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Progression of the Hydrogen Industry

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UK Market Segments Served

Gas Peaking

Grid-Scale BESS

H_2 Electrolysis

Microgrids

Data Centres

Green Gases

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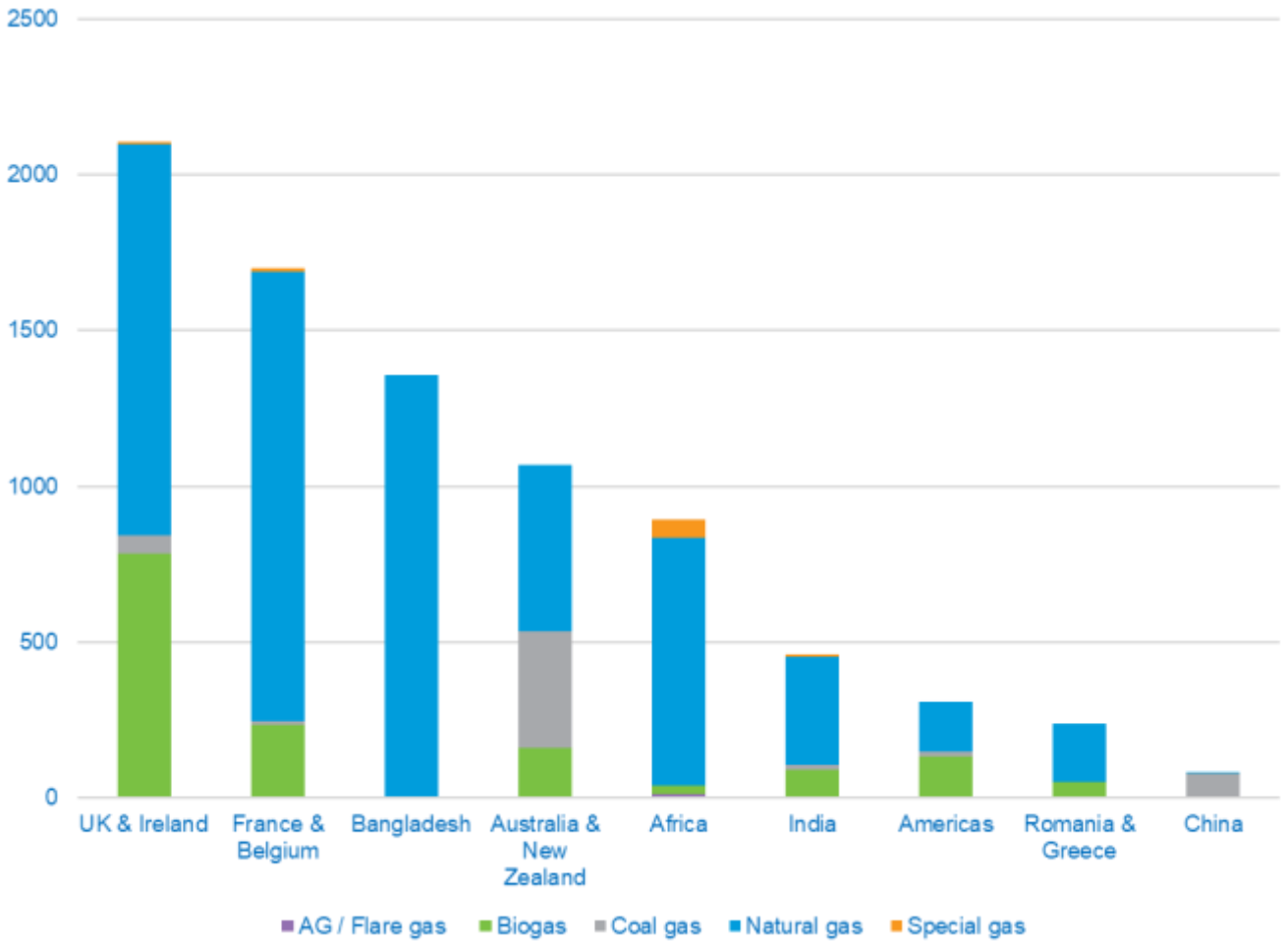
Our Global Installed Fleet



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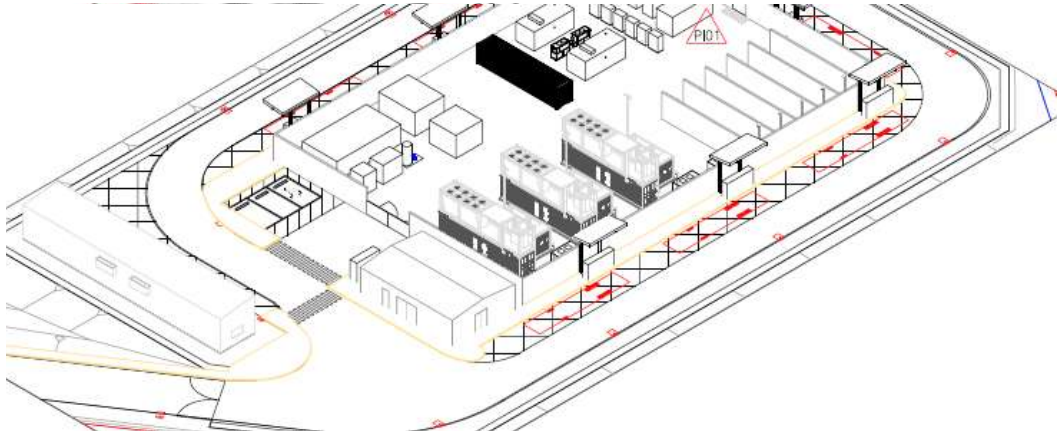
HAR1 Project
Client 1

7.5MW Electrolysis Early-Works Design Package



Scope of the early-works included

- **Equipment Specification**
- **Site Studies (Electrical / Civils / Hazard / etc.)**
- **Construction Plan**
- **Performance Guarantees**
- **Firm Price Proposal**

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Early-Works Design Benefits

- Helps to de-risk project delivery
- Only way to firm-up projects costs
- Our approach considers constructability and maintainability from the outset
- We are an EPC delivery business though… so need projects at the end of the process!

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Challenges to the H_2 Economy and Mitigation

If we are to deliver 10GW of H2 by 2030, we need to get moving

Political

Whilst government are supporting the HAR process, it's taking far too long for successful projects to reach FID

The LCHA needs to be signed quicker to show intent

Performance

In a nascent market, understanding the performance and contractual /commercial landscape is key

Expectations between developers and suppliers need to be aligned

Perception

Planners are unfamiliar with the technology and might be more apprehensive with approvals

Public perception of Hydrogen needs some work

Storage and Transportation

This is essential to the growth of the Hydrogen Industry.

UK is investing £500Million to support Hydrogen Storage and Transportation.

Demand

Transportation – Support is available for HGVs, Buses and SAF

Hydrogen to Power incentives including Capacity Market.

Distributed Heat Networks

Jenbacher H_2 Gas Engine Categorisation

JENBACHER
INNIO
Distributor New Units & Services

A

H_2 in natural gas pipeline

A-1: Low H_2 blending
Optimised for natural gas
<5% H_2 (v/v)

A-2: Medium H_2 blending
Broad product
5-25% H_2 (v/v)

B

H_2 local admixing

B-1: Special gas engine
Operational optimised
up to ~60% H_2 (v/v)

B-2: Natural gas / H_2 engine
Dual gas engine to 100% (v/v)
Natural gas / H_2

C

Pure H_2

C: H_2 engine
Hydrogen engine (H_2)
100% H_2 (v/v)

Conventional natural gas + H_2 fuel mixture boosted system

H_2 fuel injection system

Available for existing versions

Available for existing versions

Available for existing versions

Special release engines available

Special release engines available

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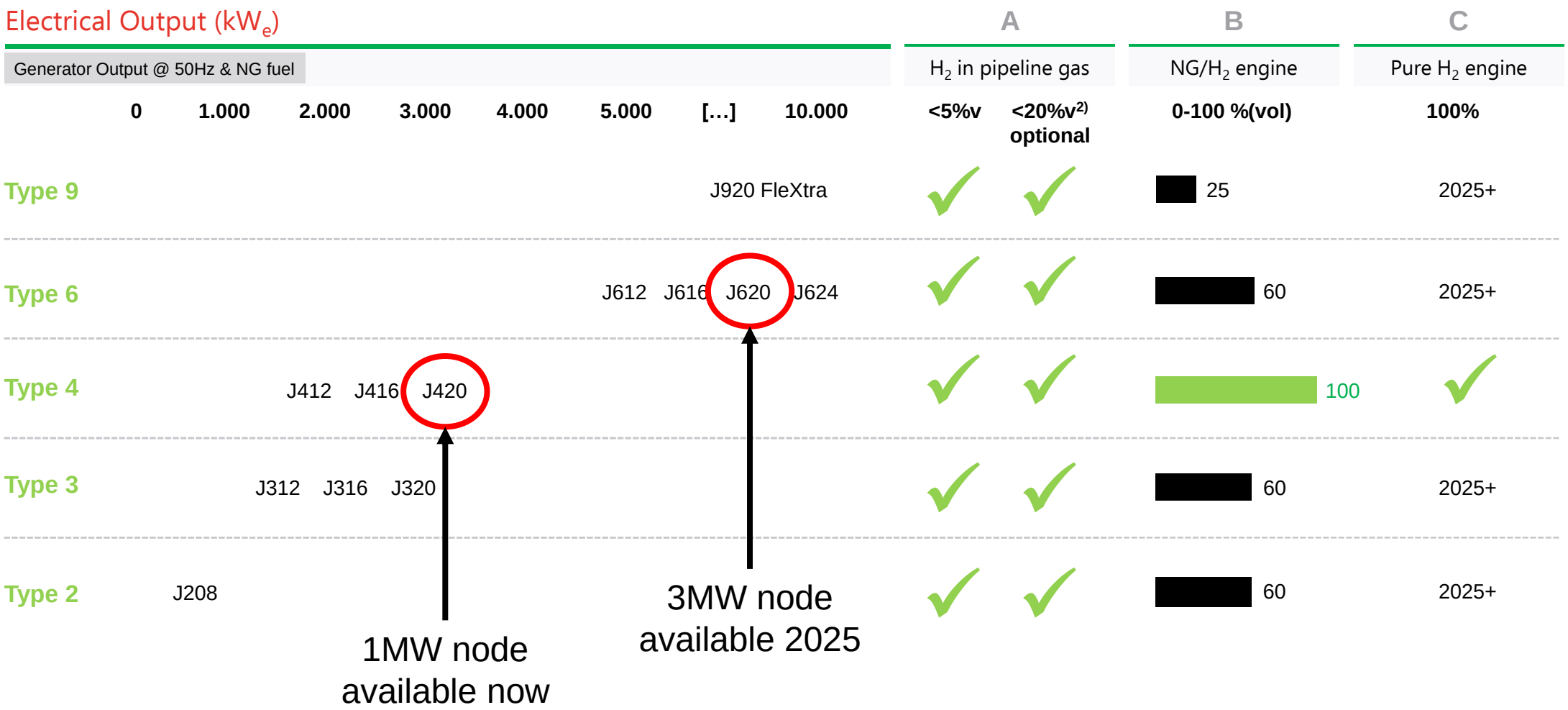
Jenbacher Product Portfolio

JENBACHER
INNIO
Distributor New Units & Services



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NorthC Datacentre, Eindhoven

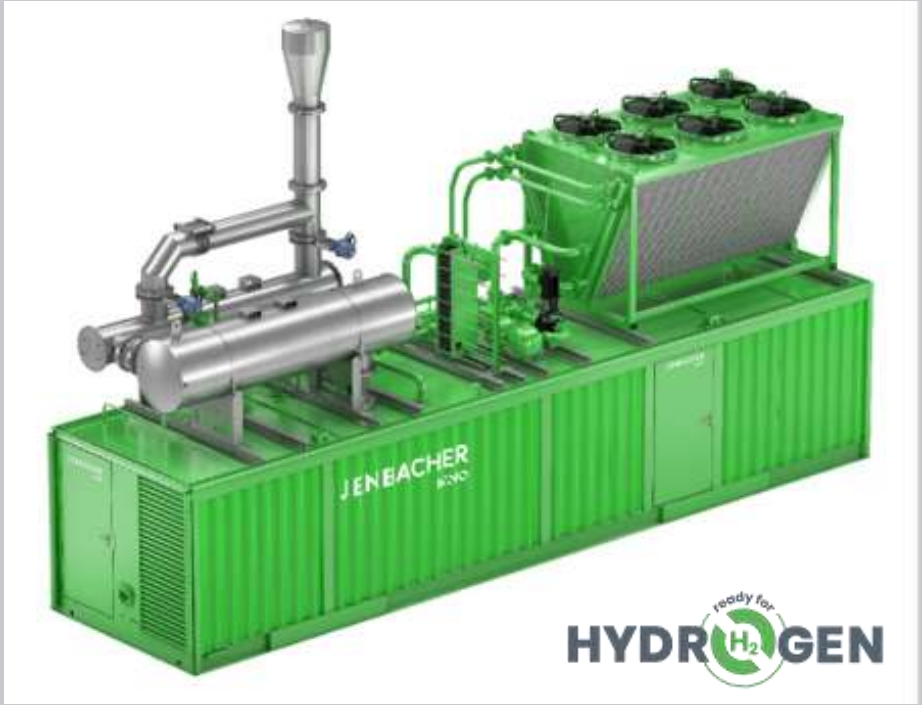
Regional colocation data centre in Netherlands

Green-certified electricity from the grid when available, with back-up H_2 gen sets

6 x 1MW_e Innio Jenbacher Gas Engines

Dual-fuel capability:

- H_2 as primary fuel
- Natural gas as back-up to support longer outages



"We selected INNIO's Jenbacher technology to support our green hydrogen-powered electricity generation because of their long-term experience and proven track record with special gases, like hydrogen. With INNIO's Jenbacher hydrogen emergency backup power solution coupled with the renewable power sources from the electricity grid, we can decarbonize our complete energy supply infrastructure."

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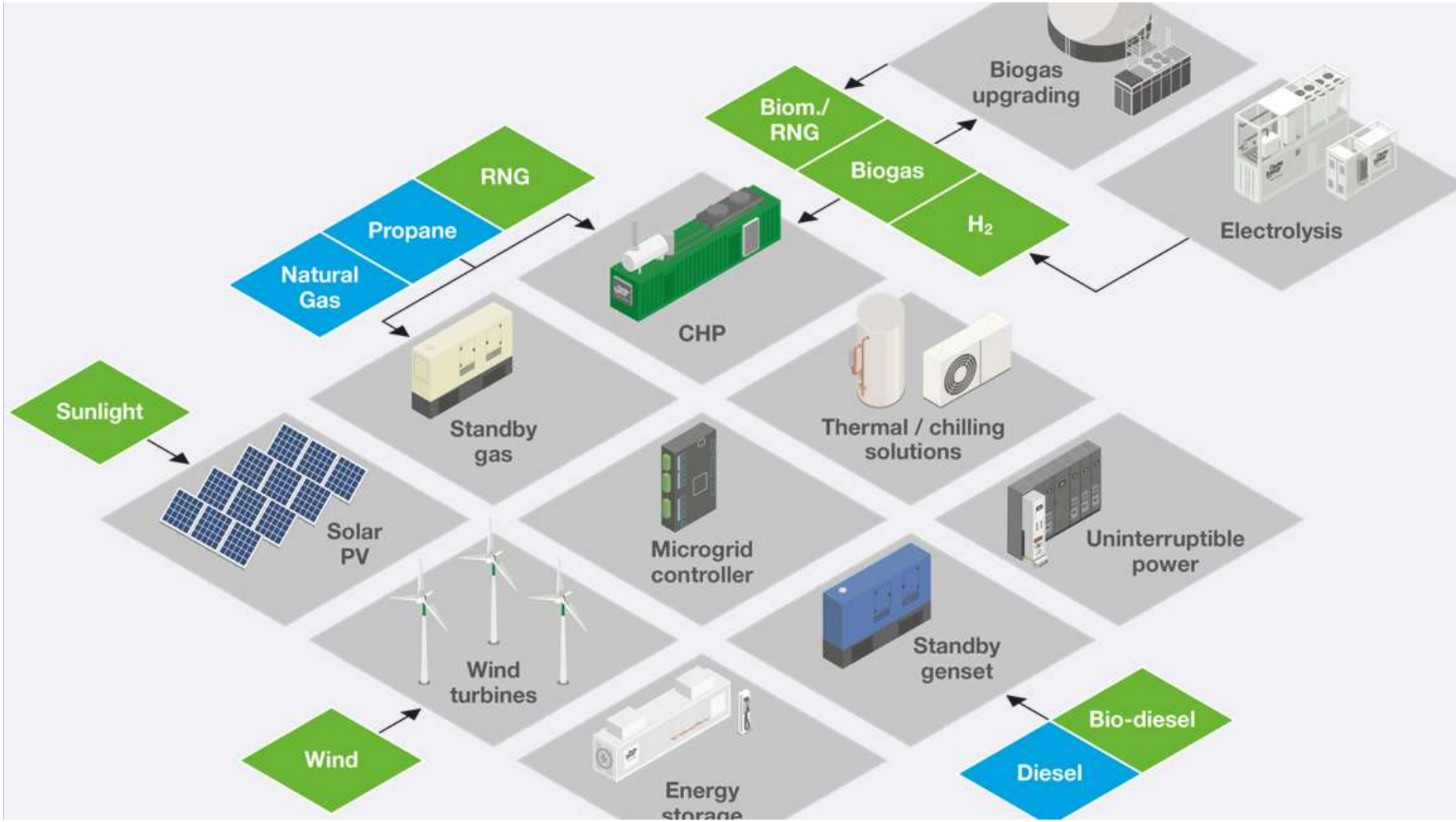
Decarbonising our Supply

Focus on an integrated system that offers maximum flexibility, maximises use of renewables when available and maximises efficiency at point of use



Any Questions?

Thank you for your time and here's looking forward to a successful H_2 future

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