar panels covering a large part of the roof. It also includes the installation of two overhead travelling cranes with 20 and 80 tonne lifting capacities, and a secure area for the on-site testing of the electrolysers.

## KEY FEATURES

The choice of construction materials focuses on employees' comfort and wellbeing. It combines the concrete commonly used in industrial environments with a wooden framework, natural materials and large openings around the building to provide natural light inside the factory.
A landscaped meadow, a biotope pond, green roofs and permeable paving for the car parks help preserve and develop the site's biodiversity.



# GSE'S ENVIRONMENTAL EXPERTISE AND STRATEGY

## FOCUS ON CERTIFICATION

Following documentary verification and an audit, the project was certified HQE Bâtiment Durable to the Excellent level. The certificate's key criteria are environmental impacts, occupants' comfort and the building's responsible management. The project was also awarded the E3C1 label, which attests to its energy performance and the reduction of its carbon footprint.

**FRANCE / BELFORT 90**

### GIGAFACTORY McPhy

France's first electrolyser Gigafactory, covering 22,000 m². Handover in 2024
**HQE BD 2016 - Excellent certificate (*pending*) / E3C1 Effinergie 2017 label**




**LOW CARBON**

- Offices: timber frame, timber-framed walls, wooden floors
- Finishing work: selection of products with better environmental impacts

**ENERGY PERFORMANCE**

- Solar farm on roof
- Rainwater recovery tank
- Hydrogen boiler to heat the plant
- High-performance envelope: substantial insulation, solar control double glazing, very airtight offices

**BIODIVERSITY**

- Biotope pond
- Flower meadow
- Permeable car park
- Green roof
- Wildlife shelters
- 50% of the plot landscaped

**COMFORT**

- Acoustic insulation of offices
- Natural lighting
- EV charging points
- Sports trail
- Indoor air quality: filtration, low-emission materials and testing at handover
- All areas wheelchair accessible

**LOW-IMPACT WORKS**

- Over 85% of waste recycled
- Protection of biodiversity during construction
- Materials from local sources
- Majority of local contractors

**ANTOINE RESSICAUD**
COO, MCPHY

***We chose GSE for their ability to meet our needs, and above all our schedule, as well as for the architectural quality of their proposal. McPhy's management was also won over by all the guarantees GSE provided regarding their CSR strategy, and the commitment and agility of the teams to meet the project's requirements.***