GAME-CHANGING H_2 POWER

Presentation prepared for:

Towards a Greener Future: European Innovation for Sustainable Cyprus

Nicosia, 27/11/2025

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SUMMARY

1. HDF Energy quick introduction

2. Our proposal for Cyprus: The Renewstable®

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HDF ENERGY,
A GLOBAL PURE PLAYER IN HYDROGEN

H2 INFRASTRUCTURE DEVELOPER

Development, operation & ownership of large-scale hydrogen infrastructure

- Electricity production
- Green hydrogen production

MULTI-MW FUEL CELL SUPPLIER

Made in France

Design and manufacturing of high-power fuel cells

- Power supply
- Maritime
- Rail

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OUR FACTORY IN FRANCE: THE WORLD'S FIRST PRODUCTION PLANT FOR MULTI-MW PEM FUEL CELLS

Annual production capacity
1 GW by 2030

Employees
+500 by 2030

Location
Bordeaux, France

Factory size
7 000 m^2
(phase 1)

Operational
In 2024

Environmental
certification

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ESTABLISHING A SOLID INTERNATIONAL COMPANY

2012
Creation of the company by CEO, Damien Havard

2016
Launch of the Cleargen project, the world's first installation of a 1 MW PEM fuel cell for an industrial application

2019 2020
Start of partnership with Ballard to develop multi-MW fuel cells for hydrogen power plants
Opening of offices in Indonesia and Australia

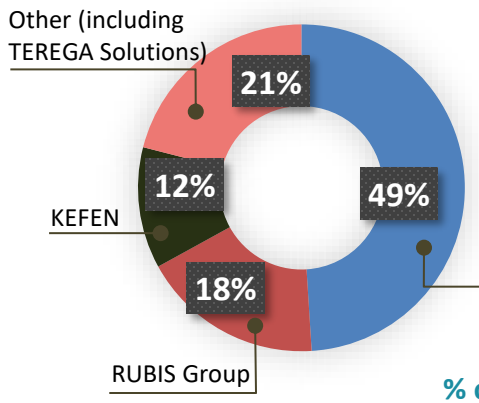
2021
IPO: 150+ M€
Financial closing of the CEOG project in French Guiana : the world's first multi-MW hydrogen power plant
Opening of offices in South Africa, Mexico and the Caribbean

2022
Renewstable® Barbados project: Rubis acquires 51% of the project's shares

2023 2024
Construction and launch of HDF's factory in France to produce multi-MW fuel cells

HDF's industrial project awarded as IPCEI Hy2Move

Shareholder structure



% of shares

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GLOBAL LEADER IN HYDROGEN INFRASTRUCTURE WITH STRONG LOCAL PRESENCE

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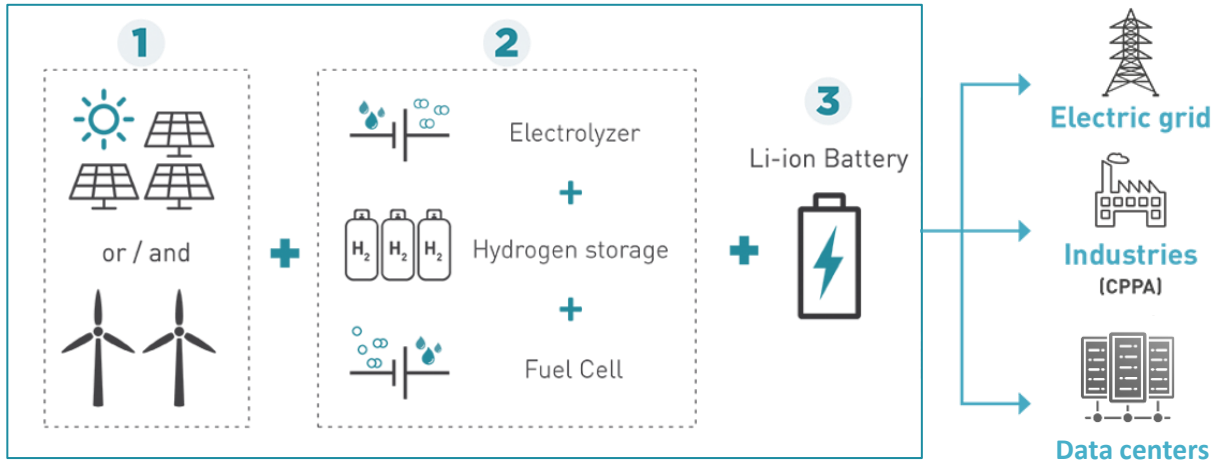
HDF ENERGY SOLUTIONS

RENEWSTABLE®

POWER TO **POWER**



- Clean baseload power
- Dispatchable and predictable power plant
- Low reservation of capacity on the grid
- Autonomous power plant, no need for a fuel import supply chain

HYPOWER

H2 TO **POWER**

- Clean peak-shaving power (replacing CCGTs).
- The development of hydrogen pipelines and large-scale storage infrastructure is required.

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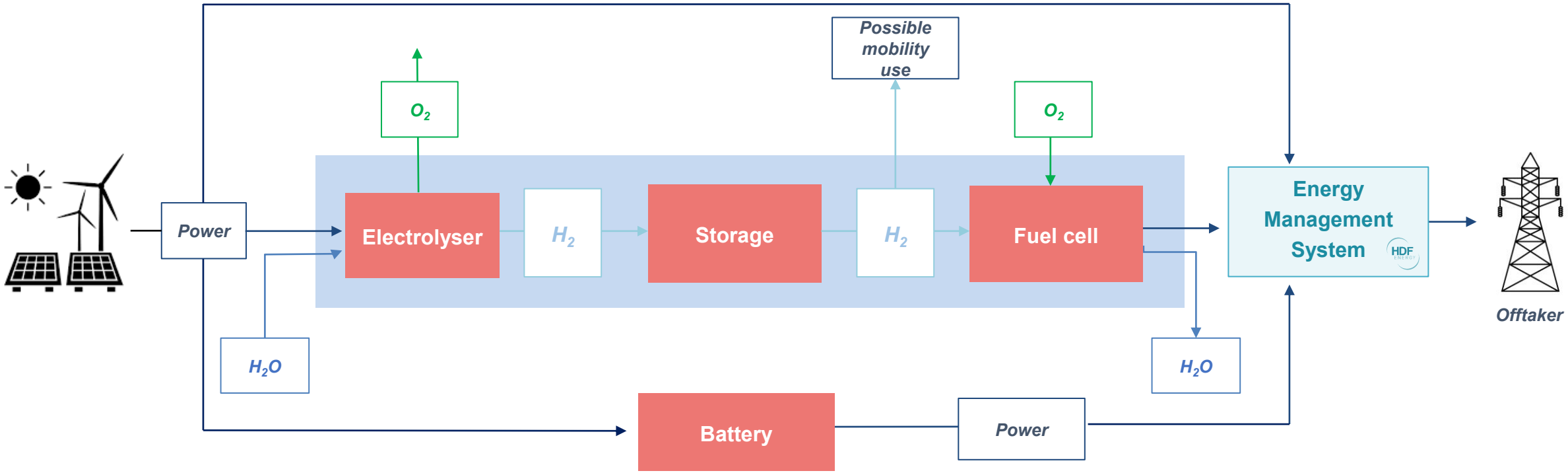
RENEWSTABLE®

Plant main characteristics



NON-INTERMITTENT RENEWABLE ENERGY SUPPLY

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RENEWSTABLE®, A STRONG TRACK RECORD IN PROJECT DEVELOPMENT

IN ADVANCED DEVELOPMENT STAGES

RSWK – Namibia

Solar PV	Storage Capacity	Power Generation
85 MWp	230 MWh	142 GWh/year baseload

LOS CABOS – Mexico

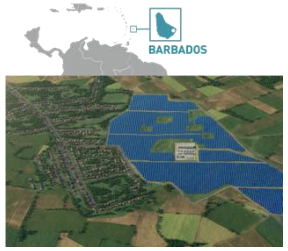
Solar PV	Storage Capacity	Power Generation
152 MWp	280 MWh	189 GWh/year Baseload

SUMBA - Indonesia

First project
to be duplicated in +20 locations across the country

Solar PV	Storage Capacity	Power Generation
30 MWp	67 MWh	47 GWh/year Baseload

RSB – Barbados



Solar PV	Storage Capacity	Power Generation
50 MWp	120 MWh	60 GWh/year baseload

LENDERS

ADB · IDB · IFC · CIBC · DFC · European Investment Bank

UNDER CONSTRUCTION

CEOG, the world's first MULTI-MW hydrogen power plant

KEY FIGURES

Solar PV	Storage Capacity	Power Generation
55 MWp	128 MWh	50 GWh/year Baseload

Electrolysers	Power Supply	Power Purchase Agreement
16 MW World's 2nd largest capacity	for 50 000 inhabitants	25 years

Total Investment: 170 M€

Commissioning: 2026

OFFTAKER
EDF

EQUITY INVESTORS
Meridiam · SARA · HDF ENERGY

LENDERS
BNP PARIBAS · SMBC · CIC · AFD

EPC
SIEMENS energy

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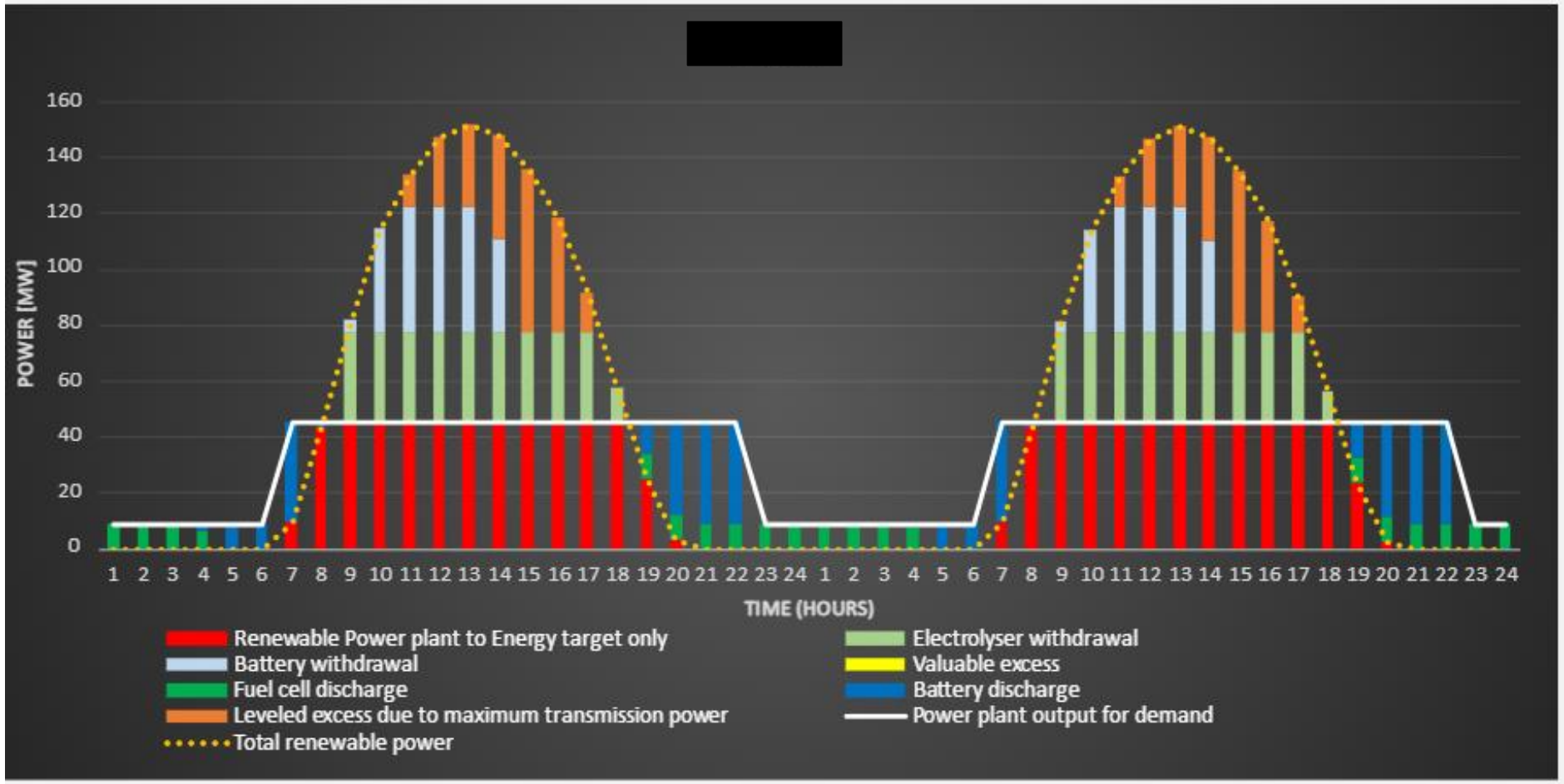
RENEWSTABLE® - OVERVIEW



- **Clean baseload power**
- Ability to predict at noon day N the power output of day N+1

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STANDARD GRID SERVICES

BASE LOAD POWER

Permanent and stable power dispatchable production with range of production from 0 to max power plant capacity on demand of grid operator

GRID-FOLLOWING

Standard function of power plant to deliver power based on voltage and frequency grid reference

SHORT CIRCUIT

Supporting the grid by delivering an important short circuit current.

ISLANDED MODE

Capacity to the plant to stay disconnected on the grid and to resynchronized power source to the grid on demand

VOLTAGE REGULATION

Capability of a power plant to adjust voltage based on the delivery or absorption of reactive power Q (kVAR) (power factor). The amount of reactive power is defined by the grid voltage U.

FREQUENCY REGULATION

Capability of a power plant to adjust frequency based on the delivery or absorption of active power P (kW) to support the grid. The amount of active power is defined by Power Management System without exceeding max power plant capacity.

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OPTIONAL GRID SERVICES

GRID FORMING

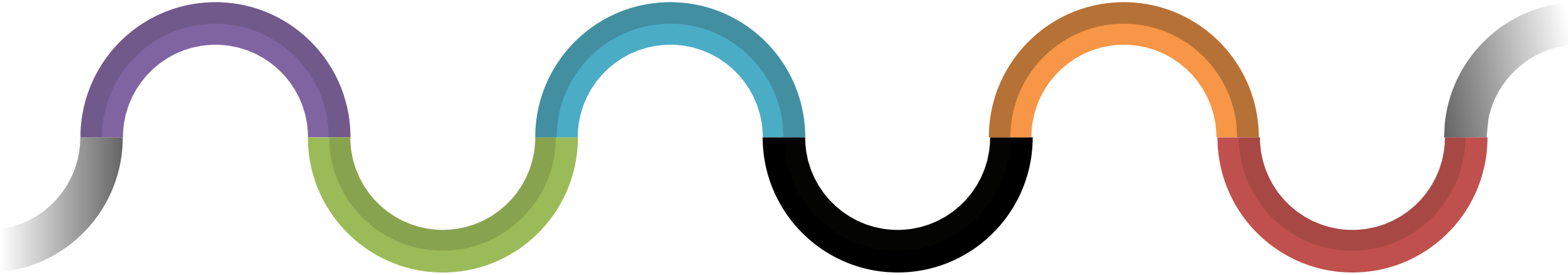
Capacity to the plant to start the grid and to provide voltage and frequency reference without power delivery to the grid (do not confused with black start)

BLACK START

Capacity to the plant to power the grid alone at nominal load after a trip of the grid.

SHORT CIRCUIT

Supporting the grid by delivering an important short circuit current.



INERTIA

Capacity to help the grid to support load variation and event to stabilize voltage and frequency

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Contact

GEORGIOS **EXARCHOU**

Country Head, Greece & Cyprus

georgios.exarchou@hdf-energy.com

+ 30 69 47 22 4912

www.hdf-energy.com

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