

UNLIMITED HYDROGEN

DESIGNER AND MANUFACTURER
OF EQUIPMENT FOR
THE PRODUCTION
& DISTRIBUTION
OF LOW-CARBON HYDROGEN

BY **McPhy**

FOREWORD



As a leading industrial player in hydrogen production and distribution equipment, McPhy contributes to the global development of low-carbon hydrogen as a solution for the energy transition.

By its nature, our business model is based on supporting national and European customers active in industry, mobility, and energy, in their efforts to decarbonize their activities.

We are observing very high growth on our markets, in terms of project volumes and installed capacities, which led us in 2021 to initiate a significant upscaling to offer a competitive industrial contribution to projects of significant environmental, technological, and economic importance.

“ Our mission: to support our European customers in the industry, mobility and energy sectors in their decarbonization efforts, through low-carbon hydrogen ”

Our scaling-up strategy is founded on four pillars:

- **TECHNOLOGY:** Invest in research and innovation to bolster McPhy's technology positioning on our two equipment segments, namely electrolyzers and hydrogen stations; by focusing on major decarbonization projects in industry and heavy-duty mobility
- **REFERENCES:** In a logic of co-construction, we remain focused on the satisfaction of our customers and partners, with:
 - >> Participation in a growing number of leading “low-carbon hydrogen” projects, reflecting the increased use and pertinence of McPhy solutions
 - >> Implementation of a strong partnership strategy, aiming to create a pan-European technology and business ecosystem to ensure references on large-scale hydrogen projects

- **COMPETITIVENESS:** We use two levers to optimize cost-competitiveness of our solutions and enable enhanced economic performance for our clients:

>> Deployment of bolstered industrial resources to upscale the production of our equipment and generate economies of scale

>> Implementation of cost reduction strategies on key components

- **PEOPLE:** As the workforce is forecast to double between 2020 and 2022, McPhy's human capital is a priority strategic aspect of the transformation plan. The diversity of teams and vastly experiences profiles are assets that we wish to sustain and develop. We are working on boosting the Group's attractiveness for our existing and future employees, in a backdrop of strong, rapid growth in staffing levels across all our sites.

By reinforcing our teams and their fields of expertise, by committing to ongoing innovation and the increasing industrialization of our manufacturing processes, we are today able to consolidate our position as a key technological and industrial partner for the hydrogen market, and secure participation in flagship projects.

We aim to strengthen our position as an industrial leader and be active in the decarbonization of Europe, by contributing to the large-scale deployment of low-carbon hydrogen solutions.



Jean-Baptiste LUCAS
Chief Executive Officer

**3 MARKETS
SERVED**
INDUSTRY, MOBILITY, ENERGY

**€ 16.0 MILLION
IN REVENUE**
IN 2022

**€ 29.4 MILLION
OF FIRM ORDERS**
AND AN INCREASE OF MORE THAN 56% IN THE BACKLOG

**LEADER
IN ALKALINE ELECTROLYSIS**
The most mature hydrogen generation
process on the market, an indispensable
technological component for the mass
production of low-carbon hydrogen from
renewable electricity

**LOW-CARBON
HYDROGEN**
Clean energy that doesn't generate
any carbon when it is produced using
electricity which comes from
a renewable source

**3 COUNTRIES
FRANCE, ITALY, GERMANY**
A scalable European industrial base
with global reach

**205 EMPLOYEES
"ONE MCPHY"**
20 NATIONALITIES, A GLOBAL ORGANIZATION,
90 RECRUITMENTS PLANNED FOR 2023**

**€ 135 MILLION
CASH POSITION**
STRONG FINANCIAL POSITION
AS OF DECEMBER 31, 2022

**193 MW
& 96 STATIONS***
IN REFERENCE

* 193 MW in reference, among which: 45 are signed projects and 148 MW for which McPhy has been selected as preferred partner
* 96 stations in reference, among which 40 are signed projects and 56 stations for which McPhy has been selected as preferred partner

"Signed projects": orders with signed purchase orders

"Preferred partner": preferred partner and subject to the project's success, considering that some of these projects should have an impact on the revenue as of 2023

** 60 on our 4 existing sites in Grenoble, Paris, Wildau and San Miniato & 30 on the Gigafactory in Belfort

OUR TECHNOLOGIES CLEAN HYDROGEN TECHNOLOGIES

McPHY
PROPOSES A FULL RANGE
OF ELECTROLYZERS
AND HYDROGEN
STATIONS



AS A PURE PLAYER IN HYDROGEN, MCPHY ENJOYS A SINGULAR POSITIONING AND PROPOSES A RANGE OF PRODUCTION AND/OR DISTRIBUTION EQUIPMENT TO SUIT YOUR ACTIVITY AND THE SPECIFIC NEEDS OF YOUR ORGANIZATION.

OUR SYSTEM-BASED APPROACH COMBINES ELECTROLYZERS AND HYDROGEN STATIONS TO BE AN INTEGRAL PART OF YOUR LOW-CARBON INDUSTRIAL OR TERRITORIAL ECOSYSTEMS.

Used as an industrial process fluid, transformed to clean fuel for low-emissions vehicles, or used as a flexibility and storage solution for electrical and gas networks, low-carbon hydrogen is truly an “all-terrain” energy vector. Hydrogen is produced through water electrolysis using renewable electricity and occupies a central place in the new panorama of energy and decarbonization journeys of public and private sector organizations. In this way, McPhy hydrogen production and distribution equipment

contributes to reducing carbon emissions, to fighting against air pollution and climate change.

As a designer, manufacturer and integrator of electrolyzers and hydrogen stations, the McPhy industrial group uses its expertise in hydrogen technologies to propose a full range at the highest standards of safety, quality and performance.



ELECTROLYZERS PRODUCE LOW-CARBON HYDROGEN ON SITE, TO YOUR SPECIFICATIONS

McPhy proposes high-pressure alkaline electrolyzers with high-current-density electrodes. This robust technology is tried and tested, economically competitive, and the best-suited to equip large-scale hydrogen projects (multi-MW, even GW).

With one of the widest ranges of electrolyzers on the market, from 0.4 to 800 Nm³/h as standard, McPhy covers all industrial and mobility needs in terms of flow, pressure, and purity.

Beyond this, multi-MW designs are available by combining 4 MW core modules, enabling McPhy to propose customer platforms from 20 to 100 MW and more.



McLyzer 200 (1MW)

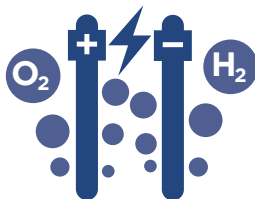
Did you know?

Not only is hydrogen the main component of the Sun, but it is also “the most abundant element in the universe.” However, it does not exist in natural state and must be produced. On Earth, the most common source of hydrogen is water, which combines atoms of hydrogen and oxygen. McPhy’s electrolysis technology creates an electrochemical reaction between water and electricity to isolate hydrogen atoms. When the electricity used in the process comes from a renewable source, this creates “green” hydrogen, which emits no CO₂.

How does McPhy’s electrolyzer work?

Water + Electricity = Hydrogen

*Water + Renewable electricity
= Renewable, or “green”, hydrogen*



Why choose McPhy?

- ⦿ Modular design: 1 MW / 4 MW / 20 MW / 100 MW+
- ⦿ 30-bar high-pressure alkaline electrolysis, directly at your process pressure
- ⦿ High current density electrodes
- ⦿ For the industry, mobility, and energy markets
- ⦿ Full range of services (digital supervision, data monitoring, maintenance, etc.)

Our range of hydrogen equipment, a system-based approach, and a solid range of services enable us to design custom hydrogen architectures.



STATIONS SWITCH YOUR MOBILITY PROJECTS TO LOW-EMISSIONS MODE

The McPhy range of stations to charge hydrogen-fueled electric vehicles provides modular and flexible solutions to handle larger vehicle fleets and propose platforms capable of 20 kg to 800 kg / day as standard. Multi-ton stations have also been designed to address the needs of heavy-duty mobility. Our hydrogen stations are compact, modular, and able to power all types of transport: cars, utility vehicles, buses, trucks, waste collection trucks, trains, boats, etc.



Did you know?

Silent, fast charging, long range and only emitting water vapor into the atmosphere: hydrogen mobility enables local territories and industrials to take part in the energy transition, to improve air quality and public health, while meeting the needs of their activities.

Why choose McPhy?

- ⦿ 20 kg Starter Kit to initiate hydrogen mobility projects
- ⦿ McFilling station with high distribution capacity: 200 / 400 / 800 / 2,000+ kg per day
- ⦿ All dispensing pressures: 350 bar / 700 bar / Dual Pressure
- ⦿ Different sources of hydrogen supply for stations: tube trailers or coupled to electrolyzers for a full low-carbon hydrogen chain
- ⦿ Full range of services (digital supervision, data monitoring, maintenance, etc.)

FOCUS
ON THE SYSTEM
SOLUTIONS

McPhy uses its expertise in hydrogen to support customer in co-building turnkey projects and system solutions which interface hydrogen production equipment (electrolyzers) and distribution methods (stations) for a true green energy chain.

We also use a partnership approach based on our knowledge of the sector to establish strong relationships with partners useful to the success of your project.

OUR MARKETS CLEAN INDUSTRY REVOLUTION

MCPHY
SUPPLIES INDUSTRIES
WITH LOW-CARBON HYDROGEN,
RECONCILING PRODUCTIVITY,
COMPETITIVENESS AND SOCIAL
RESPONSIBILITY

WIDELY USED FOR ITS FLEXIBILITY, MULTISECTORAL APPLICATIONS AND ITS ENERGY EFFICIENCY, HYDROGEN IS A COMPETITIVE AND ATTRACTIVE STRATEGIC TECHNOLOGY FOR INDUSTRIAL COMPANIES.

BY REPLACING EXISTING CARBONIZED ENERGIES WITH LOW-CARBON HYDROGEN, PRODUCED BY ELECTROLYSIS FROM RENEWABLE SOURCES, INDUSTRIALISTS ARE ENTERING A NEW LOW-CARBON ERA.

LOW CARBON, RESPONSIBLE, INNOVATIVE AND PROFITABLE: WELCOME TO THE INDUSTRY OF THE FUTURE

Already used in industry for more than 100 years, hydrogen has seen its development accelerated.

On a world scale, industrial chemical and refining applications consume 85 million tons of hydrogen per year*.

Almost all of this volume is produced using fossil fuels, based on a production process which is generally accepted to emit ten kilos of CO₂ per kilo of hydrogen produced.

By producing their low-carbon hydrogen on site, manufacturers ensure their:

- Security of supply and energy independence (freedom from logistic constraints)
- Control over their costs
- Reliability and continuity of service
- Drastic reduction of their CO₂ footprint and air pollution
- On-site production in the best conditions of quality and safety
- Creation of new business models

"POWER TO INDUSTRY": APPLIES TO ALL SECTORS AND SIZES OF INDUSTRIES



Petrol and gas refineries
fuel desulfurization, e-fuels



Chemical processing
e-methanol, synthesis of ammonia for fertilizers

BUT ALSO:

Steel mills, coal-fired plants, thermal power stations (cooling system for alternators), metallurgy, glass production, electronic components, etc.

FOCUS ON CCU:

With "Carbon-Capture Utilization", polluting industrial emissions are captured before being released into the atmosphere and then added to hydrogen, allowing synthetic molecules to be created and channelled into new uses: e-methanol, biodiesel, e-fuel, etc.

Qualified and selected by numerous industrialists and/or gas companies, our electrolyzers integrate perfectly into industrial systems, whatever their size or business sector.



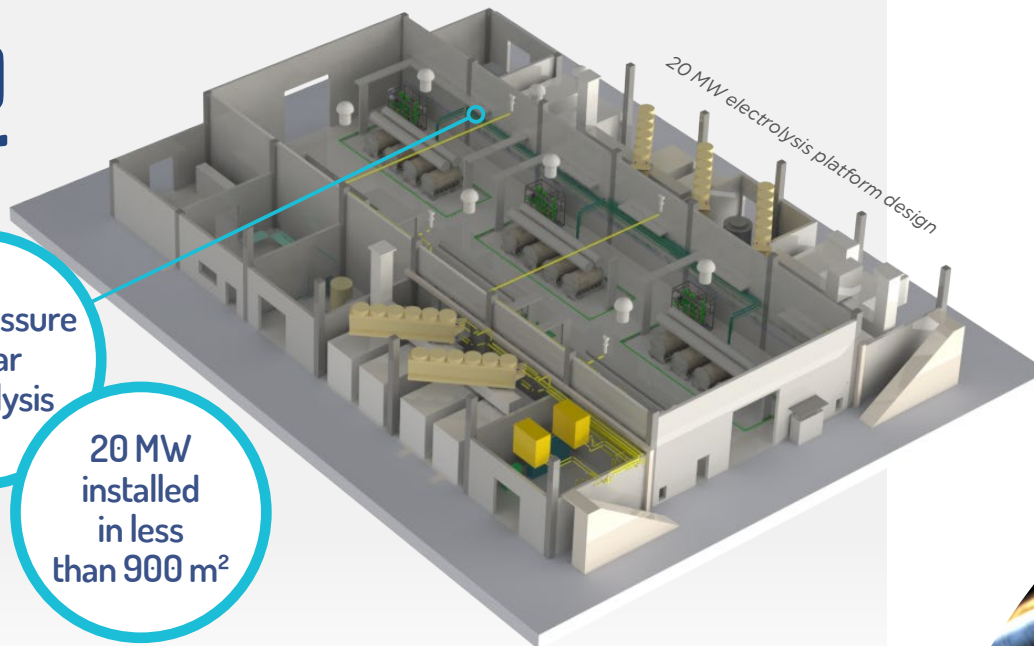
McLyzer 800-30, 4 MW module

AUGMENTED McLyzer

Advanced high current density electrodes

High-pressure 30 bar electrolysis

20 MW installed in less than 900 m²



McLyzer: electrolyzers up to 800 Nm³/h in series

Augmented McLyzer: 20 to 100 MW platforms (scalable: GW) for large-scale industrial applications

30 bar : high pressure production

Very fast response dynamics, perfectly adapted to the fluctuations of the renewables

High energy efficiency

A mature, industrialized process

Robustness

Compactness

Remote supervising and piloting

Economic competitiveness

AUGMENTED MCLYZER: NEW GENERATION ALKALINE ELECTROLYSIS FOR 20 TO 100+ MW ARCHITECTURES

A true **breakthrough technology**, our “Augmented McLyzer” electrolyzers combine the **reliability and the maturity of alkaline technology with great flexibility**. They integrate new generation **electrodes with high current density** (doubled compared to standard electrodes) that significantly increase the performance of our equipments, all within a compact design. Based on a 4 MW module design, our systems are created to scale up with your operating rhythm.

“Bigger scale, lower costs”: the scaling up and industrialization of electrolyzers will make it possible to bring about a drastic reduction in the purchasing costs and the democratization of hydrogen.

McPhy
Driving clean energy forward

**FOCUS
ON PIEL**

[From 0.4 to 12 Nm³/h | 1 to 8 bar]
Perfectly in line with discontinuous applications and the requirements of light industry, the new generation PIEL by McPhy offers a solution that is perfectly adapted to the jewellery sectors – goldsmithing, meteorology, and the glass industry, or welding operations – brazing, and thermal processing.



OUR MARKETS CLEAN MOBILITY REVOLUTION

MCPHY
OFFERS TURNKEY
SOLUTIONS
FOR LOW-EMISSIONS
MOBILITY

HYDROGEN ESTABLISHES ITSELF AS A LOW-EMISSIONS ALTERNATIVE FUEL THAT CAN SIGNIFICANTLY REDUCE AIR POLLUTION IN THE TRANSPORT SECTOR BY ELIMINATING THE EMISSION OF POLLUTANTS AND CO₂.

ENSURE HIGH-QUALITY SERVICE, ALL WHILE CONTRIBUTING TO IMPROVE AIR QUALITY AND PUBLIC HEALTH

With their great autonomy and fast refueling, hydrogen vehicles are attracting a growing number of communities, manufacturers or managers of automobile fleets and plants, and logistic platform operators.

They find the perfect union of operating convenience, continuity of service and participation in the fight against air pollution.

All types of mobility are concerned:



Utility vehicles, private cars, buses, waste collection trucks, heavy vehicles, forklifts, etc.



Railway: trains



Or maritime: river shuttles, boats

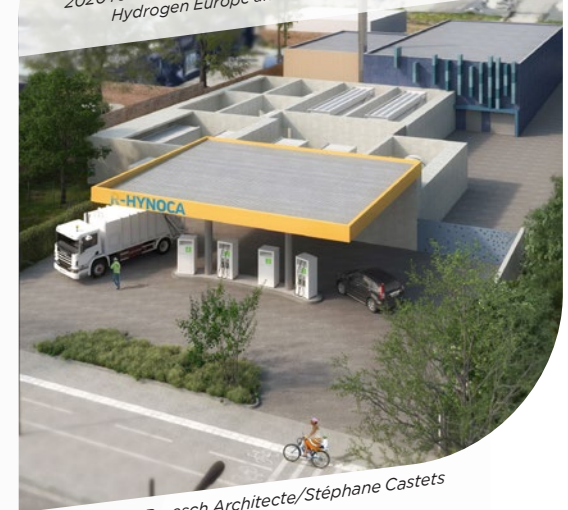
TOWARDS THE DECARBONATION OF HEAVY TRANSPORT

Hydrogen is **the only scalable technology, capable of meeting the massive needs of heavy-duty transportation**, which amount to hundreds or even thousands of kilograms of hydrogen each day:

- A low-carbon hydrogen, produced on site by alkaline electrolysis
- A clean alternative fuel, whose price at the pump becomes competitive with carbon-based energy
- "Bigger scale, lower costs": the scaling up and industrialization of hydrogen stations will make it possible to bring about a drastic reduction in the purchasing costs and the democratization of hydrogen mobility



R-Hynoca project in Strasbourg | Dual pressure station (350 and 700 bar), distribution capacity of 700 kg / day (equivalent to a fleet of 30 buses, or 70 light commercial vehicles, or 150 vehicles), associated with a hydrogen tube trailers refill point. Client: R-GDS. This project received a funding from the FCH-JU, with the support of the Horizon 2020 research and innovation program of the European Union, Hydrogen Europe and Hydrogen Europe Research.



© R-GDS/Alain Braesch Architecte/Stéphane Castets

AUGMENTED McFilling

EXAMPLE
OF POSSIBLE SCENARIOS
FOR A 2,000 KG/DAY
CONFIGURATION



Hydrogen Recharge Infrastructure ("HRI") 1,600 kg / day configuration, including a McLyzer 800-30 for on-site production of the equivalent of 4 MW of hydrogen. Possible refueling scenarios: 320 light vehicles, 40 trucks, 80 buses, and possibility of exporting hydrogen by tube trailers up to 500 bar, for uses far from the production point.

McFilling: a wide range of small, medium and large capacity stations

Compact and modular

350 and/or 700 bar

Augmented McFilling: as of 2 tons per day, a modular solution with no limits in terms of capacity

Interfaces with an **electrolyzer** for true clean mobility chain

Hydrogen mobility = **low-emissions**
low particles, low CO₂, zero noise

AUGMENTED MCFILLING: A NEW GENERATION OF STATION FOR HEAVY-DUTY TRANSPORT

A true concentration of **technological and digital innovation**, Augmented McFilling by McPhy is a **unique and proprietary design philosophy** that supports the heavy-duty transport sector's transition towards the large-scale use of low-carbon hydrogen. Combining the best of alkaline electrolysis and hydrogen station technologies, Augmented McFilling is an intelligent system capable of being **dynamically reconfigured** to offer multiple modes of operation that will **optimize customer's TCO** (Total Cost of Ownership) in real time.



**12
TRAINS**



**50
TRUCKS**



**100
BUSES**

McPhy

Driving
clean energy
Forward



AuxHyGen project in Auxerre 1 Multimodal platform integrating 1 MW of electrolysis, producing up to 400 kg of hydrogen / day, and a high-capacity hydrogen station. Inaugurated in 2021 alongside our customer Hynamics, the system allows the recharging of 5 buses in phase 1, but also the distribution to light vehicles and trucks. The hydrogen, produced from renewable electricity, avoids the emission of 2,200 tons of CO₂ per year. The Auxerrois Urban Community, Transdev and ADEME are also partners in this project. AuxHyGen has received funding from the FCH-JU program under the European Union's Horizon 2020 research and innovation program under grant agreement No. 779563.

FOCUS
ON THE **SUPERVISION**
SOFTWARE

Embedded supervisory software makes our Augmented McFilling station dynamically reconfigurable. The station autonomously defines its optimal operating scheme and (re)routes the flows, from production to distribution to the vehicle, via compression and storage steps to deliver hydrogen at the lowest cost while ensuring service continuity and maximum availability.

OUR MARKETS

CLEAN ENERGY REVOLUTION

MCPHY
AGILE HYDROGEN
SOLUTIONS
FOR GAS AND
ELECTRICITY
NETWORKS

BY TRANSFORMING SURPLUS RENEWABLE ELECTRICITY INTO LOW-CARBON HYDROGEN, MCPHY FACILITATES THE LARGE-SCALE INTEGRATION OF CLEAN ENERGY INTO THE ENERGY MIX.

INCREASING THE SHARE OF RENEWABLES IN THE ENERGY MIX

Solar, wind, hydraulic: energy transition depends on renewable energies.
They can answer the growing needs for energy, all while:

PROVIDING AUTONOMOUS
ENERGY FOR THE TERRITORIES

IMPROVING AIR QUALITY
REDUCING CO₂,
PARTICLE AND
GREENHOUSE
EMISSIONS

FIGHTING AGAINST
CLIMATE CHANGE

PRESERVING
THE NATURAL RESOURCES
OF OUR PLANET

PROMOTING ECONOMIC GROWTH
THANKS TO THE PRODUCTION
OF DECENTRALIZED ENERGY

HYDROGEN, AN AGILE ENERGY

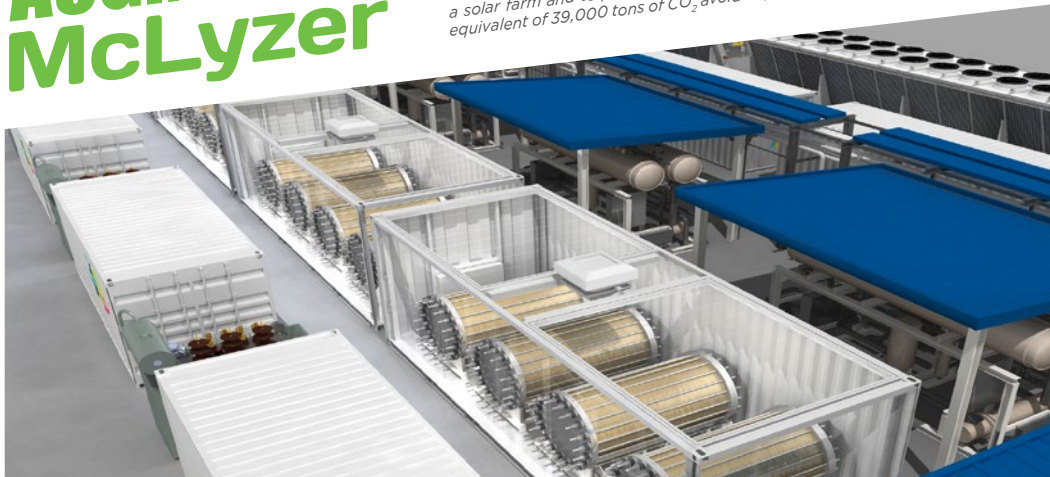
In the face of the massive deployment of renewable energies, by nature intermittent and difficult to predict, hydrogen seems to be a flexible and competitive solution.

- ⦿ Matching supply and demand thanks to hydrogen storage
- ⦿ Flexibility and balance for the network: compensate for the intermittence of renewable energies
- ⦿ Reliable energy reserve for insular or off-grid locations and a backup solution and/or autonomous energy (buildings, telecom antennas, data centers, etc.)



AUGMENTED McLyzer

CEOG project "Centrale Electrique Ouest Guyanaise" | In Western Guiana: first multi-MW hydrogen project in the world, with key partners like Meridiam, HDF, SARA and McPhy. The McPhy 16 MW electrolysis platform is to be connected to a solar farm and to produce 860 tons of low-carbon hydrogen per year, or the equivalent of 39,000 tons of CO₂ avoided per year.



MCPHY ELECTROLYZERS: A DEMONSTRATED DYNAMIC RESPONSE

The McLyzer range is positioned as the ideal tool to stabilize the electric grids confronted by a growing influx of renewable electricity and participates in the primary and secondary reserves.

Its dynamic response to power fluctuations and its durability have long been demonstrated through data collected since 2014 on the "H2Ber" Power to Gas project in Berlin.

These hydrogen generators combine a zero-loss purification unit with a closed-loop system to reduce the consumption of water to the strict minimum during its transformation into hydrogen.

Instantaneous adaptability

to power fluctuations in electricity from renewable energies

System services participation
(primary and secondary reserves)

High energy efficiency

Economic competitiveness

Reliability and robustness of a mature technology

Easy to use and maintain



McPhy
Driving
clean energy
Forward



Jupiter 1000 | Power to Gas: first industrial demonstrator at the megawatt scale in France (0.5 MW alkaline electrolysis + 0.5 MW PEM electrolysis). A project led by GRTgaz and involving many players, including McPhy for the supply of electrolyzers.

FOCUS ON POWER TO GAS

A true "bridge" between the electric and gas grids, Power to Gas brings flexibility and can increase the clean energy share, all while managing investments:

- Using existing grid infrastructures
- Coupling with other industrial or mobility applications

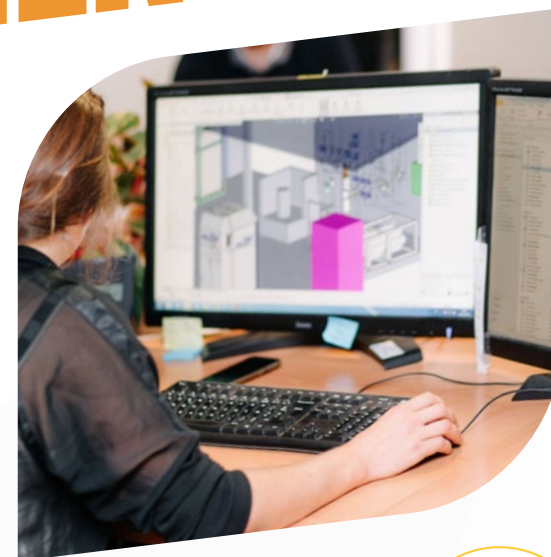
This solution has been widely adopted by large companies around the world.

OUR SCALE-UP STRATEGY

AUGMENTED HYDROGEN SOLUTIONS

TO DEAL WITH THE INDUSTRIALIZATION OF MARKETS, IN TERMS OF PROJECT VOLUMES AND INSTALLED CAPACITIES, AND TO REINFORCE THE COMPETITIVENESS OF LOW-CARBON HYDROGEN, MCPHY MANAGES ITS SCALING-UP STRATEGY BASED ON FOUR PILLARS.

AN INTEGRATED
APPROACH TO MEET
YOUR APPLICATION NEEDS
AT LARGE
SCALE



1. INVEST IN RESEARCH & INNOVATION TO BOLSTER TECHNOLOGY EXPERTISE

McPhy supports projects that involve extensive technological challenges. As a pure player in hydrogen, the Group has built solid expertise in low-carbon hydrogen technologies to serve the energy transition. Combined with a policy of ongoing research and innovation, this allows McPhy to work on continually improving its equipment, to achieve the highest standards of safety, quality, and performance.

McPhy applies its technology expertise to designing scalable architectures for the production and distribution of hydrogen with “XL” modules, ready for the industrial upscaling of the sector. All this based on a standardization approach which meets both the needs and the technical / economic demands of the markets.



2. BUILD STRONG REFERENCES

Our business model centers on helping customers in the industry, mobility and energy sectors to successfully transition to business models based on low-carbon hydrogen, reconciling economic performance and corporate social responsibility.

We adopt a partnership approach to build project teams dedicated to ensuring the success of all customer projects, putting their satisfaction at the center of our organization.

McPhy is selected by first rank businesses and positioned on projects generating high added value, which reflect the scaling-up of the sector.

The Group is also working on the deployment of a strong partnership policy on national and pan-European levels. In an approach to pool expertise across the sector, McPhy takes part in professional committees and concludes technology protocol agreements with first rank industrial operators to develop an industrial scale, competitive, and standardized offer.





3. IMPROVE THE COMPETITIVENESS OF LOW-CARBON HYDROGEN

McPhy is committed to continuing to reduce the costs of producing and distributing low-carbon hydrogen, to offer its customers a competitive alternative to the current polluting technologies. This policy is deployed in several areas:

- 🕒 Development of industrial capacities to create significant economies of scale with new production tools and processes
- 🕒 Implementation of a cost reduction roadmap for key components of our equipment



4. INVEST IN OUR PEOPLE

The people in our teams who contribute every day to deploying low-carbon hydrogen solutions are McPhy's main asset. Currently, an experienced team of over 150 (31 December 2021) contributes to completing projects of extensive environmental, technology-related and economic importance. To successfully upscale its activities and manage rapid growth across its markets, McPhy implemented a dynamic recruitment plan to increase its workforce by 60% in 2021. 60 new employees joined the Group in 2022 & 90 recruitments are planned in 2023 to bolster teams in the highly technical R&D activity, engineering and customer services.

MANAGEMENT OF OUR LARGE INDUSTRIAL SCALING-UP PROJECTS

McPhy is a genuine “European native” with centers of excellence in France, Germany, and Italy since the company was established. Its industrial and commercial base is strongly European. The Group’s industrial scaling-up is based mainly on a solid manufacturing infrastructure, where production capacities are dimensioned to change scale to keep pace with markets, and which has received significant investment in 2022.

McPhy has several centers of expertise in Europe:

- 🕒 **Grenoble, France:** site dedicated to engineering, an innovation platform, test benches and industrial production site for our hydrogen stations and a satellite office in Paris
- 🕒 **Wildau, Germany:** multi-MW electrolysis systems engineering
- 🕒 **San Miniato, Italy:** a vast ISO 9001 certified site dedicated to the assembly of PIEL electrolyzers and the production of our high-capacity stacks (multi MW)

Gigafactory project in Belfort (1)





Major industrial scaling-up projects are under way and enable McPhy to respond to the industrialization of markets while optimizing the cost competitiveness of its equipment.

Production of hydrogen stations

- 🇫🇷 **France:** all teams dedicated to hydrogen stations will be merged on a new 4,000 m² industrial site in Grenoble. This new site will be able to produce up to 150 stations every year, enabling the **Group to multiply its hydrogen station production capacity sevenfold, from 20 to 150 units per year.**



Electrolyzers production

- 🇮🇹 **Italy:** optimized production lines to **multiply the electrolyzer production capacity threefold, from 100 MW to 300 MW per year**, creation of a test bench and testing platform.
- 🇫🇷 **France:** the Belfort site has been selected for the installation of an electrolyzer Gigafactory, adding 1 GW of production capacity as from 2024, with progressive ramping up⁽¹⁾.

For the installation and commissioning phases, McPhy has created a Services team, supported by an international network of first rank partners.

**FOCUS
ON SAFETY AND
QUALITY, NO.1
PRIORITY AT MCPHY**

ANNUAL PRODUCTION CAPACITY

	2021	2022+ Progressive ramp up as of 2022
 HYDROGEN STATIONS	20	x7 → 150
 ELECTROLYZERS (MW)	100 MW	x13 → 1 300 MW

(1) The construction of a Gigafactory of electrolyzers, for which the Belfort site was selected and validated by the European Commission within the framework of financing from the IPCEI.

McPhy works on innovative technology projects which require rigorous methods in terms of design, production, monitoring, installation, and compliance guarantees.

Rigor in terms of Quality and HSE is a key requirement applicable to all levels within the McPhy Group. Each employee plays a key role in the correct application of the quality management system. Put in place in 2015, its aim is to manage the activities through an approach

focusing on processes and risk management. On a managerial and operational level, this structured approach enables the Group to identify areas of significant impact, to organize internal control and training, to mitigate risks in Group activities depending on their criticality.



**FACED WITH ENVIRONMENTAL, ECONOMIC AND SOCIETAL
CHALLENGES, A NEW ENERGY MODEL IS EMERGING,
ROOTED IN THE TERRITORIES, AND BASED
ON NON-CARBON EMITTING ENERGIES.**

*Used as a feedstock in industrial processes, converted into clean fuel for low-emissions vehicles, or used to facilitate storage and flexibility for electricity and gas networks:
low-carbon hydrogen - produced by electrolysis using renewable electricity -
plays a central role, and contributes to the decarbonization of all sections of the economy
and the emergence of a societal model that is more carbon neutral.*

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