

hygrid

LOVE YOUR ENERGY



**HYGRID POWERPLANTS: PLUG & PLAY HYDROGEN
SOFCs & SOECs THAT CONNECT TO EXISTING PLANTS**



SCAN ME

AGENDA

1. **MISSION & VISION**
2. **WHAT IS A HYDROGEN ECONOMY?**
HYGRID INNOVATION IS DOING WHAT?
3. **WHEN: TECHNOLOGY MATURITY**
4. **HOW: HYGRID SOFC & SOEC -**
HYDROGEN PRODUCTS AND USP
5. **WHO ELSE IS DOING IT: COMPETITORS**
6. **WHERE: EARLY ADOPTERS, CUSTOMERS**
AND WHERE WE ARE IN THIS JOURNEY





United Nations
Climate Change

The different

futures that

lie ahead.

+1.5 °C

+2 °C

+3 °C

We, as a society, **perceive** energy suppliers **negatively**.
We all have a **bad conscience** about energy production.
Energy companies have a **bad rep**.



**TO GET
THERE.**



**NOT
THERE.**

OUR MISSION

Hygrid will contribute to the **positive transformation** of the energy industry. In something we can be proud of.

We want clean energy and **lots of it!**

We are determined to revolutionise energy, turning it from something we feel wrong about into **something we love.**

hygrid OUR MISSION
LOVE YOUR ENERGY

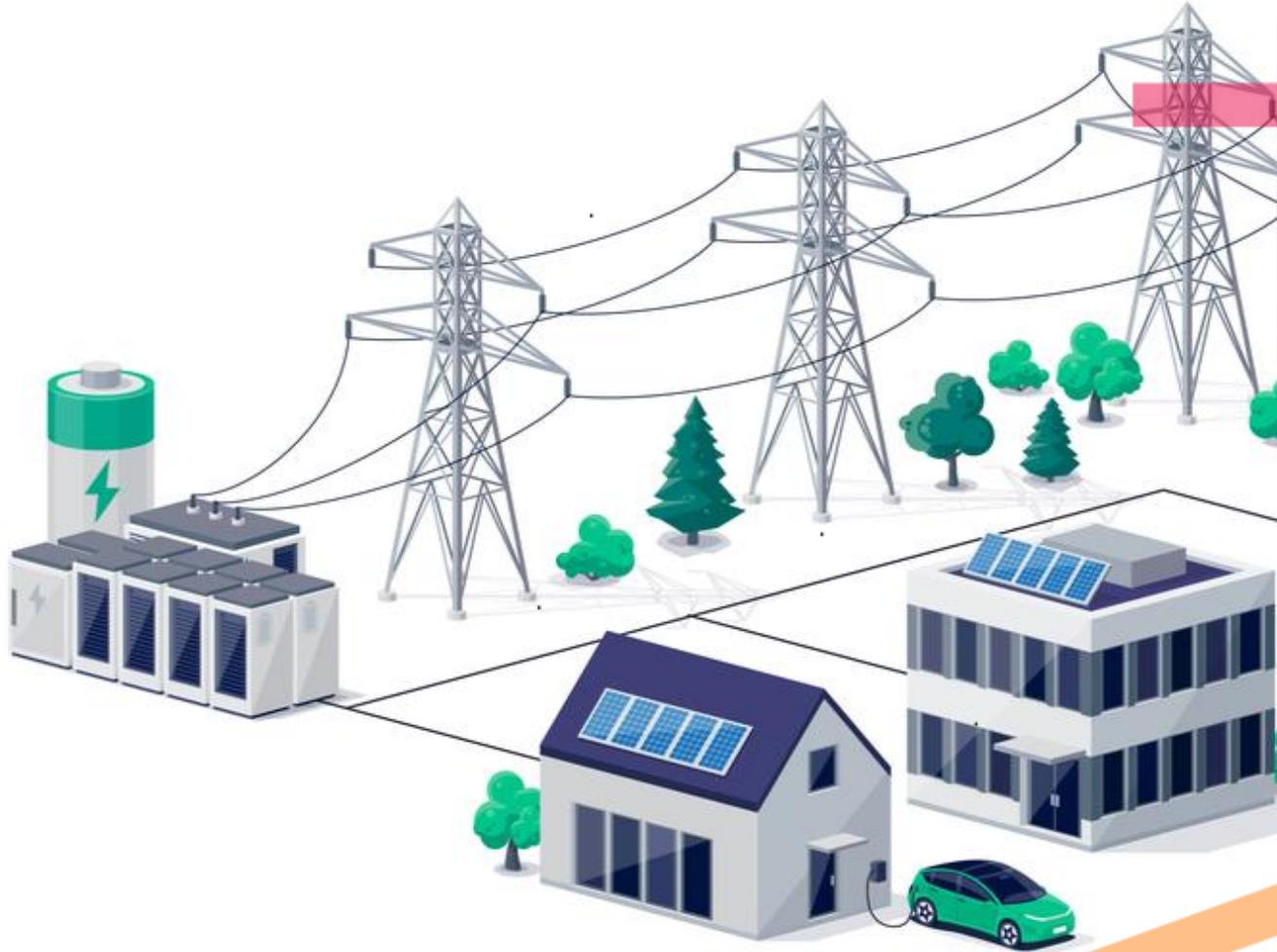
HYGRID IS HERE TO DEMOCRATISE CLEAN ENERGY
MAKE IT AVAILABLE AND VIABLE FOR EVERYONE

OUR VISION

**WE SEE A FUTURE WHERE
HYGRID IS EMPOWERING
CLEAN ENERGY PRODUCTION
ALL OVER THE WORLD.**

VISION: URBAN AREAS

ELECTRICITY OUT



GAS IN

HYDROGEN OR RENEWABLE GAS



VISION: RURAL AREAS

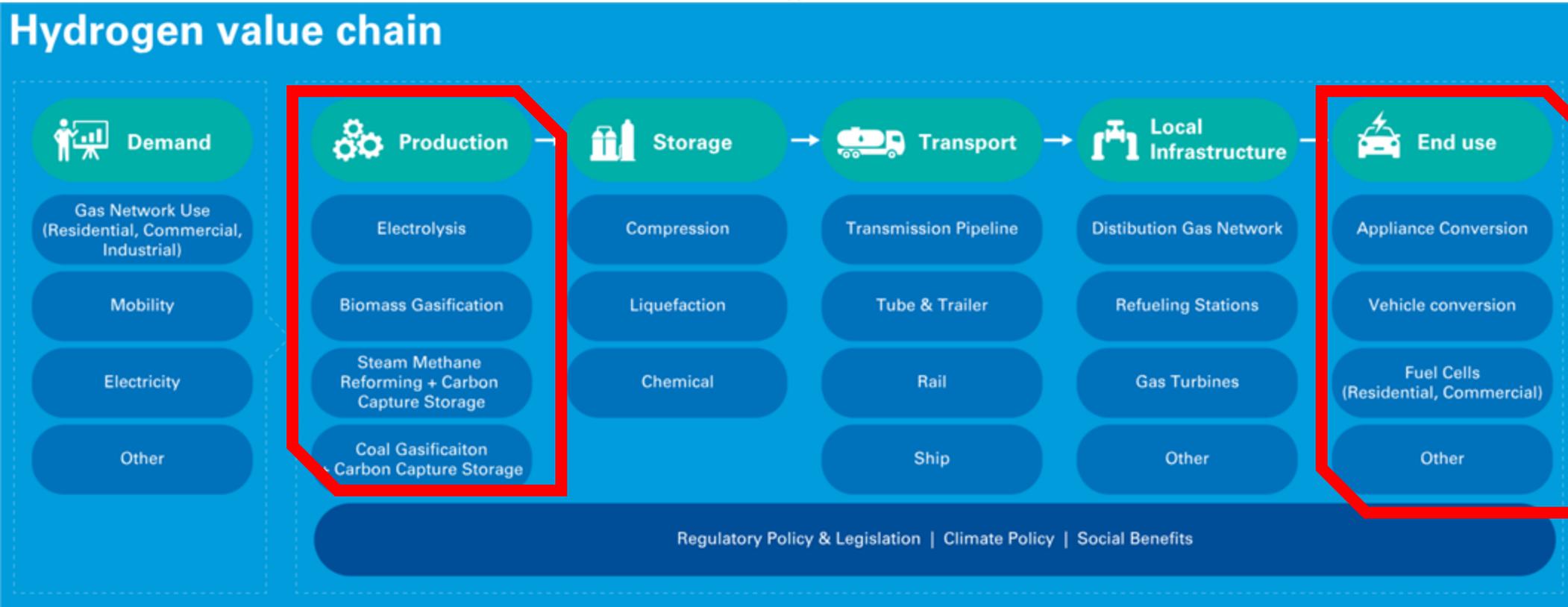
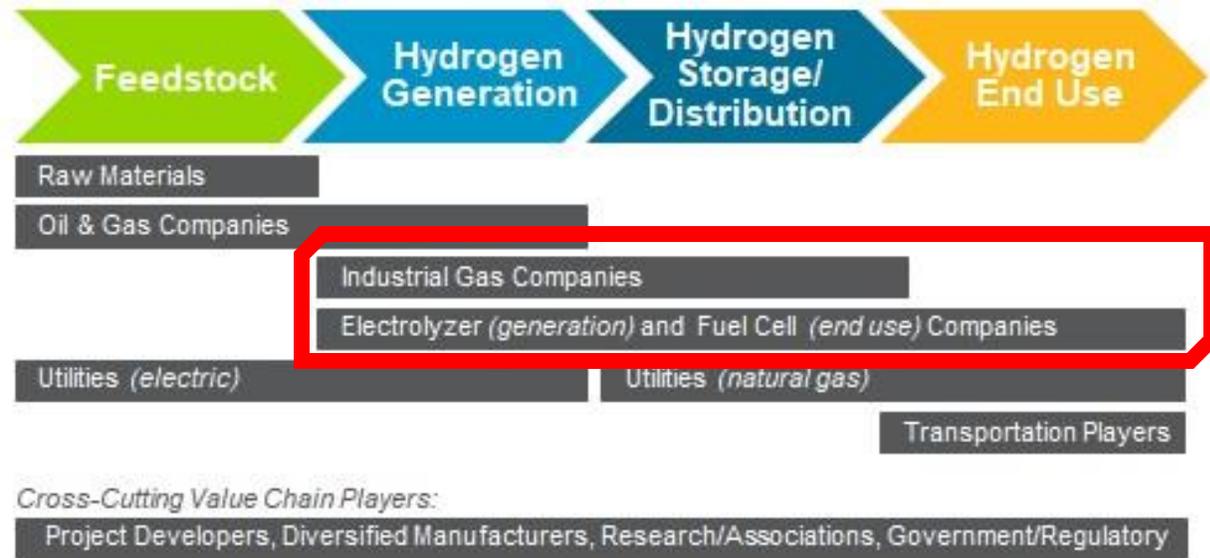
ELECTRICITY OUT



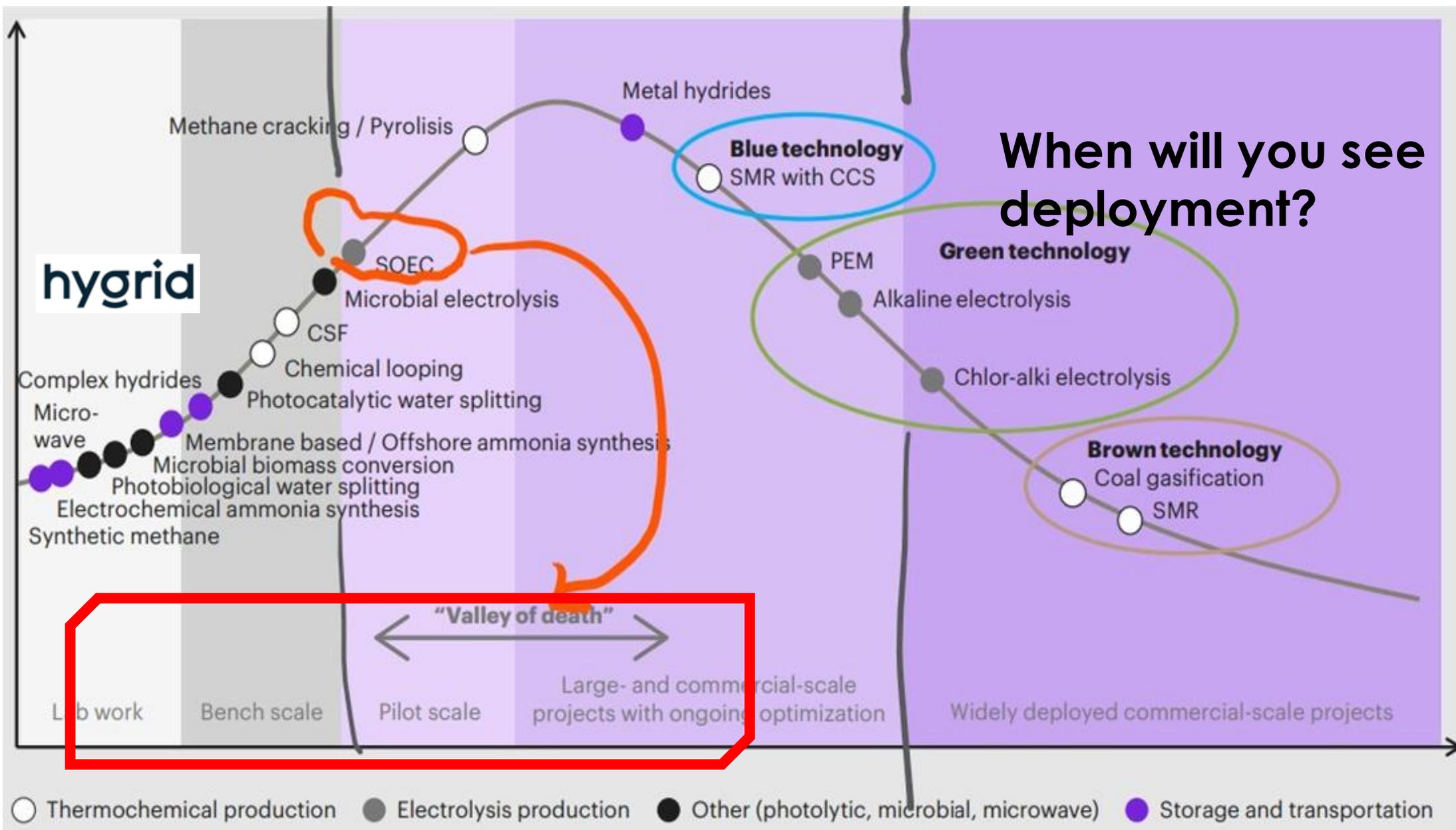
BIOGAS IN

HYDROGEN VALUE CHAIN

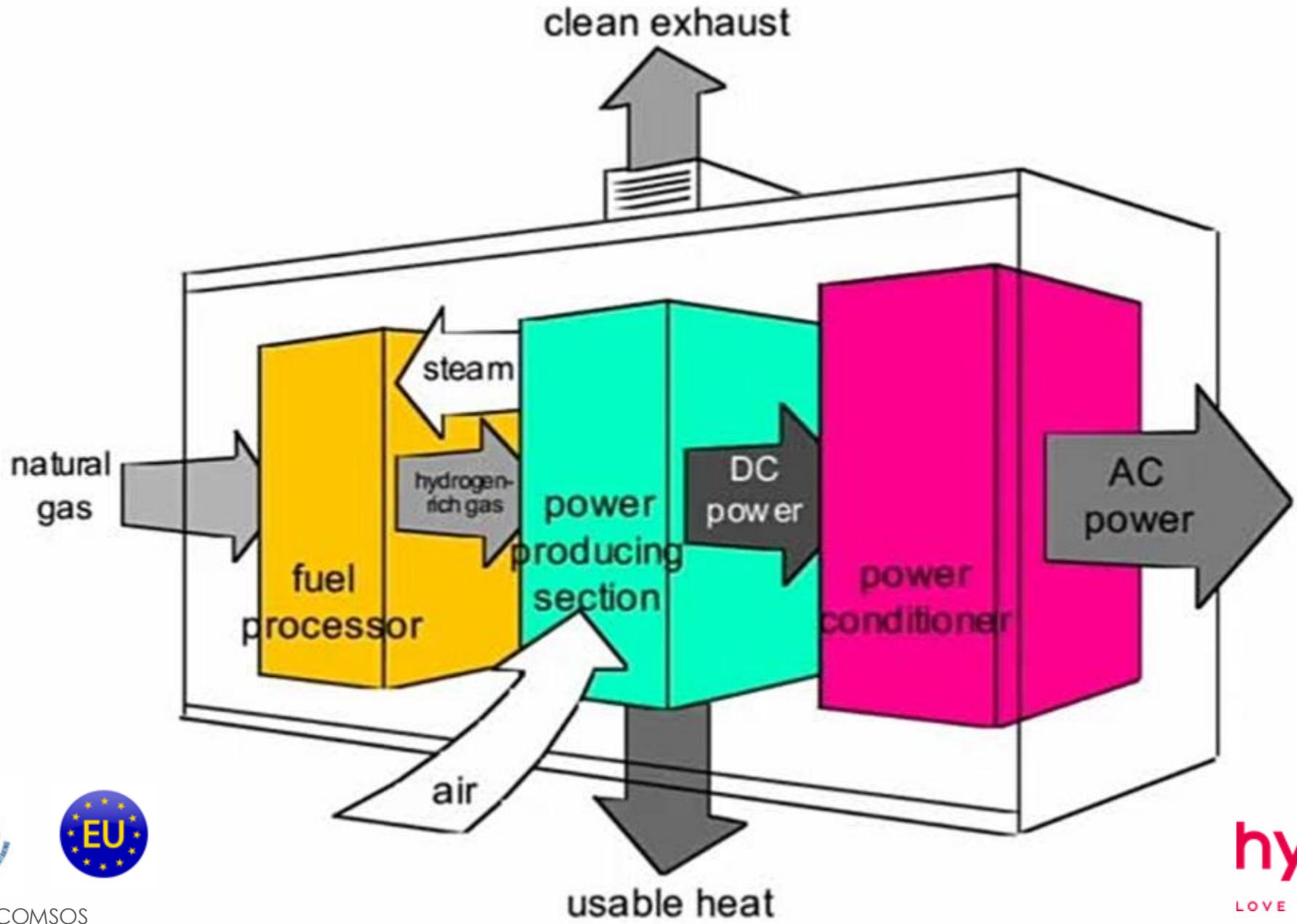
Where does hygrid fit in the hydrogen value chain?



HYDROGEN TECHNOLOGY MATURITY CURVE



HYDROGEN SOFC PROCESS



SOLUTION - PRODUCT – What is it?

Layer 3: Hygrid Virtual Grid Software (User experience)

Layer 2: Sensors and electronics integrated

Layer 1: Hygrid Powerplant with SOFC (IP)

HYGRID SOFC

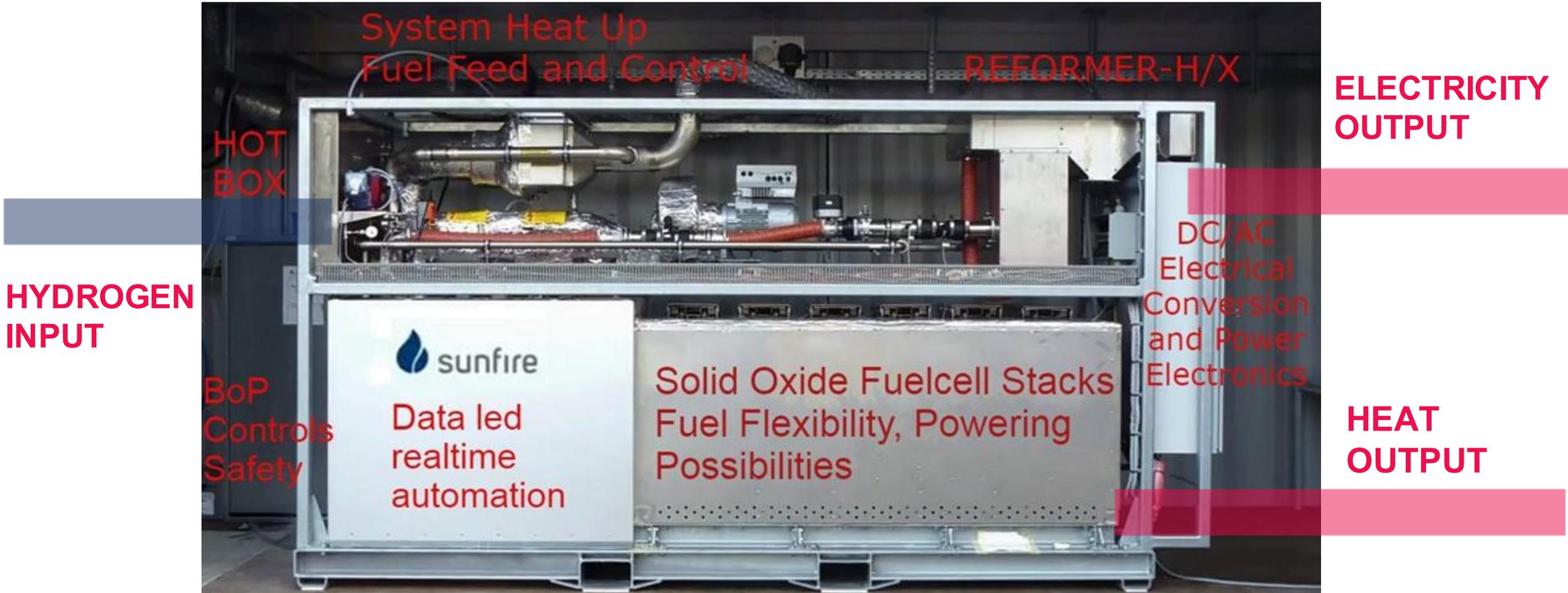


Image Source: EU Research Project SOFCOM - **SUNFIRE SOFC Prototype** – For Illustrative Purposes Only
<https://cordis.europa.eu/docs/results/621/621213/final1-final-report-stage-sofc-27062018.pdf>



INTEGRATION & FLEXIBILITY

Hygrid Virtual Grid Software

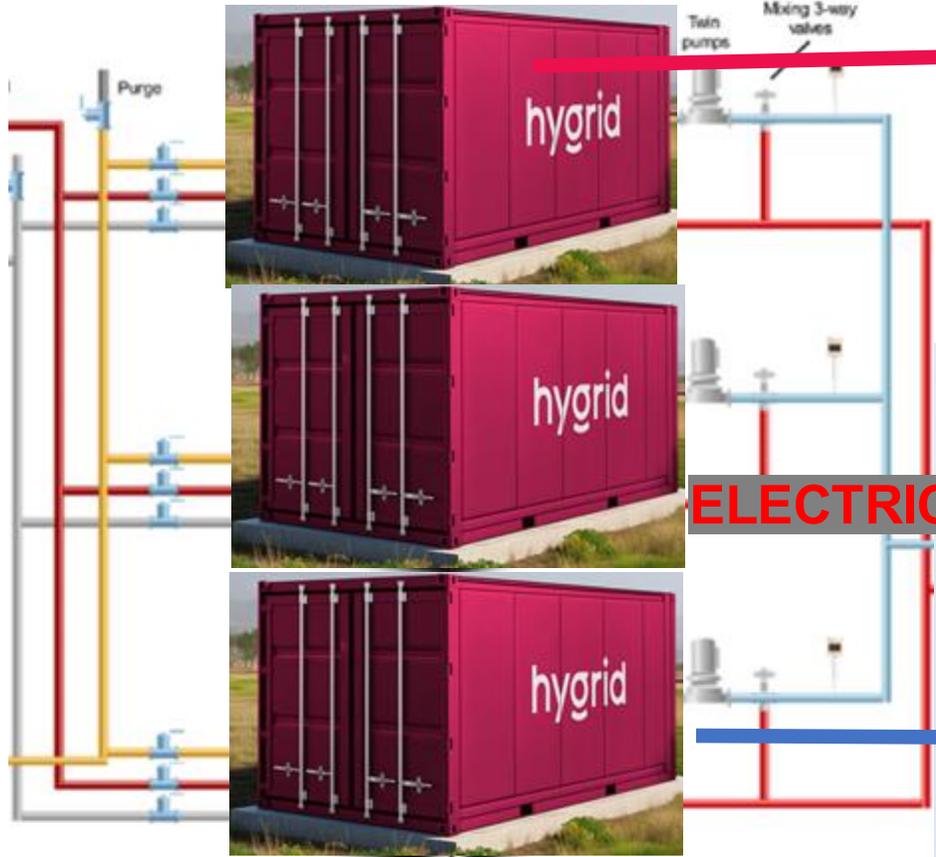
BIOGAS

or

HYDROGEN

or

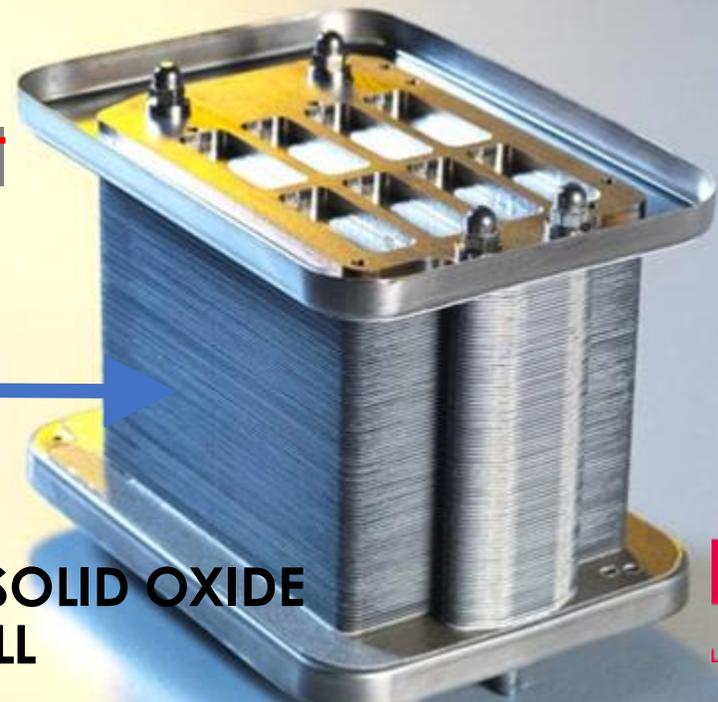
**RENEWABLE
GAS**



ELECTRICITY OUT

Flexible Fuel Input & Modular

**HEART: SOLID OXIDE
FUEL CELL**



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VALUE PROPOSITION – FEATURES & BENEFITS



**LOW
EMISSION
ELECTRICITY**



**SINGLE
TECHNOLOGY
MULTIPLE
APPLICATIONS**



**CUTTING EDGE
AUTOMATION**



**CHEAPER
ELECTRICITY
THAN THE
GRID**



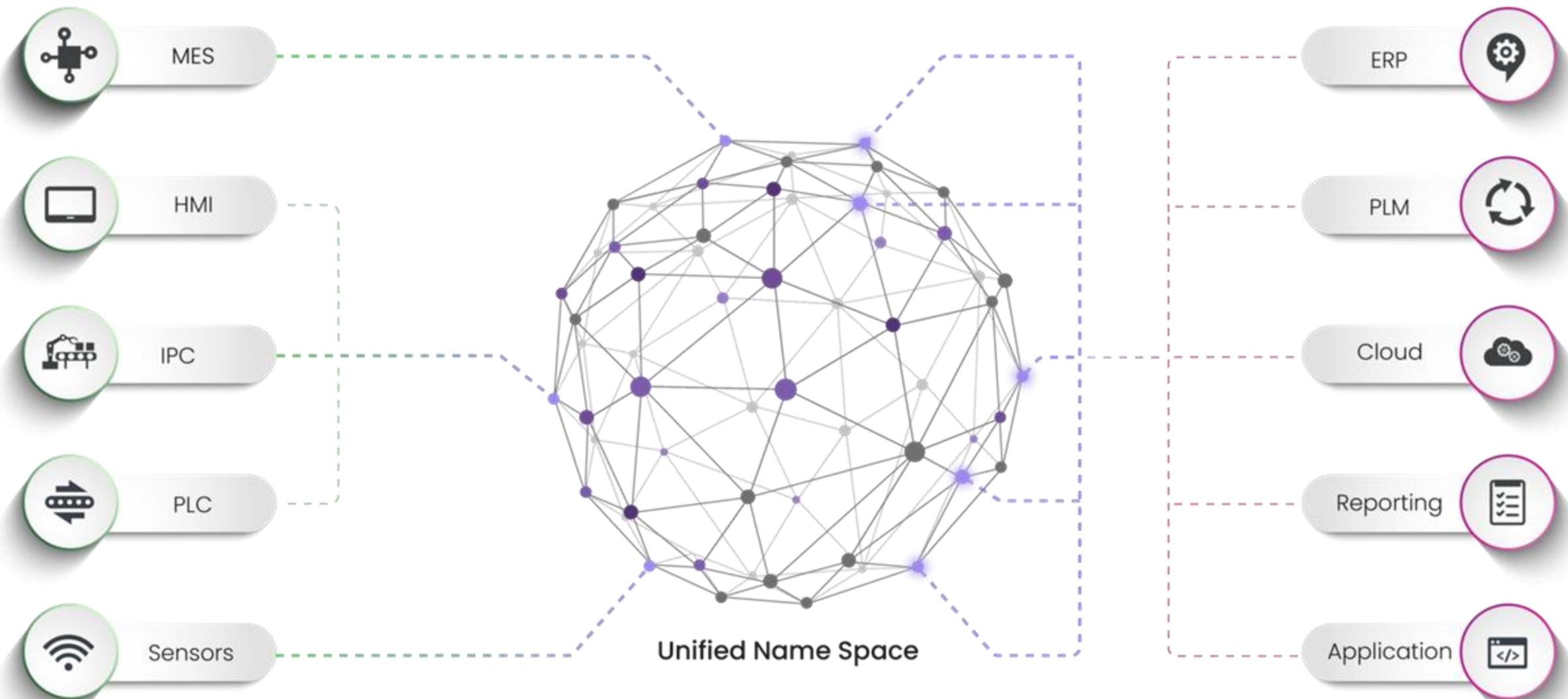
**SUSTAINABLE
ENERGY
TRANSITION**



**MODULAR
COMMERCIAL,
INDUSTRIAL
POWER AND
CHP**

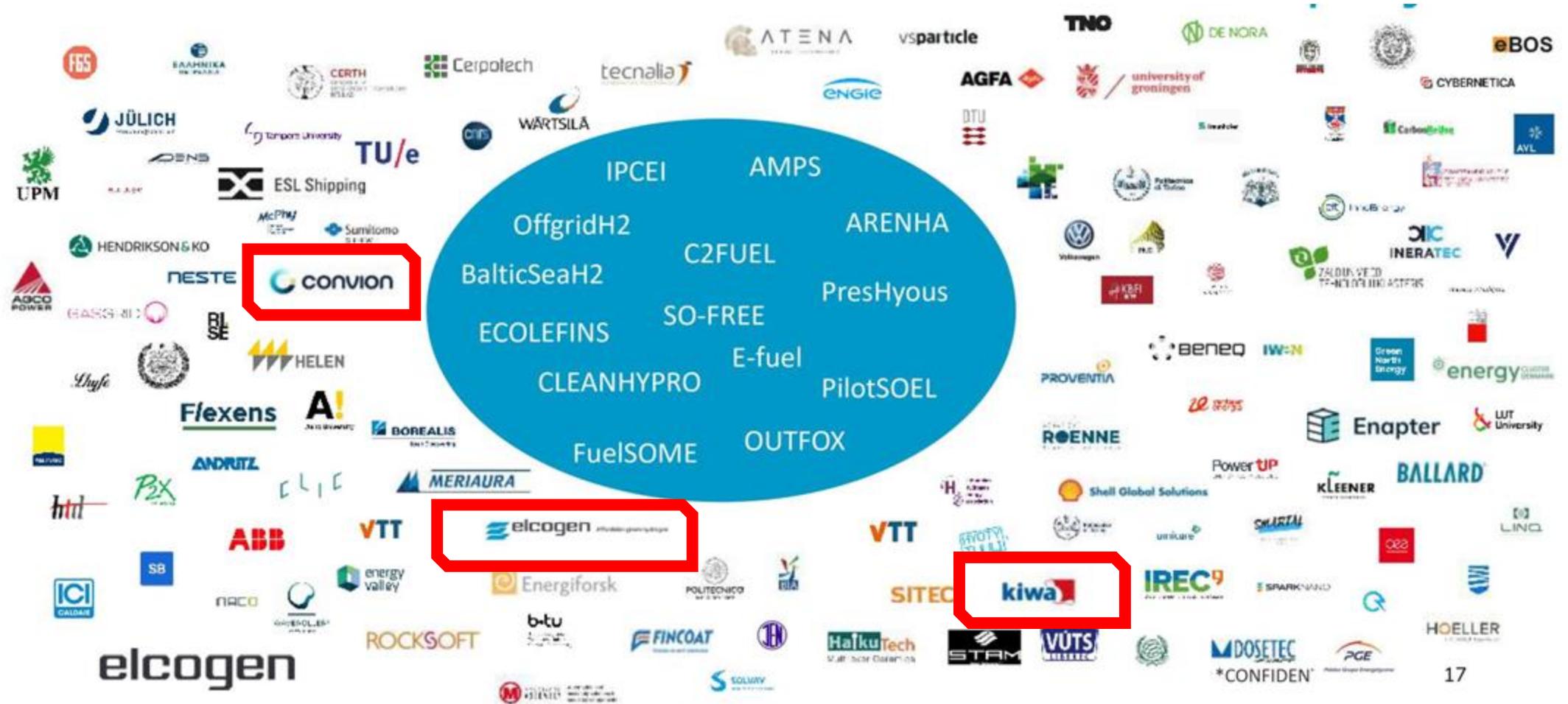


UNIQUE PROPOSITION - DIGITAL BUSINESS



DIGITAL 4.0 DATA LED-DECISION MAKING = REAL-TIME OPTIMISATION

COMPETITORS and MARKET ENTRY – COLLABORATION IN EU & UK



 This project has received funding from the European Union's Horizon 2020 research and innovation programmes.

CUSTOMERS – WE SEEK EARLY ADOPTERS & PARTNERS

First Customers:

- Biogas Producers – Wastewater treatment plants & Anaerobic Digestors – **CHP operation**
- Gas & Electricity Grid – **Balancing**
- Supermarkets and Hotels – **CHP operation**



Competitors

Founded: **2012**

Employees: **26**

Investors: **6**

Revenue: **£15million [2022]**

Valuation: **£20m- July 2024**

Convion Fuel Cell Systems on 26th August 2024 Acquired by a South Korean firm for **€72m**



Competitors

Convion Signs a Financing Agreement with Nefco

Posted on [September 22, 2022](#)



Convion takes an important step ahead by signing a loan [agreement](#) with Nefco, the Nordic Green Bank. Nefco's investment will help to scale up Convion's technology and the manufacture of electrolyzers for the green hydrogen economy. Nefco is a financial institution founded by the Nordic countries and it finances projects in energy efficiency, renewable energy, clean water and sanitation, waste management, and cleaner industrial processes. Convion's solution helping decarbonization of hard-to-abate industrial sectors, is well aligned with the scope of Nefco's portfolio and we are happy to work together in bringing green hydrogen into the mainstream, and helping industries to wean from dependence on fossil fuels and feedstocks. The financing agreement with Nefco provides an important boost for Convion in its technology commercialization efforts.

Q Power and Convion Collaborate to Transform Biogas Plants with High-Efficiency Methanation and Hydrogen Technology, for Doubling the Output of Biogas plants

Posted on [October 12, 2023](#)



Q Power, a pioneer in the development of synthetic methane technologies, and Convion, a leading provider of solid oxide electrolyzer and fuel cell technology, have joined forces to develop an efficient concept for biogas plants to maximize the value of their assets. This collaboration harnesses the power of Q Power's methanation technology and Convion's hydrogen production and fuel cell technology to address the growing need for biogas upgrading. The jointly developed concept will be modular and fully scalable for biogas production facilities starting from below 1MW. [Continue reading](#)

SolydEra and Convion to jointly address growth in fuel-cell and hydrogen market

Posted on [September 25, 2023](#)

Pergine Valsugana (Italy) and Espoo (Finland), September 25th 2023

SolydEra and Convion announced today that they have entered into a global strategic partnership.

The agreement brings together **SolydEra's industry leading solid oxide technology** and Convion's flexible power generation and hydrogen production systems' technology.

The energy sector plays a strategic role in every aspect of business. With a constant electricity demand rising, companies recognize the need to adopt more efficient and greener solutions to ensure competitiveness and proceed rapidly on the critical pathway towards the Net Zero emissions.



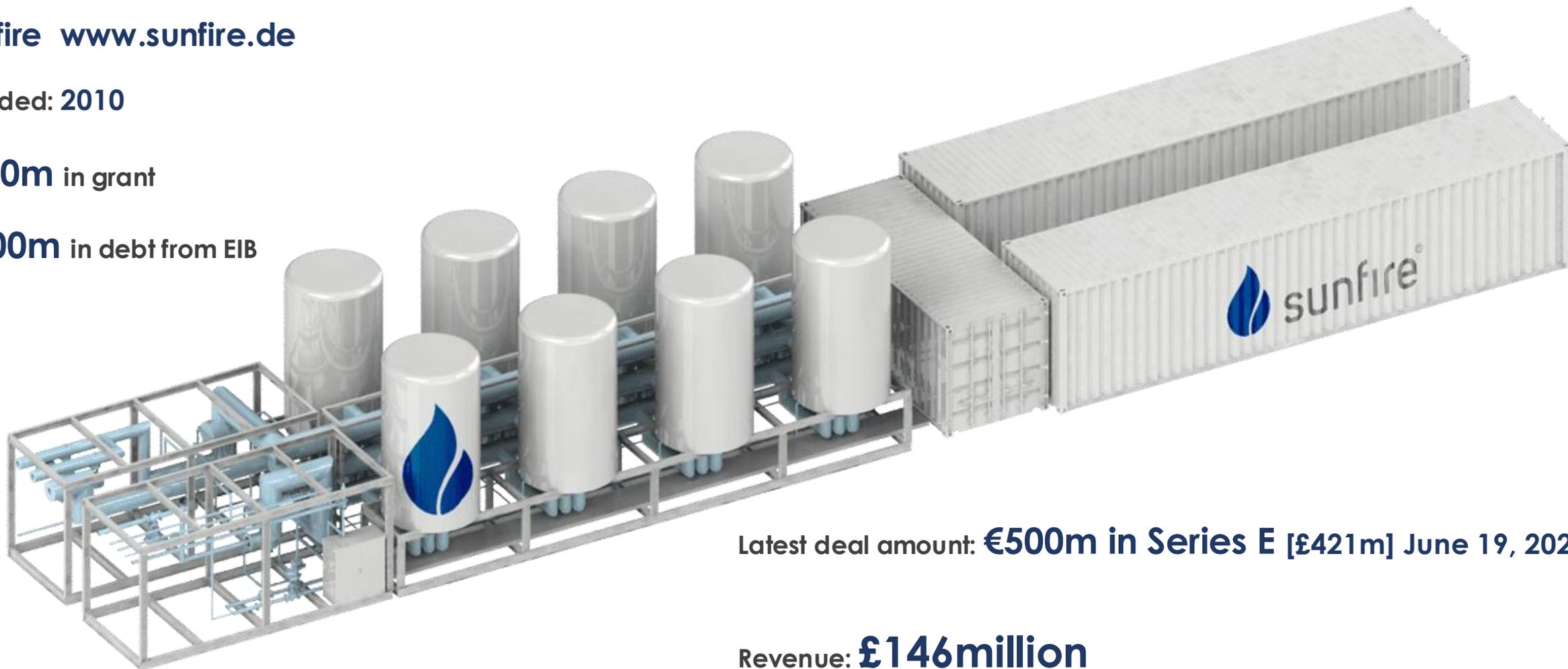
Competitors

Sunfire www.sunfire.de

Founded: 2010

€200m in grant

€100m in debt from EIB



Latest deal amount: **€500m in Series E [£421m] June 19, 2024**

Revenue: **£146million**

March 2024 Valuation: **£1.06 billion**

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QUESTIONS?



+



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Clean
Power

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Current Progress and ask:

- **UK Govt Grant applications in progress, Regulations and CE mark certification.**
- **Talent -Mechanical Thermal Management**
- **Talent – Electronics Embedded system engineer with coding**
- **Talent –Systems Engineering, FEA, CfD and Matlab expertise.**
- **Software Engineers – Architecture, Data Ops, Gaming Devs C++ biased.**
- **Data science engineers**
- **Angel/Seed Investors**



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What is the CO2 Concentration at
+1.5°C?

