

*Originated from Airbus Group's developments, PowiDian has demonstrated its know-how of **intermittent renewable energy storage technologies** and management of poor quality networks.*

*PowiDian integrates **all hydrogen technologies** in its solution portfolio: hydrogen production, electricity, heat, fuel for mobility and long-term storage.*

*Anticipation, learning, optimization and control are the cornerstones of PowiDian SAGES® software suite of solutions.*



**100% AUTONOMOUS POWER**



**HYDROGEN BASED PROJECTS FEASIBILITY STUDIES**



**EPC (ENGINEERING, PROCUREMENT, CONSTRUCTION & COMMISSIONING)**



**PRODUCTION OF DECARBONIZED ELECTRICITY**



**DIESEL GENERATORS REPLACEMENT**



**ENERGY SYSTEM MANAGEMENT, OPTIMIZATION AND CONTROL**



## ACHIEVEMENTS



### COL DU PALET MOUNTAIN SHELTER

#### ISOLATED BUILDING

World highest hydrogen production installation in Parc de la Vanoise (Alt. 2,600 m) for a 40 bed mountaineering shelter. This SAGES® station has been in operation since its 2015 commissioning.



### LA REUNION ISLAND - MAFATE

#### ISOLATED VILLAGE - MICRO-GRID

Installation of a SAGES® station for EDF (Électricité de France). 100% solar powered electric network with hydrogen storage. It supplies public buildings with electricity all year round. In operation since its 2016 commissioning.



### SAINT-HERBLAIN

#### POSITIVE ENERGY BUILDING

The 4,600 m2 DeltaGreen office building combines renewable energy and hydrogen storage for peak consumption control and lower subscription costs. In operation since its 2016 commissioning.



### FROAN ISLANDS - NORWAY

#### INSULAR SITE - MICRO-GRID

Installation of a micro-network for TronderEnergi, the Norwegian energy company. It combines miscellaneous renewable energy sources (wind and solar) and a dual battery / hydrogen storage. Realized within a consortium and part of the European project «Remote». Installation in 2019.



### GLORIEUSE ISLAND - INDIAN OCEAN

#### INSULAR SITE - MICRO-GRID

Solar power plant associated with hybrid battery / hydrogen storage to replace the present diesel based electrical production. Client: French Army. Installation in 2019.



### TOULOUSE

#### FULLY AUTONOMOUS BUILDING

Inter-seasonal storage technology installation based on an hydrogen chain (electrolyser, fuel cell and 200 bar storage), for CEA Tech Liten «TOTEM» building in Labège (France). Installation in 2019.



# HYDROGEN SOLUTIONS

## FOR ENERGY TRANSITION



# ENERGY TRANSITION VIA HYDROGEN

*Hydrogen is a real energy vector. It allows long-term energy storage, it is a fuel for mobility, and can produce electricity, heat and cold.*

*Hydrogen is now recognized as one key solution to decarbonize many activities still dependent on fossil fuels: mobility, electricity generation, industry and housing.*



## ECO-DISTRICTS

Hydrogen is used to store renewable energy and increases individualized or shared self-consumption within a neighborhood.

## GREEN TRANSPORT

Regardless of the type of mobility, hydrogen is a solution to decarbonize short or long-range transportation.

## CLEAN CONSTRUCTION SITES

Thanks to hydrogen, urban construction sites can be CO2 emission-free and noise-free for all of their electrical needs: construction equipment, tools, lighting etc...

## PORTS POWER SUPPLY

For the power supply of docked or refueling ships, Hydrogen is a key element to decarbonize maritime transport and tourism.

## ISOLATED SITES

Hydrogen makes it possible to add «long-term storage» components to renewable feeds of isolated sites, thus making them fully autonomous without any fossil fuel.

## OUR SOLUTIONS



### 100 % AUTONOMOUS POWER

The combination of renewable energy production and **short and long-term storage** technologies makes it possible to meet the energy needs of **isolated sites** (villages, islands, remote facilities). Thanks to its **design capabilities**, PowiDian takes care of the design and installation of projects and also offers **operation and maintenance**.

### PRODUCTION OF DECARBONIZED ELECTRICITY

With its field proven technology, PowiDian is a **green electricity producer** and proposes **PPA** type contracts (Purchase Power Agreement).

### DIESEL GENERATORS REPLACEMENT

PowiDian, **fuel cell** specialist, offers a **range of hydrogen powered «zero emission» generators**, ranging from a few kW to the MW.

### HYDROGEN BASED PROJECTS FEASIBILITY STUDIES

Due to its **intimate knowledge of the hydrogen world** and its full expertise on related equipment, PowiDian carries out **feasibility studies and budget estimates** of all types of hydrogen based projects.

### ENERGY SYSTEM MANAGEMENT, OPTIMIZATION AND CONTROL

**Optimizing energy** management is at the heart of PowiDian's raison d'être. PowiDian proprietary software embedded in our solutions ensures **efficient and autonomous energy management**. Our dedicated supervision interface allows visualization and analysis of energy data. Thanks to AI, PowiDian offers on-board **self-learning** capabilities based on production and consumption forecasting.

### EPC (ENGINEERING, PROCUREMENT, CONSTRUCTION & COMMISSIONING)

PowiDian focus and know-how is the realization of **integrated systems** based on the use of hydrogen. PowiDian takes care of the **engineering, installation and commissioning of any projects**.