

# Testing Infrastructure Electrolyser ITALY

Key references: Projects in execution



Rimini Energy Expo - March 2025

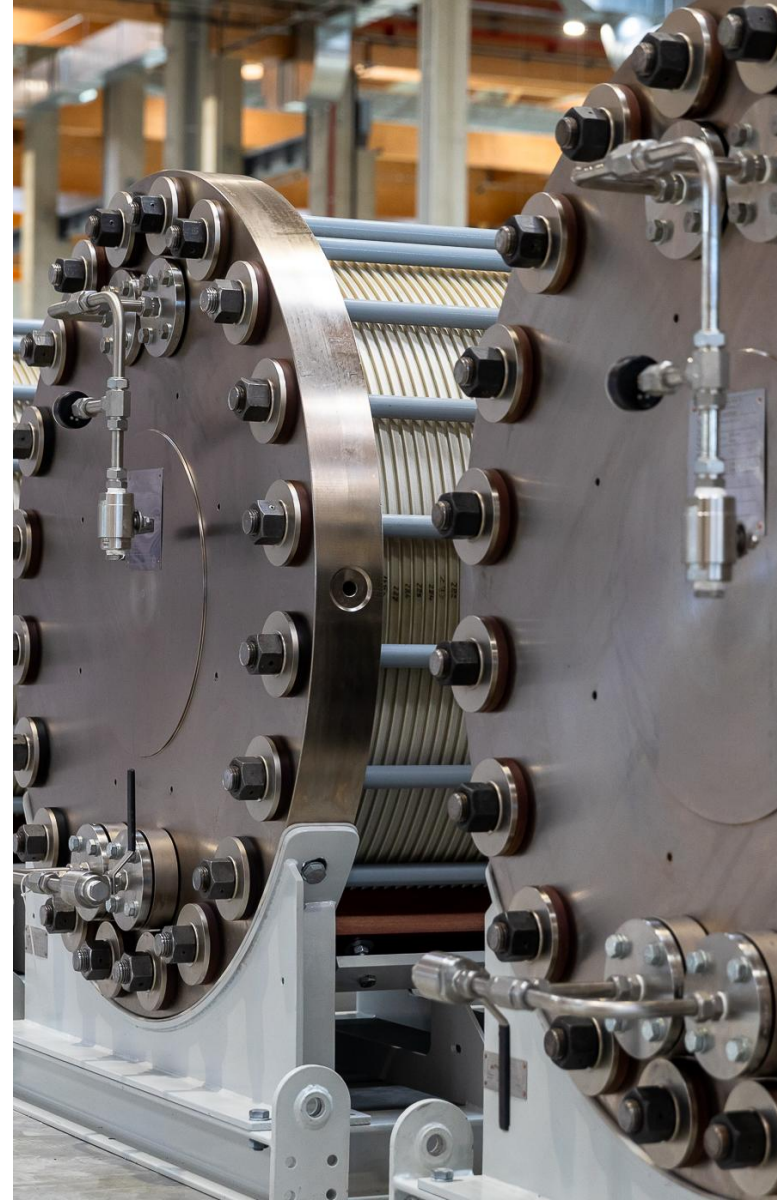
A large, three-dimensional blue 'McPhy' logo is mounted on the side of a building. The building has a dark, vertically-ribbed facade. The logo is made of thick, blue metal letters. The background shows a blurred green landscape and a blue sky with light clouds.

# McPhy: leading low-carbon H2 Equipment Manufacturer

- Market needs
- Projects in execution for Hard to Abate Industries
- Unique Electrolyser 1MW TestBench in Italy/Europe
- Scalable Electrolyser Technology
- Conclusion Q&A



**Eng. Marco PARIGI**  
Global Sales Director Light Industry  
MultiMW Sales Director Italy



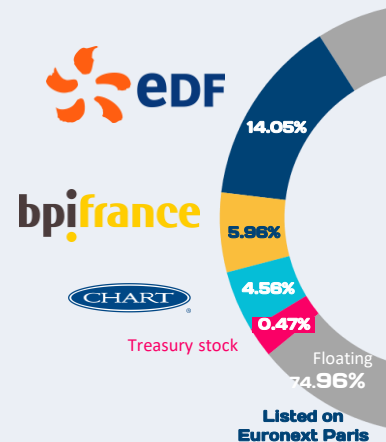
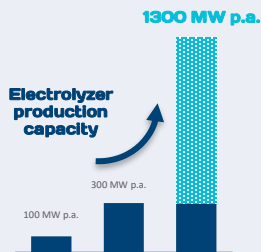
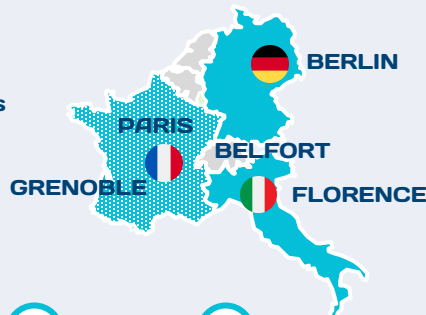


### History

### People & footprint

### Shareholders & partners

- 2024**  
Opening of the Gigafactory  
Sale of station business
- 2022**  
R&D acceleration  
Industrial scale-up
- 2020**  
180 M€ raised  
Technip & Chart partnership
- 2018**  
EDF partnership
- 2012 - 2013**  
Enertrag's electrolyzer acquisition  
PIEL acquisition
- 2008**  
Incubation with CEA & CNRS

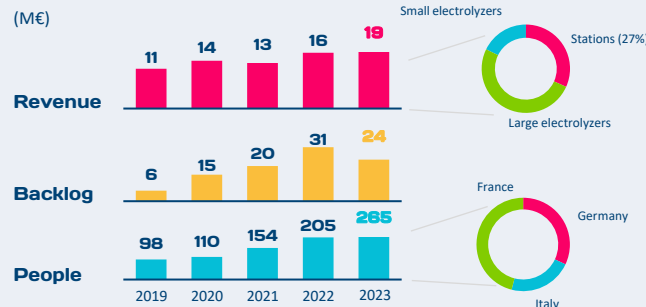


### Our products

### Key figures



### Electrolyzers



## Pan-European Pure Player

# Projects in execution for Hard to Abate Industries

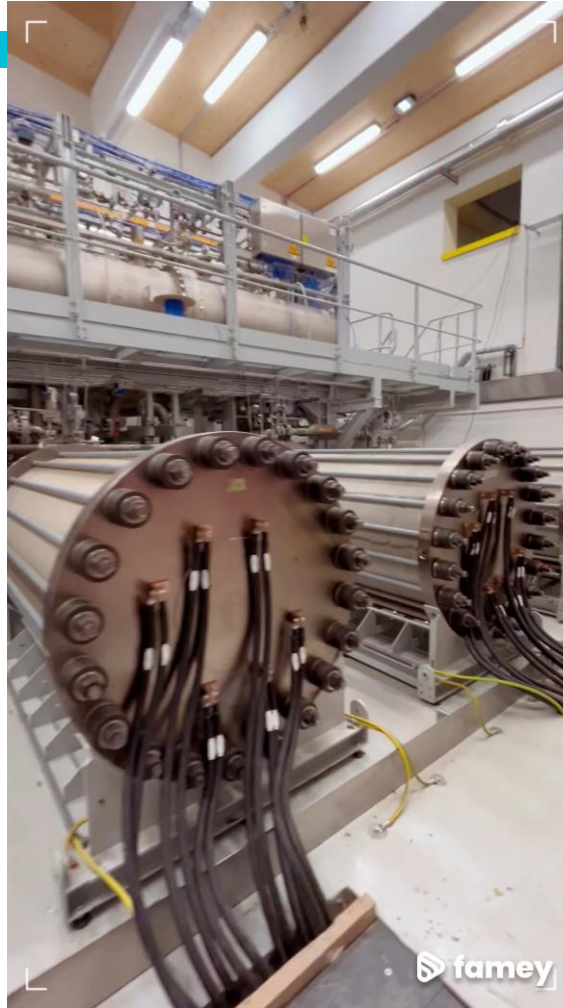


# Green Metal Project for Plansee Group

1

Build-up Strong

REFERENCES

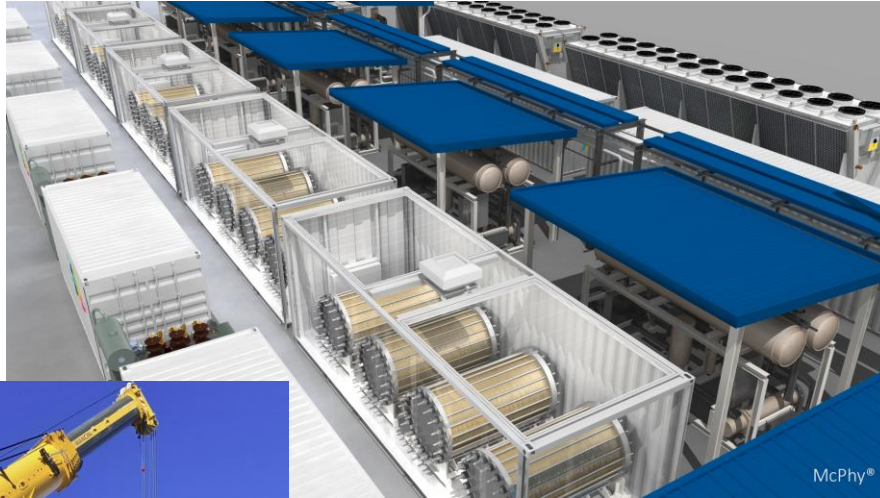


## Landmark contract in the industrial field for green metal project in Austria, another key milestone in metallurgy

- Landmark contract Supply of one McLyzer 800 of 4MW capacity in Austria on Plansee Group's site (x3 next years)
- Key milestone in metallurgy: low-carbon metal production project
- Innovative partnership: long-term maintenance services
- Commissioning end of 2024



# CEOG



## World's first multi-megawatt hydrogen power plant

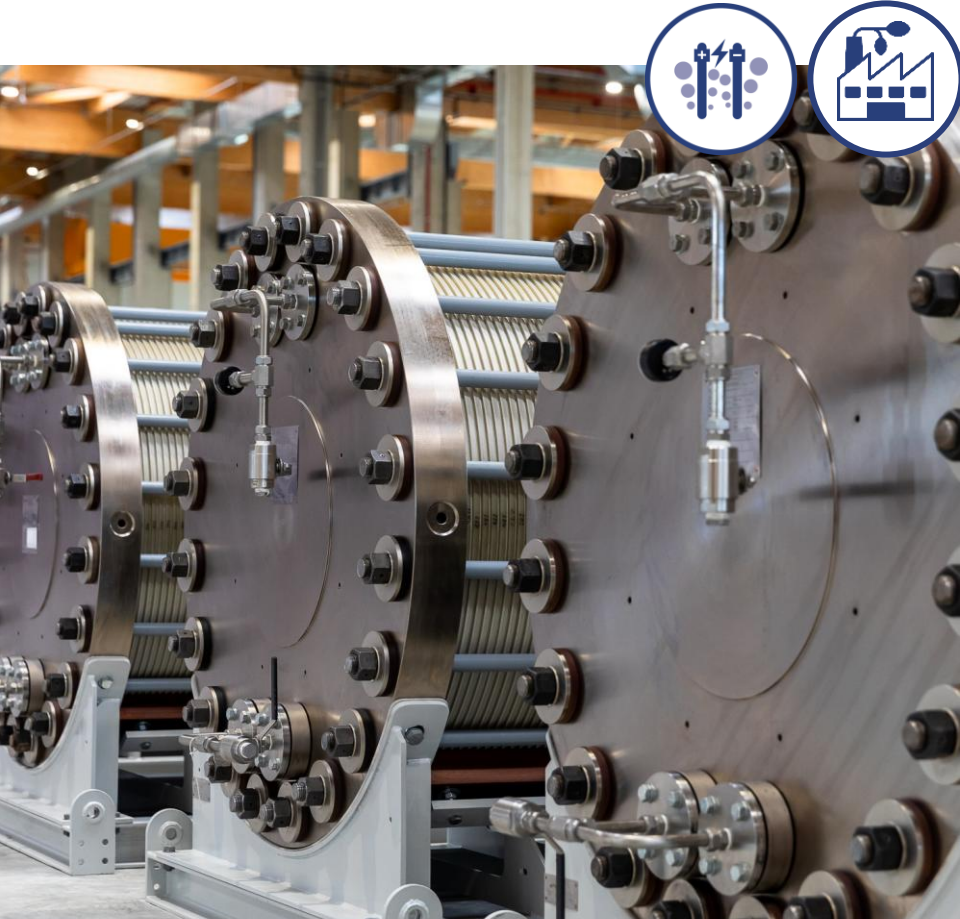
- 16 MW High Current Density alkaline
- Augmented McLyzer electrolyzer: a unique combination of high-pressure alkaline electrolysis (30 bar) and high current density electrodes
- 860 tons of green hydrogen to be produced per year, 39,000 tons of CO2 per year avoided
- Fed by a PhotoVoltaic farm
- Delivered end 2024
- 8-year maintenance contract with Siemens Energy

Partners:





# AAK



## A firm contract in the industrial field for the supply of a McLyzer 800 to AAK in Sweden

- Supply of a 4 MW McLyzer 800-30 and related spare parts to the Swedish company AAK
- Renew of AAK equipment on its manufacturing plant to use the low-carbon hydrogen produced as a process gas
- Under manufacturing 2024/2025

# AAK

# ArcelorMittal & VEO

1

Build-up Strong

REFERENCES



## Signing of an Agreement with ArcelorMittal & VEO to build pilot electrolysis plant in Germany

- 2 McLyzer of 1 MW capacity each effective in 2024
- A “Dual Pressure” station (350/700 bar)
- Newly developed electrolysis demonstration plant
- Hydrogen to be used directly in steel production and for logistics processes on the site
- Long-term 5-year service contract agreed upon
- €5.1m funding by the State of Brandenburg and support from Brandenburgische Technische Universität Cottbus-Senftenberg
- First delivery: second half 2024

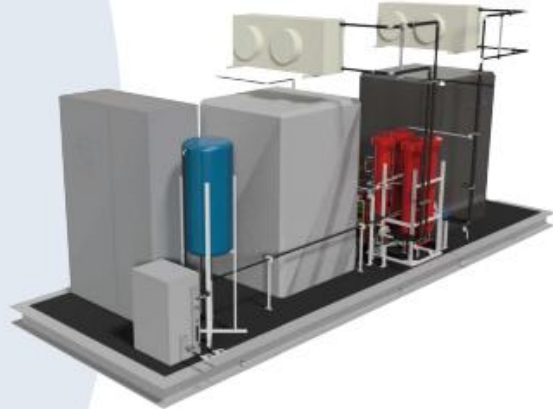
Eisenhüttenstadt, Germany | Contract: 2022 | Commissioning: first half 2024



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# HYDROALP



## H2ALP-120



- H2ALP is a plug & play solution designed for easy installation in various industrial settings.
- H2ALP by Hydroalp enables companies to approach hydrogen with a small-scale solution, which is interesting for testing the application and assessing the impact it could have in terms of decarbonizing the industrial process.
- H2ALP is remotely manageable and is part of Industry 4.0 enabling

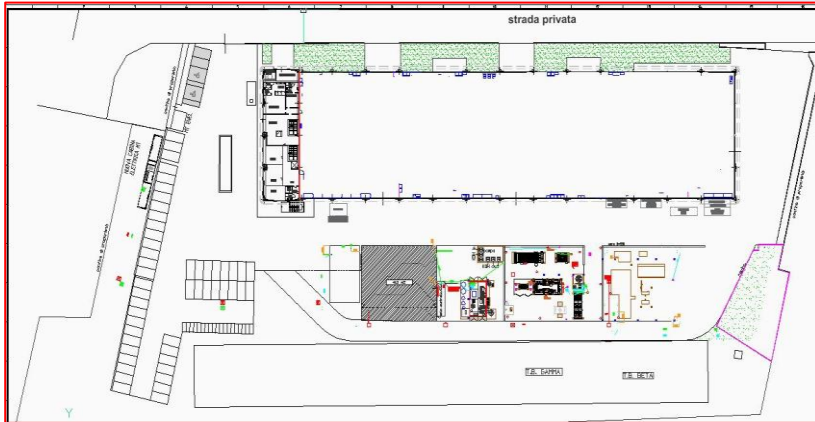


# Unique Electrolyser 1MW TestBench in Italy/Europe



# 1+1MW Electrolyser TestBench (Gamma & Beta)

| Electrolyzers production site – San Miniato



**Target:** Inauguration Q2 2025

# Increasing McPhy's Manufacturing Capacity

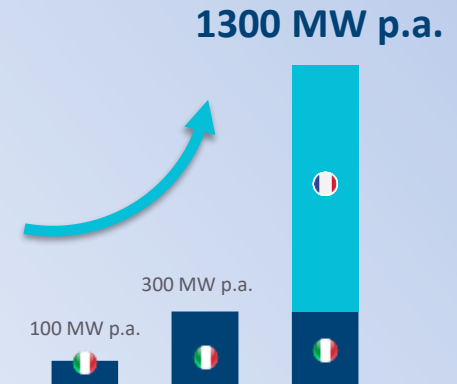
| Electrolyzers production site – San Miniato



 Site **4 000 m<sup>2</sup>**

 Capacity **300 MW / year in 2 shifts**

- Semi-automatic line to robotize the production of large stacks
- Increase of production capacity from 100 to 300 MW in 2023
- Better quality, repeatability, productivity, safety & ergonomics







# Why Choosing McPhy?

| Front runner within electrolysis technology

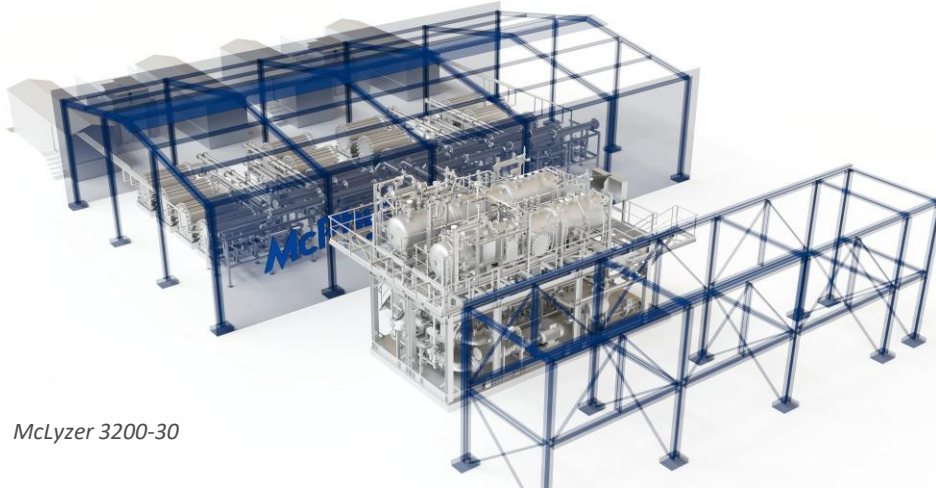


Piel series M 6.6



McLyzer 800-30

*Containerized configuration: lower building and installation costs  
Perfectly adapted to green field environment.*



McLyzer 3200-30



## Electrolyzers

- High current density electrodes
- Flexibility and fast response time
- High efficiency: < 4.65 kWh / Nm<sup>3</sup>
- High-pressure: 2-30 bar, no need for further compression stage
- Modular technology (standardization and replicability):

McLyzer 4 / 16 / 100+ MW; Piel 6 / 70 kW

- Compact footprint:  
20 MW installed in less than 900 sqm
- Highest quality & safety standards



# Augmented McLyzer Electrolyzer Program Roadmap

**2022-2023**  
**Standardization**  
 Current solution McLyzer 800

**2023-2025**  
**PHASE I of GIGA Project**  
 McLyzer 3,200 (v1) – XL module

**Beyond 2025**  
**PHASE II of GIGA Project**  
 McLyzer 3,200 (v2) – XL stack



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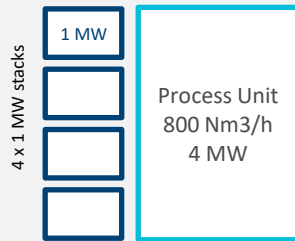
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**4 to 20 MW Electrolyzer Platform**  
 Container – Energy & Mobility markets



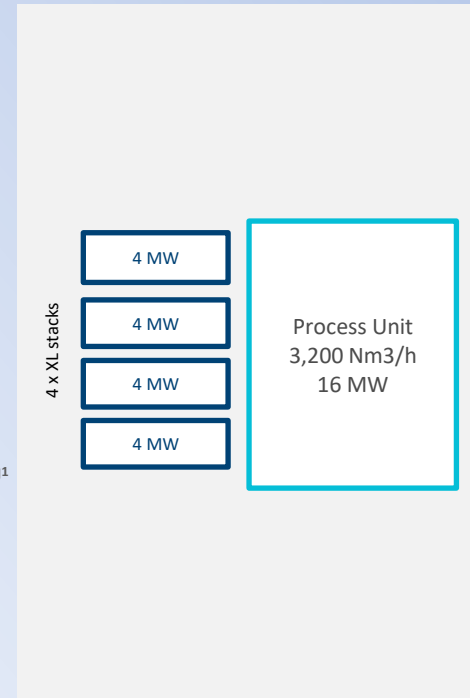
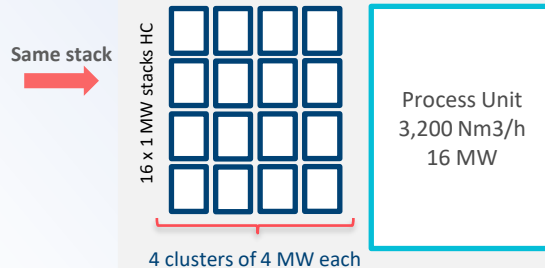
**16 MW**  
 4 x ML800 outdoor



**100 to 200 MW Electrolyzer Platform**  
 Building – Large Industry market



**96 MW**  
 (19,200 Nm<sup>3</sup>/h)  
 6 x ML3200 indoor



Note: <sup>(1)</sup> EPU – Electrolyzer Process Unit: skid with separation of electrolyte and gases, pumping & cooling of electrolyte, gas cooling...

# Conclusion Q&A



McPhy



Driving  
clean energy  
forward

# Thank you for your attention!

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MultiMW Sales Director Italy

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