



YOUR CATERER
FOR ENERGY INDEPENDENCY

Jordan Bellatreche
Head of Business



ABOUT US

Swiss Innovation for the World

World's Best Green Hydrogen
production Technology

10+ Years of R&D

150+ Years of combined
experience in world-renowned
Team



The 'ARB' - Breakthrough Technology

World's best technology

- Innovative Integrated Photo-Electrochemical device
- Concentrated light 1000x
- Smart thermal and mass-transport management
- Lifetime 25 years with minimal maintenance
- Plug & play automated co-generation system

25%

Solar to Hydrogen
efficiency
(>2x conventional)

36%

Solar to electricity efficiency (>2x conventional)

80%

Overall system efficiency (>6x conventional)

World-wide



The 'ARB'

Co-generation system



Integrated Photo-Electrochemical (IPEC) Technology

The 'ARB'

Versatile and Flexible co-generation system



MAGIC SAUCE

Integrated Photo-Electrochemical (IPEC) Technology

Multiple Outputs:

- H_2 (pre-compressed till 30 bars inside Reactor, >99.999 % purity)
- O_2 (>99.9% purity)
- Heat (upto 80 °C)
- Electricity (on-demand)



The 'ARB'

Versatile and Flexible co-generation system

Hybrid Input Capability:

24H

Constant fuel production at
100% capacity
with Sun + Grid

(proprietary controller for fast-dynamic matching)



DIVERSIFIED PRODUCT PROTFOLIO

3 Sizes of Arb for catering to customers at various scales

1_(50 Arb) – 20_(1000 Arb) MW
Equivalent

3,650 tons/year H₂



9-meter Arb
(20 kW_p)
10 kg/day

40_(1000 Arb) MW
Equivalent

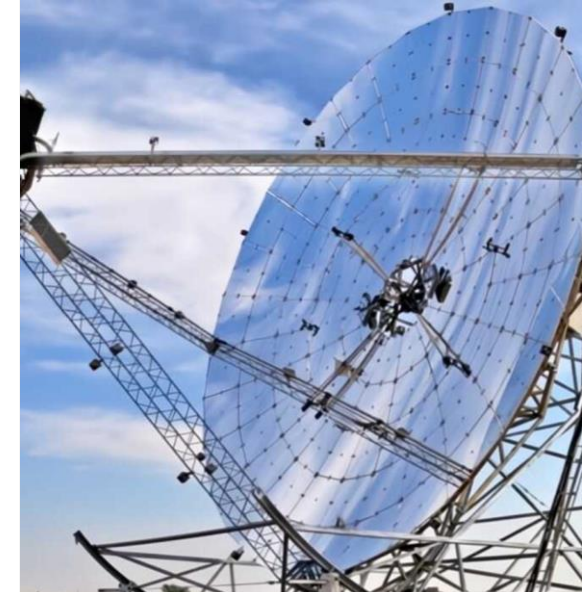
7,300 tons/year H₂



13-meter Arb
(40 kW_p)
20 kg/day

160_(1000 Arb) MW
Equivalent

29,200 tons/year H₂



25-meter Arb
(160 kW_p)
80 kg/day

Developing Gardens for Fuel and Power production

Our current industrial Pilot in Switzerland – About completion in next months



Solar + green Grid
Operation

400 tons/year
CO₂ saving

- $\underline{\text{H}}_2$: 18 tons/year
- $\underline{\text{O}}_2$: 145 tons/year

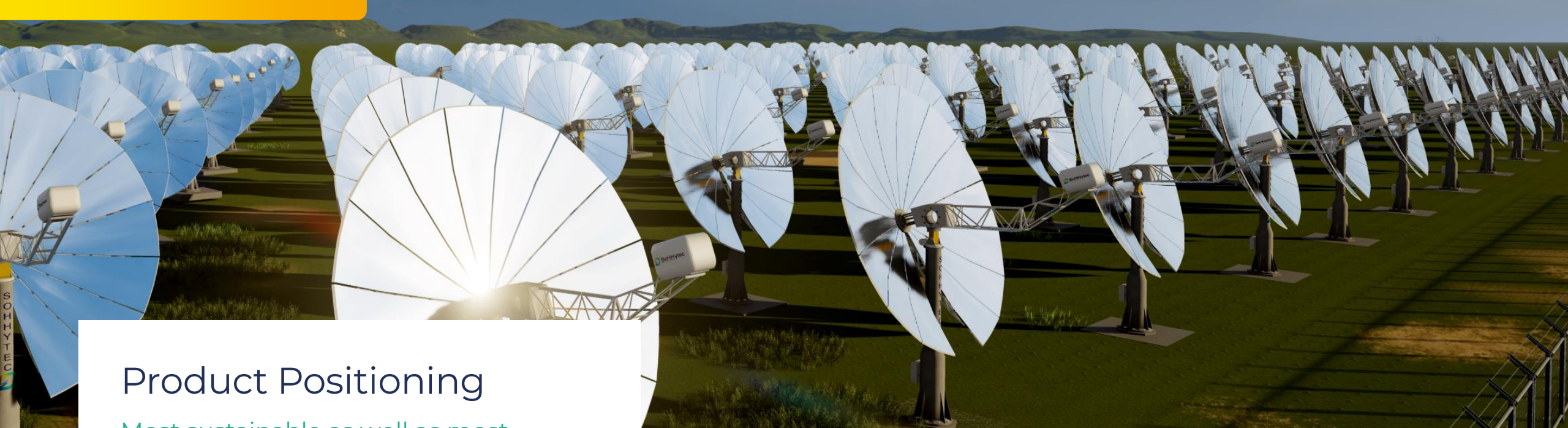
~40% Cheaper than
grey H₂ market
price

ARB FOREST

Integrated into existing landscape

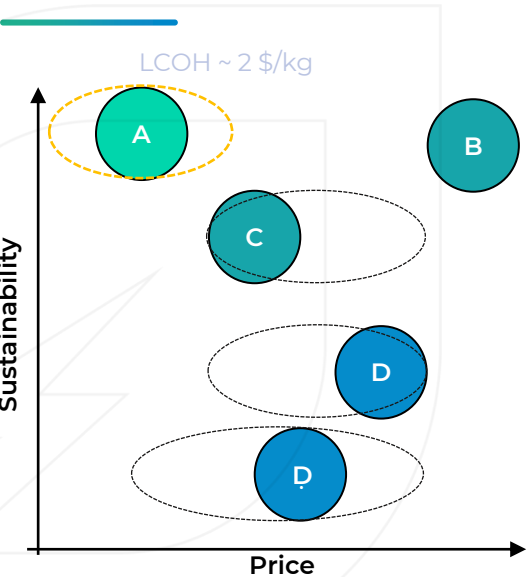


<https://vimeo.com/923920661/655f39b89c>



Product Positioning

Most sustainable as well as most economical solution



*Dumortier et al. EES 2015

Concentrated Integrated PhotoElectrolysis (IPEC) SoHHytec	Renewable energy powered Electrolysis		Non-Renewable energy-based production	
	High Temperature/other Photo Water splitting	Conventional photovoltaic/wind/hydro powered Electrolysis	Grid Electricity based Electrolysis	Steam Reforming using Fossil Fuels
A	B	C	D	E





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