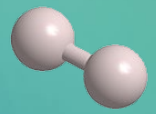
Clean energy innovation

AFC Energy PLC
Annual General Meeting

23rd April 2025

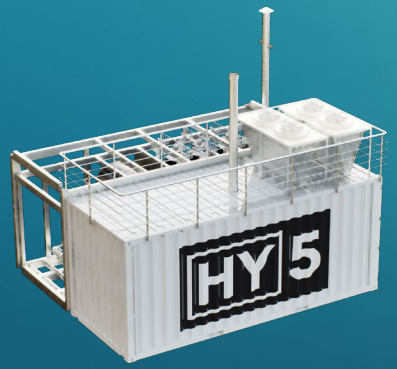
The Whole Solution – End to End

Ammonia



Hydrogen

Power



HYAMTEC

Ammonia
Cracking Systems

AFC Energy

Fuel Cell Generator
Systems

AFC Energy

The Market Opportunity – Hyamtec

UK govt has set a 2030 H2 production target of 3,600 tonnes per day

(Source: UK: hydrogen demand forecast by scenario 2050 | Statista)

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5% Market share* @ £10kg = £1.8m revenue per day / £650m pa

360 Hy-5 units deployed

* Market share relates to UK market only

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The Market Opportunity – Fuel Cell

210,000* 45kVa / 30kW generators sold per annum

(2.1m annual volume with an estimated 10% in AFC sweet spot)

=

=

1% market share = revenue of £200m pa (2,100 units)

* Management estimates based on 2.1m annual generator sales

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The Market Opportunity – Group

Fuel Cell
£200m pa

Hyamtec
£650m pa

=

£850m pa revenue @
40% Gross Margin*

£340m gross profit

* Margin based on management estimate (only includes 2 new product launches)

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Our short term focus

Hyamtec
Product suite development to capitalise on market disruptive price point for hydrogen production

Fuel Cell Gen Sets
Lower cost fuel cell gen sets to enable market penetration

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The Market Opportunity – Upside Potential

Export revenue from HY-5

Portable Appliance

(Fuel Cell)

Off highway

(Cracker Technology)

Electrolyser Displacement

(Cracker Technology)

Product Range Extension (100kW, 200kW, 500kW)

(Fuel Cell)

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Fuel Cell Strategy – Total Cost Of Ownership

	Diesel	Current AFC Offer	Future AFC Offer*
Capital Cost	↓	↑	↑
Servicing / Maintenance Cost	↑	↓	↓
Fuel	↓	↑	↓ (HY-5)
Generator Efficiency	↓	↑	↑
Total Cost of Ownership	=	↑ +450%	=

*Future offer includes lower cost fuel cell and Hydrogen supplied from a HY-5 unit @ £10kg

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Fuel Cell Highlights

Example Case studies – Technical Validation

Acciona

- S30 Air-cooled generator system deployed & operating in Spain (30kW)
- 11 MWh of energy generated so far, on continuous operating duty.
- Very high uptime percentage
- Field trails still ongoing – likely to be extended at the customer's request

Brett Aggregates

- S+200 Liquid Cooled generator system deployed & operating at a UK quarry [200kW]
- 7.1 MWh of energy generated so far, on continuous operating duty.
- Very high uptime percentage

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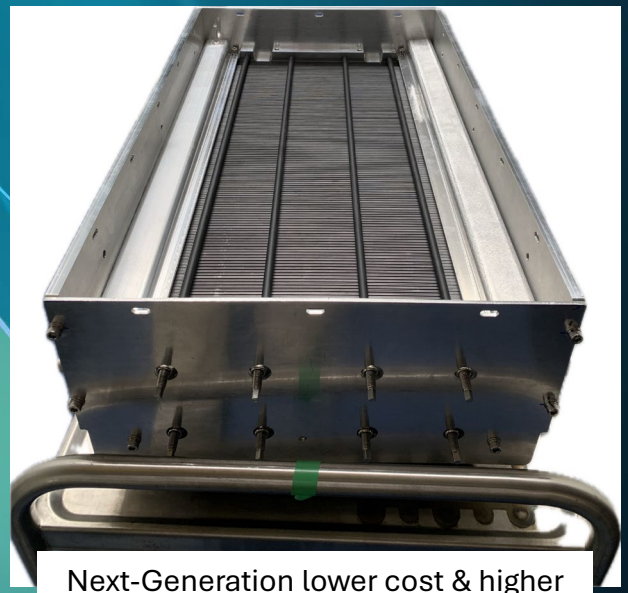
Our Achievements 2024

Refitted 5S Manufacturing spaces

Built on-site training facility



Next-Generation lower cost & higher power air-cooled stack

CE

S30 Systems CE Mark

Generator Assembly & Testing

In-house hydrogen course for construction partners

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Product / Cost Evolution

High Power Platform 100 – 500 kW

	Generation 1	Generation 2
Cost	High	-65%
Weight	High	-28%
Size	Large	-34%

Medium Power Platform 10 – 50 kW

In Development

	Generation 1 [10kW]	Generation 2 [30kW]	Generation 3 [30kW]
Cost	High	-50%	-65% (Target)
Weight	High	+20%	TBC
Size	Tall	Format Change	TBC

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Hyamtec Highlights

Our Achievements - 2024

Building on the back of extensive technical expertise

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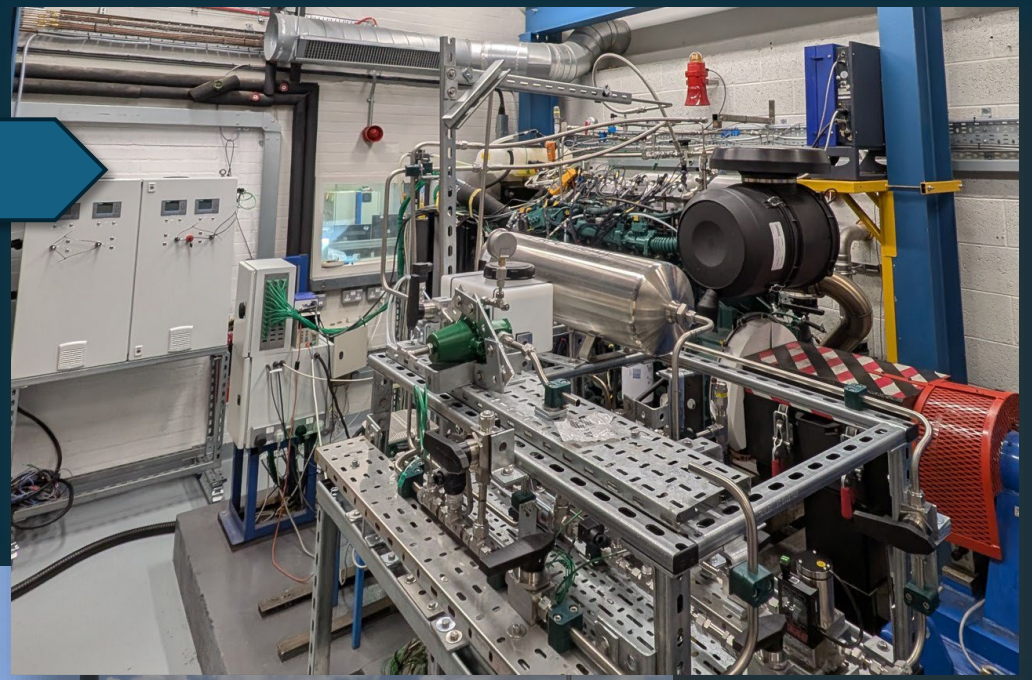
Advanced Module Testing

Engine Integration



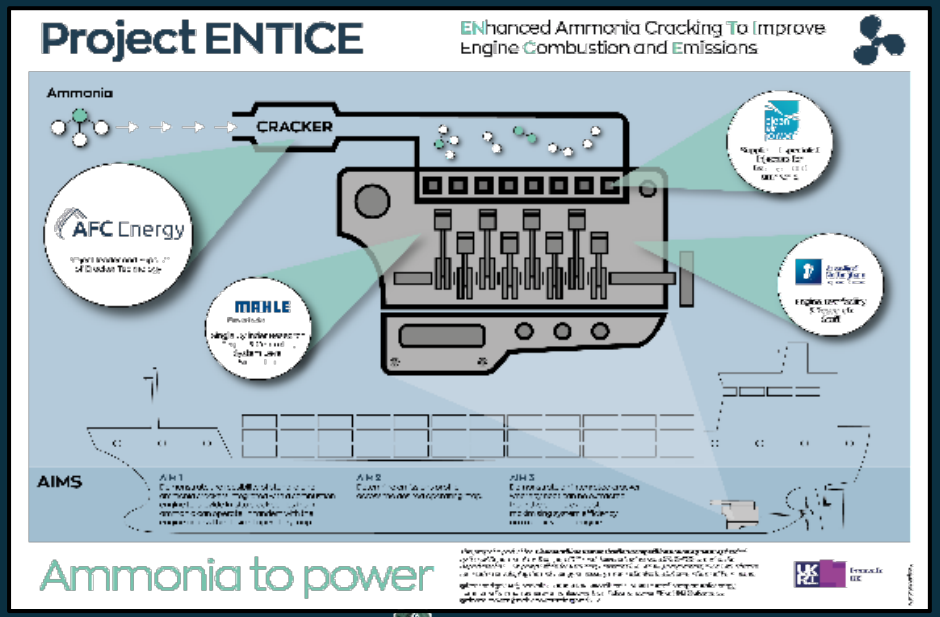
Pilot Site Operations

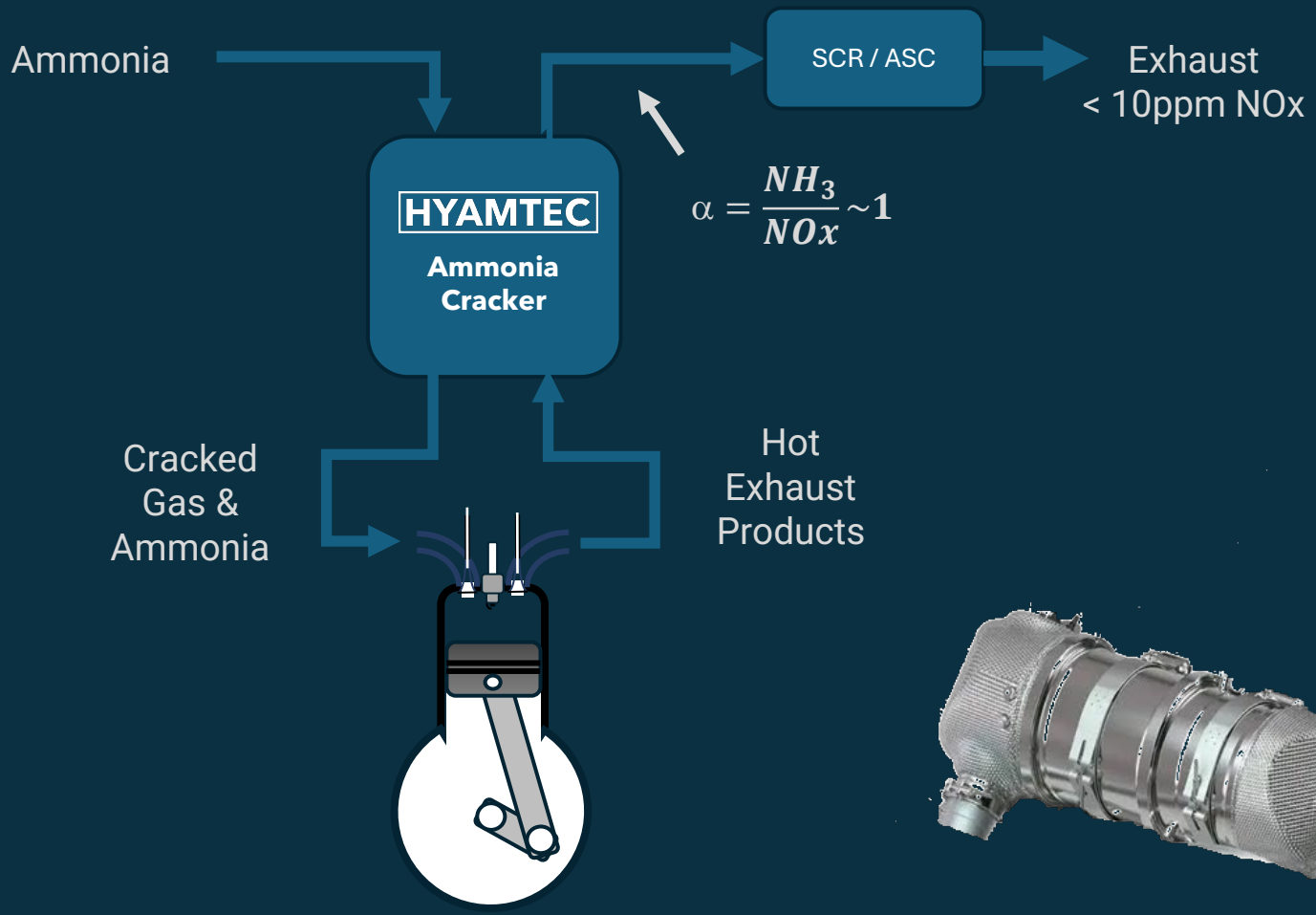
New High-Capacity Test Facility

Deep Dive : Project ENTICE

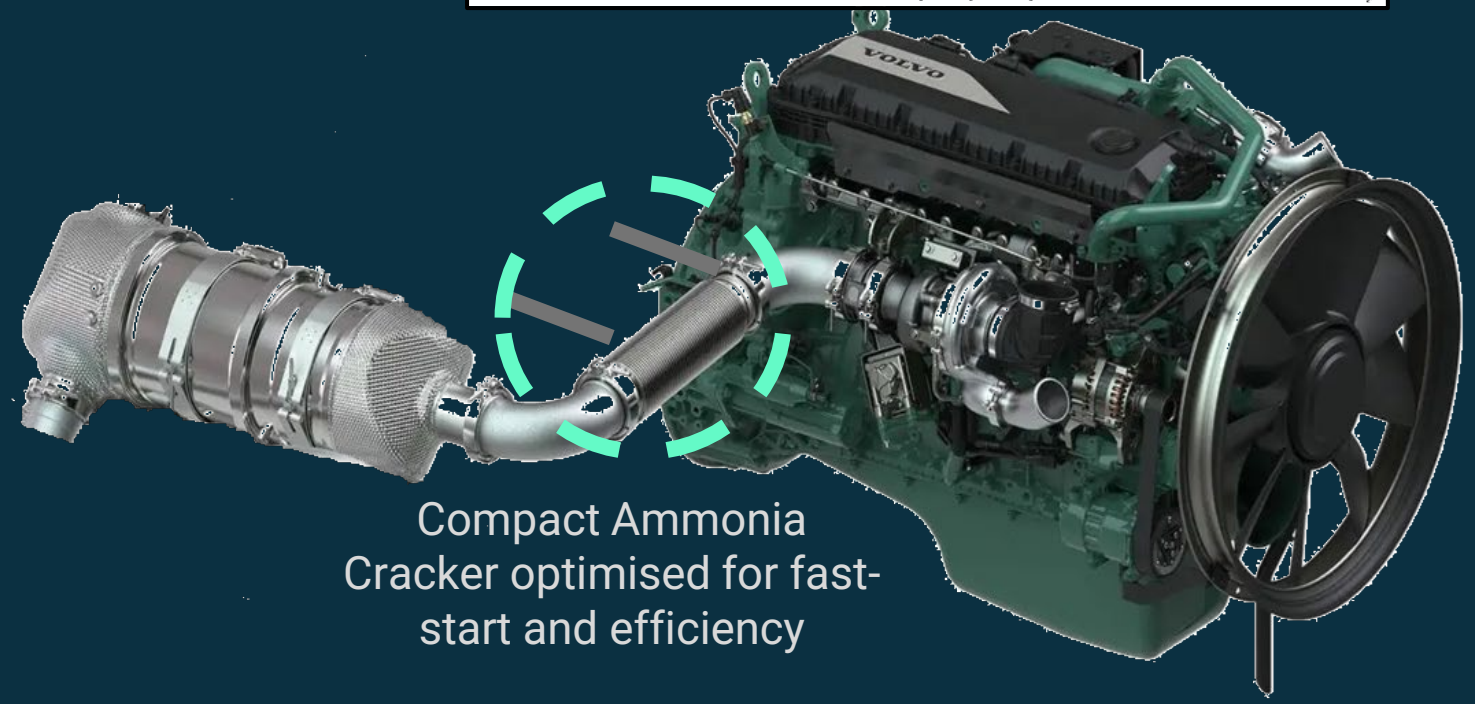
Use case: Large multi-MW 4-Stroke combustion engines

AFC Energy HYAMTEC





Lean Burn Engine operation (Lambda ~1.2)



Compact Ammonia Cracker optimised for fast-start and efficiency

Target Markets

The Hyamtec ammonia cracker technology development

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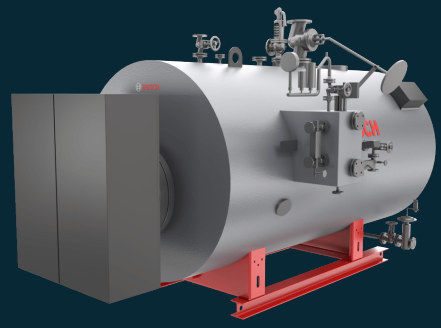
Gen 2

Current Architecture

Refuellers

ICE Conversions



Industrial Plant Conversions

Gen 3

Future Architecture

Port Side Ammonia Crackers

Hydrogen Pipeline Filling

Introducing the HY-5 hydrogen generator

Based on Generation 2 Family architecture

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Introducing the HY5, a modular hydrogen generation solution based on Hyamtec's proprietary ammonia cracking technology

- Up to 500 kg / day hydrogen output
- Low power consumption
- Containerised & readily deployable
- Scalable up to 3 tonnes / day output with additional modules

HY5

Why do we think ammonia is the future?

Superior energy density with no carbon emissions

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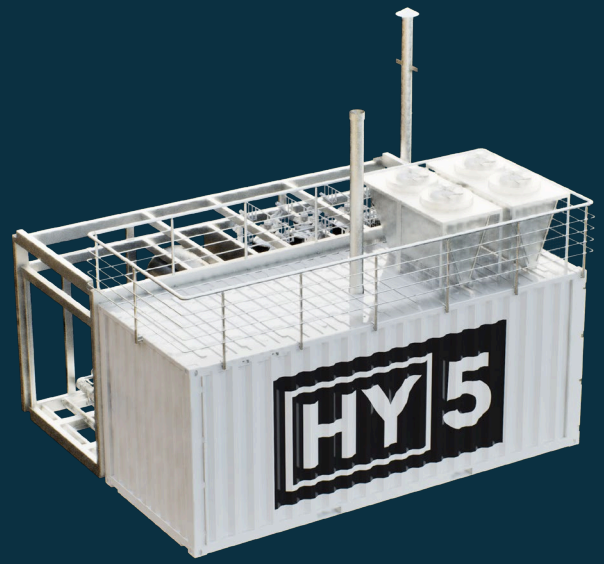
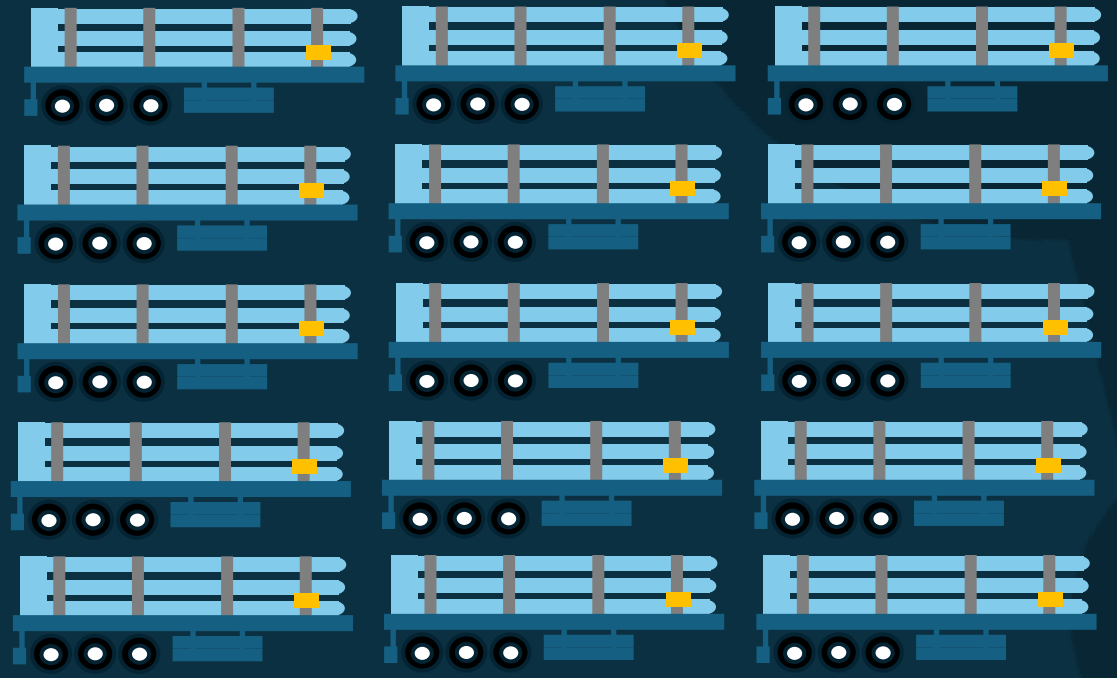
Two ISO Tanks of Ammonia
(26 Tonnes)





Fifteen 300Kg Hydrogen Tube Trailers

The AFC Energy / Hyamtec Ammonia cracker technology unlocks access to low-cost, readily transportable hydrogen

Industry use case example : Asphalt production

Why ammonia makes sense as a future cleaner fuel

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PROPANE

13 hrs runtime

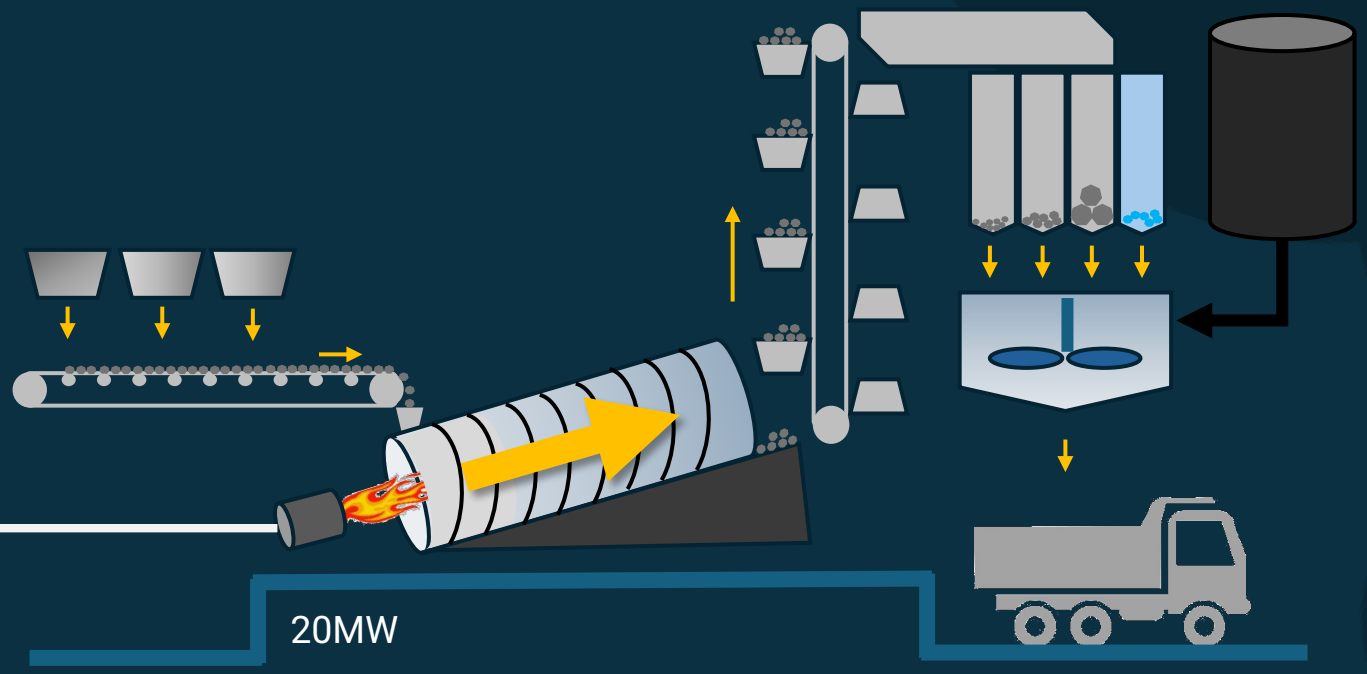
CO_2

HYDROGEN

1hr 20 mins runtime

AMMONIA

~ 6 hrs runtime



Hydrogen is commercially challenging for heavy industrial energy users, ammonia and ammonia crackers enable a clean fuel transition

Making Hydrogen at a 90% cost reduction

Why ammonia makes sense as a future cleaner fuel

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*Historical grey ammonia pricing **

* Source : Bloomberg

Raw Commodity cost of hydrogen

One Tonne of Ammonia

0.176 Tonnes of Hydrogen

$ ~500 per Tonne NH_3

$ 2.84 per kg
~ £ 2.15 per kg

LCOH = Ammonia Pricing + Ammonia Logistics + Cracker costs + Site Services + Profit

What about comparing costs with electrolysers?

Making hydrogen in locations with cheap renewables and shipping as ammonia makes sense

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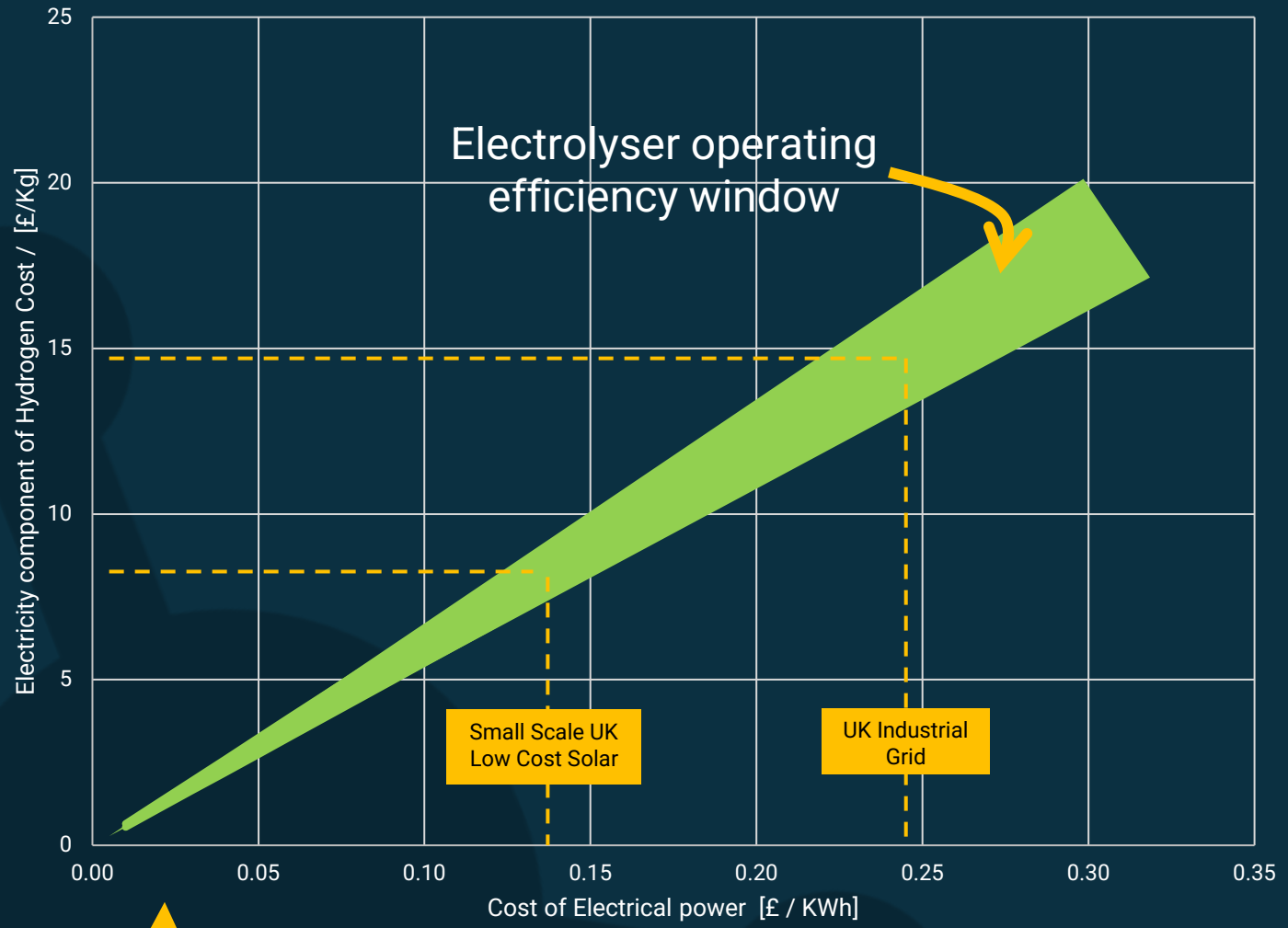

To achieve similar hydrogen costs with electrolytic generation, the cost of electrical power needs to be below £ 0.05 / kWh

- You need very low cost power (i.e. large renewable installations)
- Very low cost land
- Easy permitting

LCOH = Electricity cost + Water Cost + Electrolyser costs + Site Services + Profit

Focus & Summary

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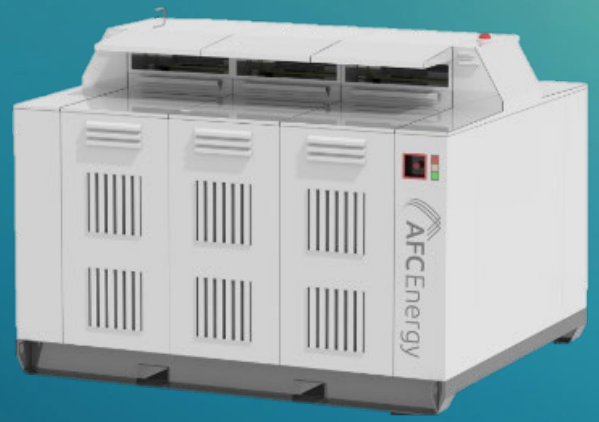
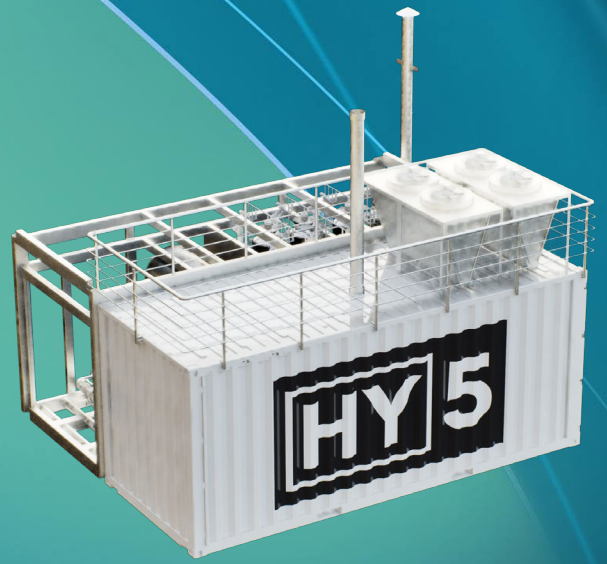
Business Priorities



- Cost reduction
- Support Speedy Hire on deployments to gain market acceptance
- Customer specific product delivery



- HY-5 productisation
- Cracker product roadmap delivery
- Technology validation through strategic partnership

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Summary

- Business repositioned with clear commercial focus
- Emphasis on product / market fit
- Creates substantially greater market opportunity in target markets:
  - Construction and off grid applications
  - Hydrogen production and supply
- Highly skilled workforce motivated to deliver
- Increasing interest in Hydrogen and Hydrogen related projects
  - Uniquely placed to capitalise without the need for government subsidy

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Questions