

FUSION FUEL™

**—ENDLESS
ENERGY.
UNLIMITED
FUTURE.**

00— Disclaimer

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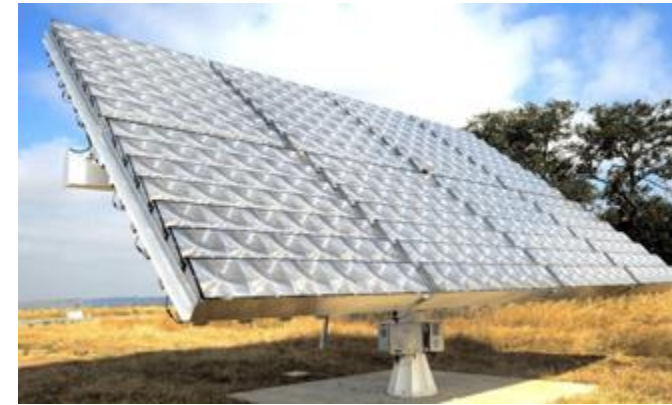
*01 —
FUSION
GROUP
OVERVIEW*



01 — FUSION FUEL OVERVIEW

The Fusion Fuel team started working in the solar industry in 2007, with the development and industrialization of a highly innovative solar technology that concentrates solar radiation to produce electrical energy, using specialized optics and highly efficient III-V.

With the commercialization of this technology, Fusion Group, through a subsidiary company, became a leading company in Solar Concentration.



2008 – 2012

First prototype, TRK-28, used for proof of concept of Solar Concentration with 260x concentration.

Increased the solar concentration ratio to 460x and to 800x.

Installed a manual assembly line with a manufacturing capacity of 3MW per year.

Installed the first medium size plant with 0.45MW of power.



2013 – 2015

Developed a partially robotized 6'000 sqm facility with 15 MW/year capacity.

Launched TRK-180.

Initial MW size contracts in Portugal and Africa.

Achieved 7 years on field operation with proven and highly reliable technology for Solar Concentration.



2016 – 2021

Developed a semi-automated 20'000 sqm facility with 54 MW / year capacity.

Launched the TRK-200 and TRK-220 with a concentration ratio of 1'400x.

Expanded to France and other countries.

Developed the Photon Electrochemical Hydrogen Generator device (HEVO) for hydrogen production module.

01 —
FUSION
HISTORY

The Fusion Team's track record, through its subsidiary company, includes more than twenty solar plants installed in Portugal, France, Cabo Verde, Morocco, etc.



Ferreira do Alentejo
PT



La Durance
FR



Évora
PT



Les Murier
FR



Almodôvar
PT



Cabo Verde
AFRICA

01 —
**FUSION FUEL &
HL ACQUISITIONS
BUSINESS
COMBINATION**

**TRANSACTION
TIMELINE**

**AUGUST
12TH 2020**

HL files definitive
Proxy and
Registration
Statement with
SEC

**SEPTEMBER
2ND 2020**

Signs
commitments for
\$25mm Private
Placement

**DECEMBER
4TH 2020**

HL shareholders
vote to approve
business
combination with
Fusion Fuel

**DECEMBER
10TH 2020**

Transaction
Closes

**FUSION FUEL
TRADES ON
NASDAQ AS
HTOO**

**Fusion Fuel Green PLC
(HTOO)**

Emerging Leader in Green Hydrogen.
Unique distributed, micro-electrolyzer technology
that utilizes CPV waste heat and other factors to
bring down costs. Focus on both Project
Development & Technology Sales.

**HL Acquisitions Corp
(HCCH)**

Nasdaq-listed SPAC raised \$55mm in June 2018.
\$53mm held in trust as of December, 2020.
Experienced Board & Management team.
Proven investment track record.

02—
***FUSION FUEL'S
GREEN
HYDROGEN
TECHNOLOGY***

02 —
EVOLUTION
OF THE SOLAR
CONCENTRATION
TECHNOLOGY

Fusion Fuel has adapted its CPV technology, integrating a proprietary micro-electrolyzer to take advantage of the heat generated in the solar concentration process to enhance the efficiency of the electrolysis reaction.

Existing Technology for Solar to Electric Generation

Two-axis automated solar tracking system

New Technology for Solar to Hydrogen Production

Tracker with integrated solar concentration and HEVO

Tracker base including in-situ H₂ storage vessel

02 —
HEVO

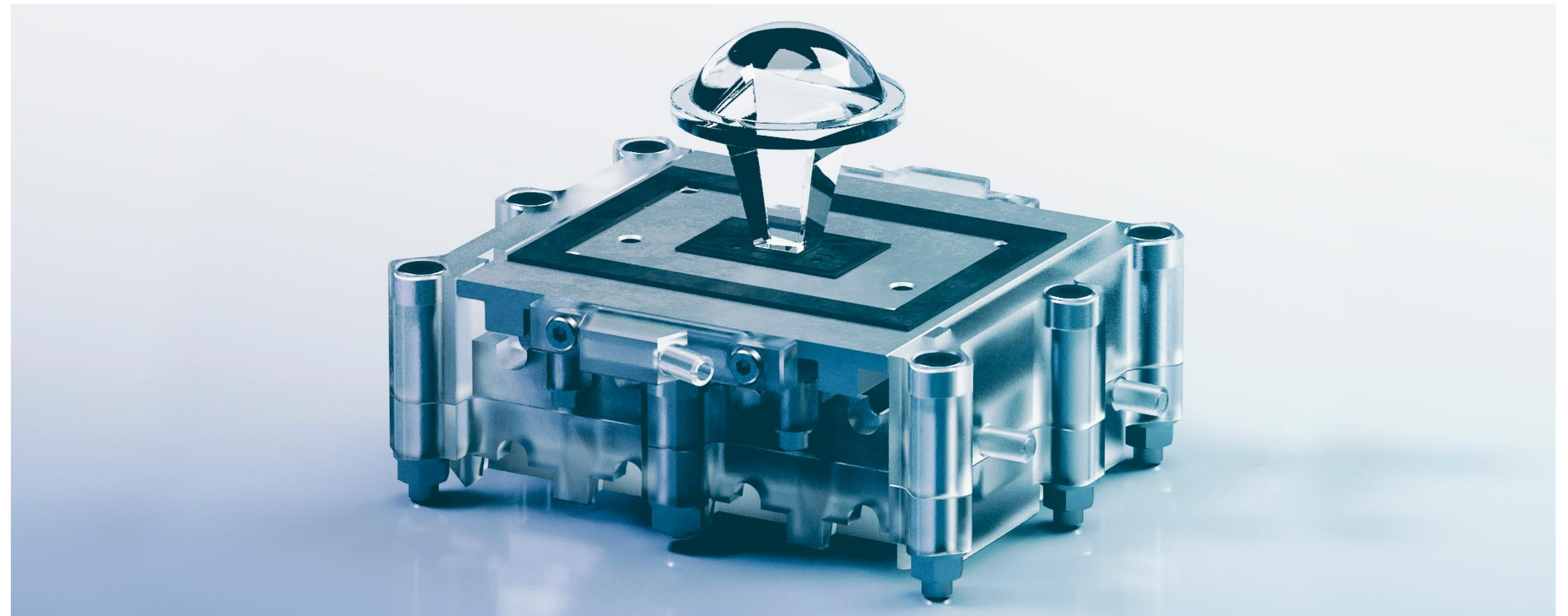
HEVO is the defining creation of this revolutionary new concept and design - a bold step in the evolution of the Hydrogen technology.

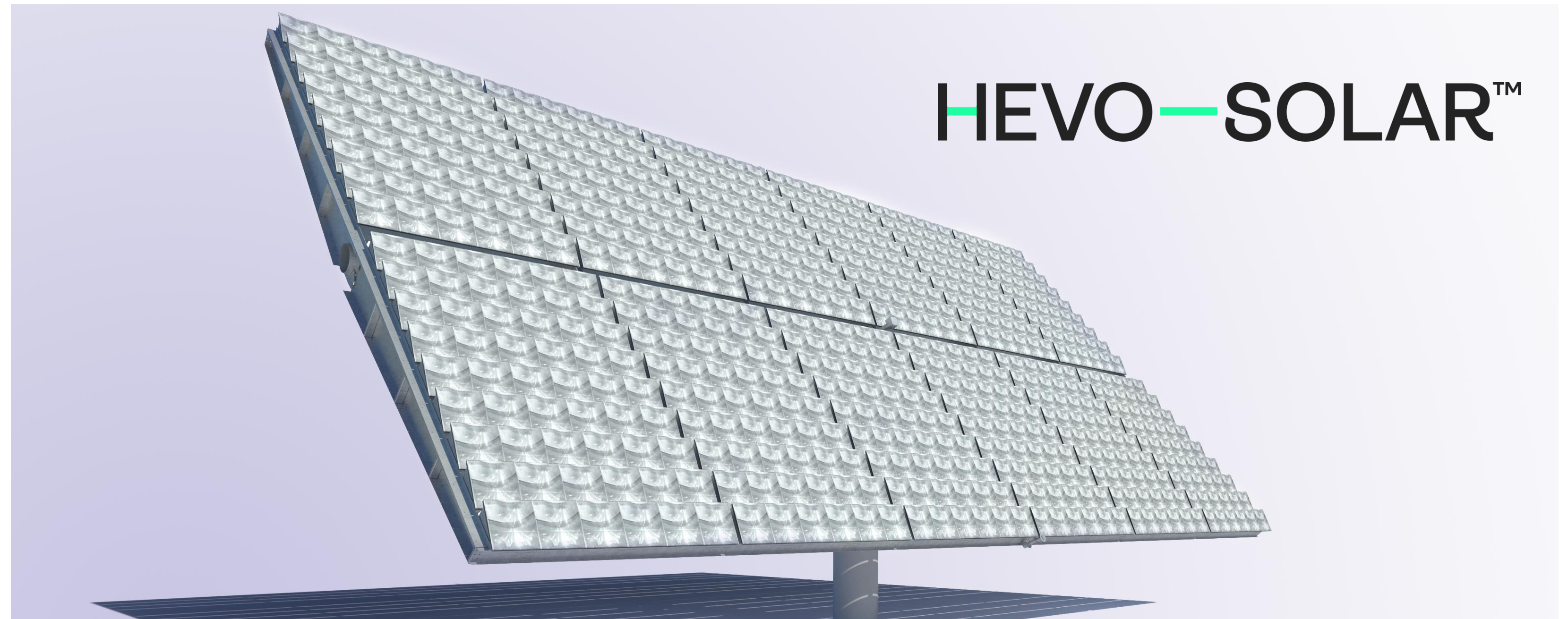
HEVO is Fusion Fuel's proprietary miniaturized PEM based electrolyzer.

It has been specifically designed to be small, light, and critically, able to be mass produced using automated production lines.

Its extraordinary simplicity allows us to fundamentally rethink the production of Green Hydrogen.

HEVO™





The combination of HEVOs with a high efficiency concentrated photovoltaic solar solution, designed to use both the electrical and thermal energy from solar radiation, enables us to uncouple hydrogen production from the grid.

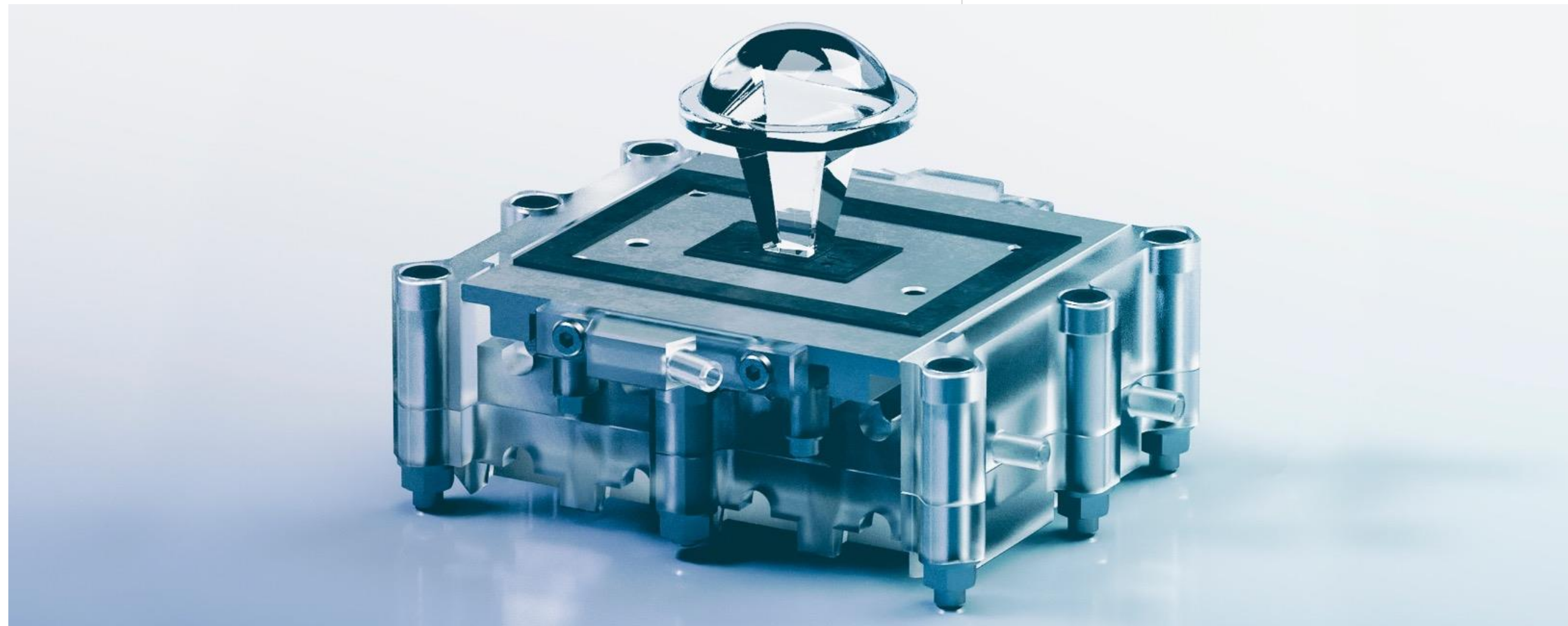
The HEVO-SOLAR benefits from direct access to the electrical energy created without transport and conversion losses and the freely available thermal energy, which together reduce the energy load required to split the water molecule.

Each HEVO-SOLAR has a surface area of around 100m², weighs approximately 4 tons and includes around 288 HEVOs.

In a location with a solar irradiation level of 2'100 KWh/m²/year (such as in Southern Portugal), each HEVO-SOLAR can produce 1 ton of Green Hydrogen per year using only solar power. By utilizing other sources of renewable electricity at night each HEVO-SOLAR can produce 2 tons of Green Hydrogen per year.

02 —
HEVO TECHNICAL
CHARACTERISTICS

HEVO
SPECIFICATIONS



Operating Direct Normal Irradiation (DNI)
from 15 W/m²
to 1200 W/m²

Hydrogen production
3.19 grams of H₂
per Hour (at DNI
of 1000 W/m²)

Hydrogen production variation
proportional to irradiation (DNI)

Solar to hydrogen efficiency (BOL)
26.8%

Maximum operating temperature
85°C

Typical operating temperature at DNI of 350 W/m²
53°C - 57°C

Typical operating temperature at DNI of 900 W/m²
68°C - 76°C

Operating pressure
1 atm

Hydrogen purity
99.998%

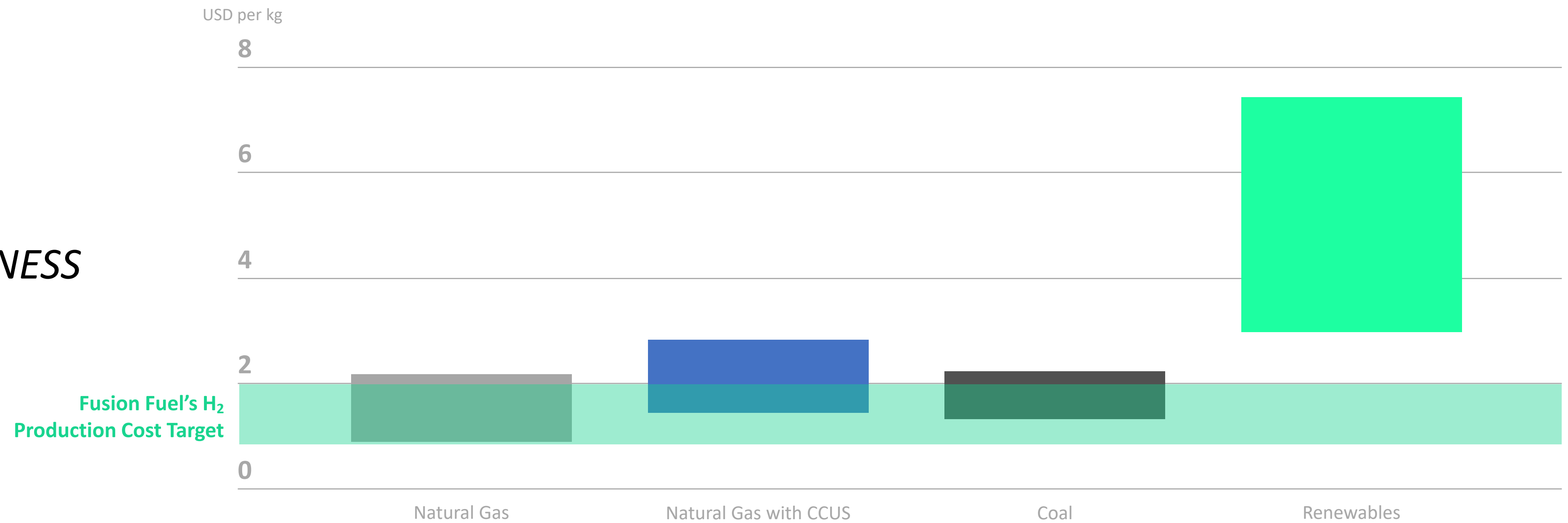
Water flow
5ml/min to 35ml/min

Required input water quality
ASTM Type II
deionized water
(<0.1 micro
Siemen/cm)

Recommend input water quality
ASTM Type I
deionized water
(<0.1 micro
Siemen/cm)

Degradation after 20'000 h
<3% (degradation is compensated by
additional power from the solar cell)

02 —
HEVO TECHNOLOGY
COST-COMPETITIVENESS



Source: IEA – The Future of Hydrogen Report from June 2019

By combining proven solar concentration technology with a proprietary micro-electrolyzer design, Fusion Fuel can produce green hydrogen at costs well below its peers and at parity with grey and brown hydrogen.

Fusion Fuel's technology will unlock the production of green hydrogen at between € 1.0 – 2.0 / kg (depending on the level of solar resource), enabling it to compete with conventional hydrogen; additional costs from carbon pricing or carbon capture will further improve the economics of Fusion's solution

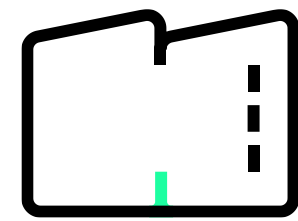
Green hydrogen was expected to achieve cost-competitiveness with conventional hydrogen by 2030. Fusion's HEVO technology will enable us to achieve this milestone by 2023.

03—
BUSINESS
LINES



03—
FUSION FUEL
BUSINESS
LINES

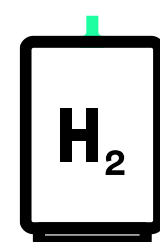
FUSION FUEL HAS TWO PRINCIPAL BUSINESS LINES



01 Industry
Technology
Provider

- Provider of HEVO-SOLAR technology to customers who are looking to build green hydrogen production capacity.
- Fusion Fuel will sell and install hydrogen generators and peripheral equipment in the intended location, typically in collaboration with a local EPC contractor.
- Active operation, monitoring and maintenance of established facilities offered to customers as a managed service.

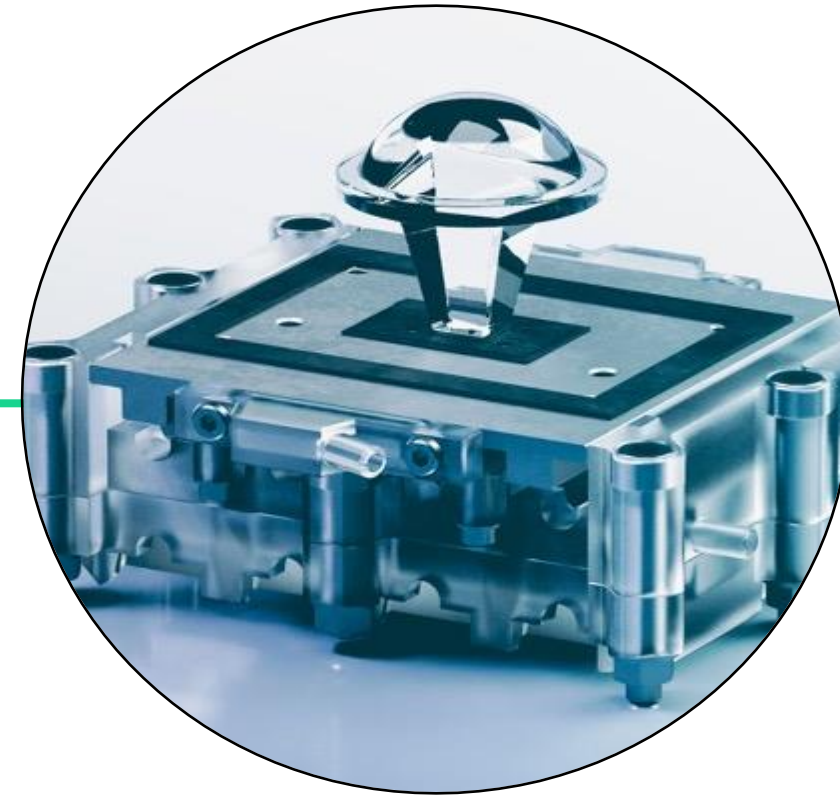
Annual Production Capacity	2021	2022	2023	2024	2025
HEVO-SOLAR (# of units)	1'100	4'700	9'300	15'500	17'200
Equivalent Electrolyzer Capacity	27 MW	115 MW	228MW	380 MW	422 MW



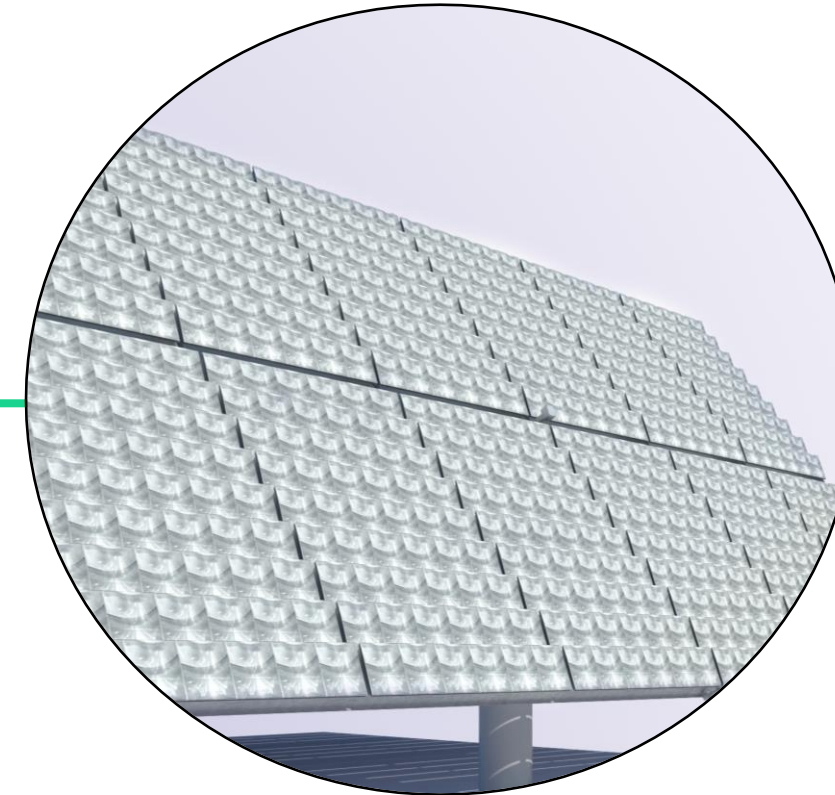
02 Projects
Plant Developer
and Operator

- Developer company-owned solar-to-hydrogen farms plants with the purpose of selling green hydrogen as an end product through hydrogen purchase agreements (HPAs).
- HPAs signed with credible offtakers (refineries, ammonia producers, gas networks, refueling stations, etc.) guarantee long-term cash flows.
- Once established, company-owned green hydrogen farms can be managed as a portfolio and sold to funds with lower IRR thresholds

03 —
FUSION FUEL
HYDROGEN
VALUE CHAIN



HEVO
Proprietary Microelectrolyzer



HEVO-SOLAR
Modular Hydrogen Generator



Solar to Hydrogen Plant



Hydrogen Canisters



Hydrogen Tanks



Hydrogen Fueling Station

03 —
PRIMARY USE-CASES FOR GREEN HYDROGEN

- 1 NATURAL GAS NETWORKS** Most of the largest European economies have outlined aggressive targets ($\leq 20\%$) for hydrogen blending in natural gas pipelines to reduce emissions from heat and electricity generation
- 2 OIL REFINING** Hydrogen is used as a key catalyst in the hydrocracking process – refiners are looking to integrate green hydrogen into their portfolio to reduce the carbon intensity of oil refining
- 3 GREEN AMMONIA** Hydrogen is a key feedstock in the production of ammonia (NH_3) – ammonia producers are looking to develop on-site green hydrogen production to reduce their carbon footprint
- 4 SYNTHETIC FUELS** The transportation sector is investigating substituting conventional fuels with carbon-neutral synthetic fuels (e.g., green ethanol and methanol), using green hydrogen and captured carbon
- 5 MOBILITY** Compressed hydrogen may be a potential decarbonization vector for long-haul and heavy-duty commercial transport due to its high energy density per unit of mass and fast refueling time
- 6 ENERGY STORAGE** Green hydrogen is viewed as a potential solution to the challenge of storing energy from intermittent renewables, as well as for grid services like peak shaving and demand response

04 —
*BUSINESS
DEVELOPMENT*



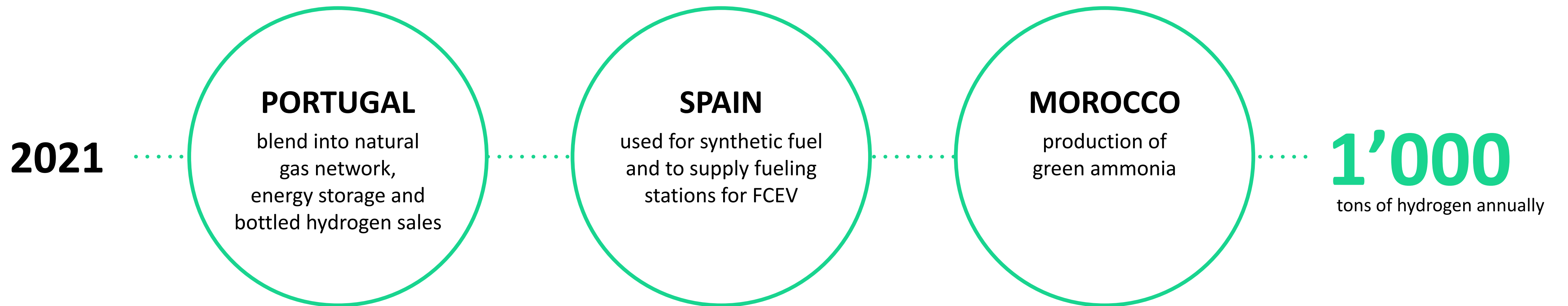
04 —
SELECT 2021
PROJECTS

Target to develop projects that will produce 1'000 tons of Green Hydrogen as of 2022.

Spread across several projects in Portugal, Spain and Morocco.

Fusion Fuel aims to install 600 HEVO-SOLAR units in 2021 across several projects, which will produce 1'000 tons of green hydrogen per year, helping establishing itself as a strategic partner to multiple industry players in the region.

The end-use of the green hydrogen produced varies project by project:



04—
PORTUGAL

Fusion Fuel's Green Hydrogen Utility Scale Demonstrator, in Evora will have 55 HEVO-SOLAR units and will produce around 60 tons of Green Hydrogen per year.

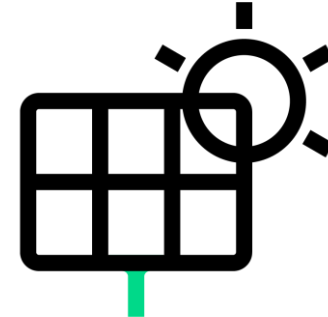
The Evora Green Hydrogen project will be developed in two phases:


ÉVORA

1st

**GREEN
HYDROGEN
PLANT**
in Portugal.

PHASE 1

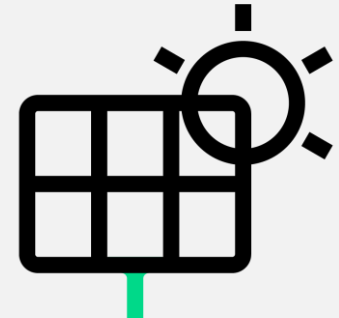
15 

15 HEVO-SOLAR units
demonstrating the production of Green Hydrogen from solar radiation and converting it to electricity at night.

PHASE 2

40 

40 HEVO-SOLAR units
to produce green hydrogen to inject into the natural gas network and sell in containers for industrial uses.

55 
HEVO-SOLAR units

60 
tons of Green Hydrogen
per year

Go-live of Evora Hydrogen production 2Q 2021.

04—
PORTUGAL


SINES



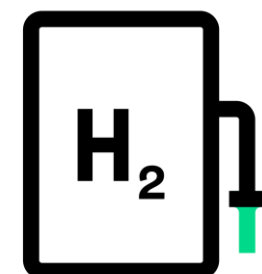
PROJECT

€136m



55'000

tons of green ammonia



10'250

tons of green hydrogen annually

As part of the Sines plans, **Fusion Fuel** has created a partnership with companies along the entire value chain, from solar energy to off-taker, to create a green ammonia plant in the area of Sines using Green Hydrogen from **Fusion Fuel's** technology.

The project has been submitted to the **European Commission Program** for Hydrogen and the companies are further progressing the project feasibility study.

The proposed project has a total CAPEX of around € 136m, will aim to produce 55,000 tons of green ammonia using 10,250 tons of **Green Hydrogen** annually.

04—
SPAIN
SYNTHETIC FUELS



Fusion Fuel signed MoUs to explore potential projects with:

...to develop an industrial plant to produce **35'000 tons of synthetic fuel per year** capturing **100'000 tons of CO₂** from their steel mill and **14'000 tons of Green Hydrogen** produced with Fusion Fuel Technology.

This partnership will look to explore additional projects in Spain. A major international energy trader has submitted an Lol to buy the synthetic fuel.




GRUPO INDUSTRIAL CL



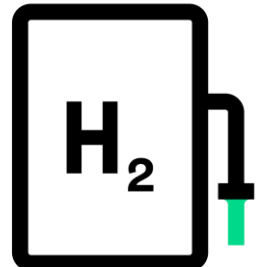
MAGNESITAS

...install up to **10'000 HEVO-SOLAR** units at Magnesitas' site in Lugo, Spain, which would produce **20'000 tons of green hydrogen** annually. Part of the output would be used to generate industrial heat in the natural gas / hydrogen combi furnaces, while the remainder would be combined with **125'000 tons of captured CO₂** to produce between **38'000 and 45'000 tons of synthetic fuels annually.**

04—
SPAIN
SYNTHETIC FUELS



PROJECT
€275m



14'000
tons of green
hydrogen annually



E-Fuel Balboa is a project under development to install a Synthetic Fuel Facility near the city of Badajoz, Spain, with the following characteristics:

- Synthetic Fuel Capacity
 - **Bio Jet Fuel – 35.000 tons per year**
 - **Bio Ethanol – 72.000 Tons per year**
- **Green Hydrogen needed – 14.000 tons per year**
- CO₂ Balboa Steel Mill – 100.000 tons captured per year

The E-Fuel Balboa will need a total of € 275 m including the Green Hydrogen Plant and the Synthetic Fuel plant

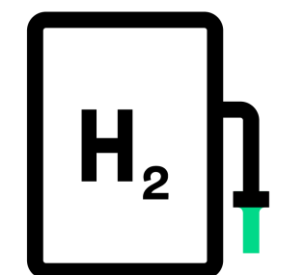
The project is being developed by **Fusion Fuel** Spain, together with other companies that will be produce the Jet Fuel, transport it to Huelva Harbor and ship it to the North of Europe.

The Project is expected to start construction in 2022.

04 —
SPAIN
SYNTHETIC FUELS


MAGNESITAS

 PROJECT
€344m

 **17'000**
tons of green
hydrogen annually



E-Fuel Magnesitas is a project under development to install a Synthetic Fuel Facility near the city of Lugo, Spain, with the following characteristics:

- Synthetic Fuel Capacity
 - **Bio Jet Fuel – 42.000 tons per year**
 - **Bio Ethanol – 87.000 Tons per year**
- **Green Hydrogen needed – 17.000 tons per year**
- **CO₂ Balboa Steel Mill – 120.000 tons captured per year**

E-Fuel Magnesitas will need a total of € 344 m including the Green Hydrogen Plant and the Synthetic Fuel plant

The project is being developed by **Fusion Fuel** Spain, together with other companies that will be produce the Jet Fuel, transport it to Huelva Harbor and ship it to the North of Europe.

The Project is expected to start construction in 2022.

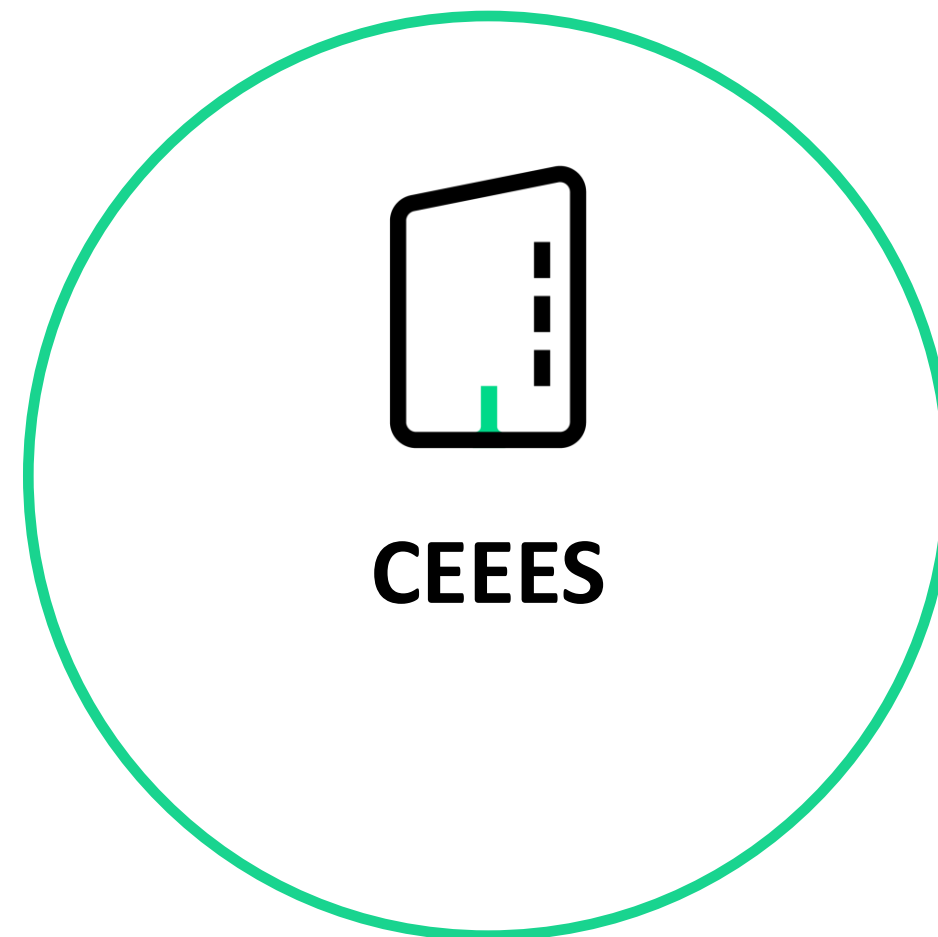
04 —
SPAIN
REFUELING
STATIONS



Fusion Fuel signed MoUs to explore potential projects with:

CEEES represents thousands of service station owners across Spain and is committed to lead the transition to sustainable mobility, having recently inaugurated the first hydrogen fueling station for long haul vehicles in Madrid, Spain.

CEEES and Fusion Fuel aim to develop small-scale green hydrogen plants for the initial refueling stations in its network and expand the production as the market develops.



Grupo Zoilo Ríos, a member of CEEES, is one of the leading groups of gas stations in the Aragon region of Spain and is committed to leading the transition to sustainable mobility in the region.

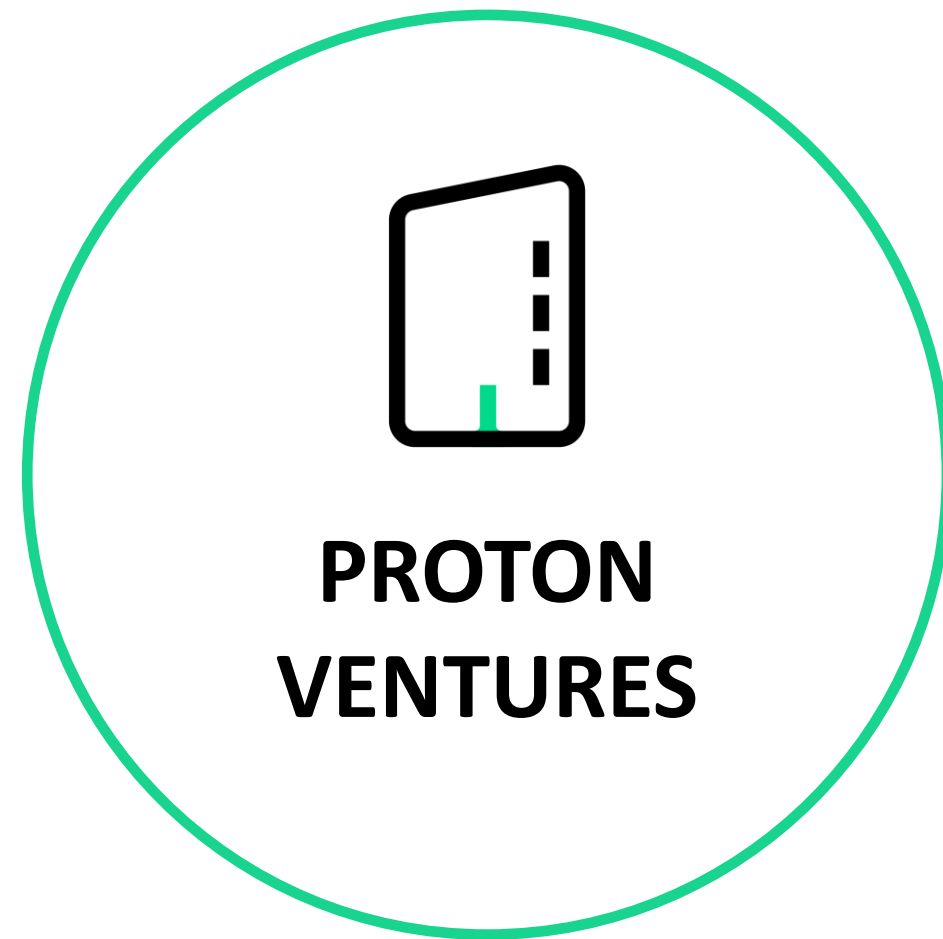
Zoilo Ríos and Fusion Fuel will develop the first green hydrogen plant co-located with existing traditional service station and will expand the green hydrogen production footprint to the other Zoilo Ríos service stations

04 —
MOROCCO

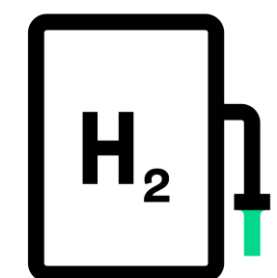
Fusion Fuel is jointly developing a green ammonia project in the southern part of the country.

Fusion Fuel entered into a partnership with Proton Ventures to develop a green ammonia plant in the south of Morocco to produce and supply 33'000 tons of Green Hydrogen per year to be used in the production of 183'000 tons of green ammonia.

These projects will be developed and installed from 2021 to 2026.



 **183'000**
tons of green ammonia

 **33'000**
tons of green hydrogen annually



04—
INDIA

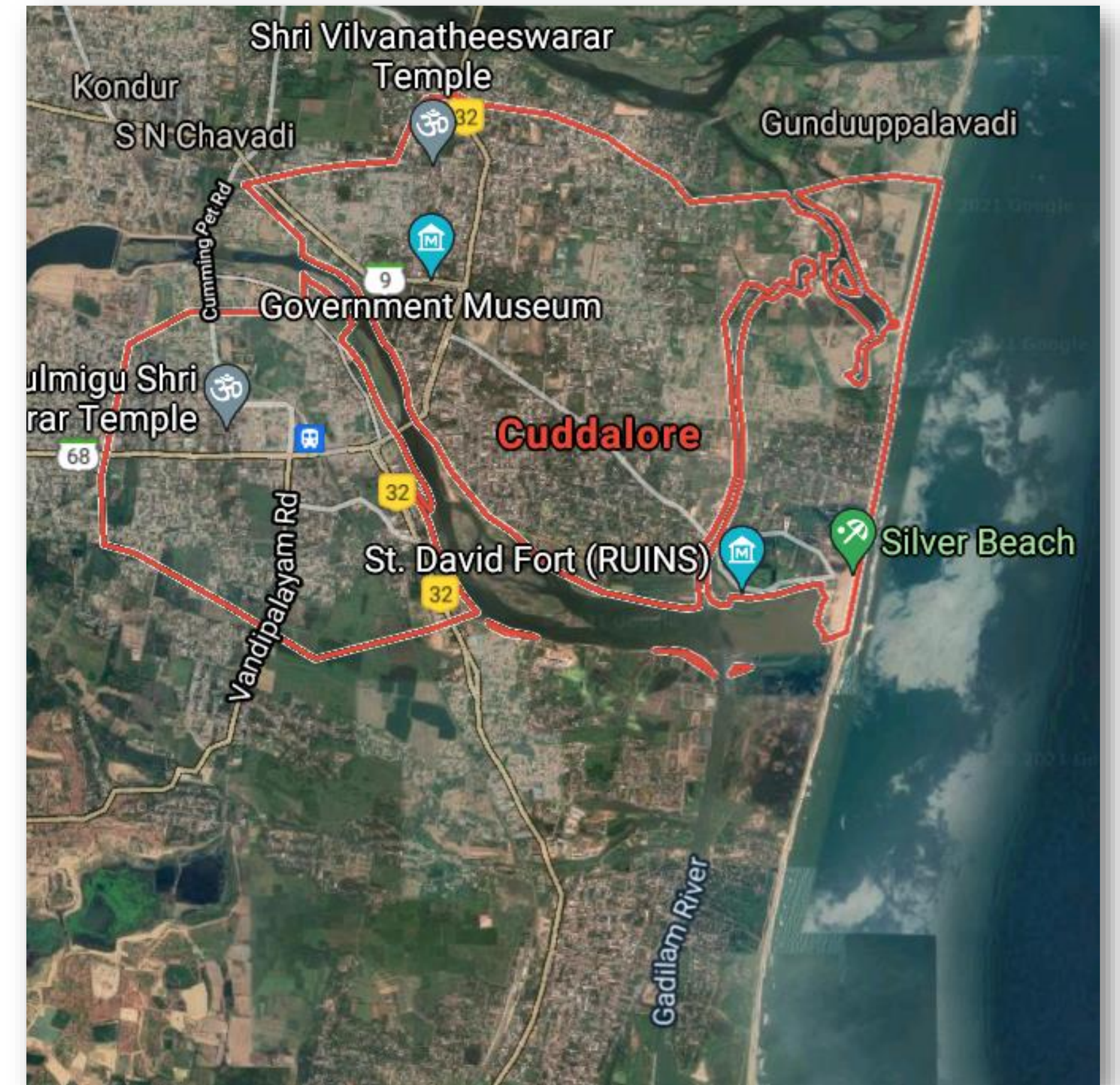
Fusion Fuel will install a small demonstrator facility for BGR Energy in the region of Cuddalore, Tamil Nadu, India in the second half of 2021 using its market-leading HEVO-SOLAR technology.

The companies will then co-develop projects throughout India, leveraging BGR Energy’s extensive client network and existing commercial footprint.

BGR Energy has developed more than 12,000 MW of power plants and Balance of Plant related services in India and has substantial capabilities in the design and manufacture of high-tech equipment.

Hydrogen already plays a critical role in the Indian economy, with roughly 6 million tons of hydrogen consumed annually, primarily in the production of ammonia and methanol, as well as for use in refineries.


CUDDALORE



06—
2021
MILESTONES

There are three key milestones for the Fusion Fuel team in 2021.

1—

**EVORA PLANT
GO-LIVE**

First Green Hydrogen Plant go-live is important to prove industrial scale effectiveness of the solution and for bankability of technology.

2—

**MOUs & HPAs
SIGNED**

Hydrogen plants take time to obtain licenses, permits and to develop. Therefore, multi-year agreements to develop plants are important to deliver on growth plans.

3—

**PRODUCTION
FACILITY**

Commencement of development of new facility during summer 2021 and delivery of first units from that facility by year-end are important to avoid delays to growth plan.

FUSION-FUEL™