Clean powergen with Gas Turbines for Datacenters

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NovaLT™16 Gas Turbine burning up to 100% hydrogen

MECHANICAL DRIVE
17.2 MW 37,7% efficiency

POWERGEN SIMPLE CYCLE
16.7 MWe 36,6% elect. efficiency

COMBINED CYCLE
22.0 MWe
48% El. Efficiency

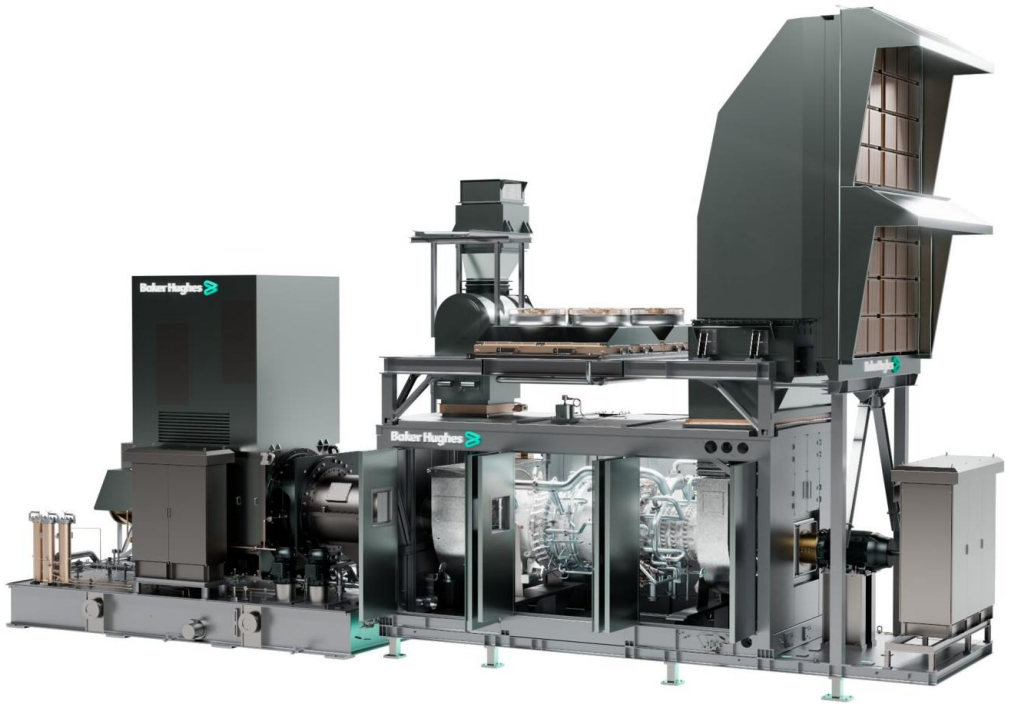
COGENERATION
31tph Steam
80% CHP Efficiency

MAINTENANCE
35 khr – 70 khr
(1250-2500 starts)
Fast Engine swap

EMISSIONS burning 100%H2
NO_x <25 ppm with SCR
15 ppm full DLN (2026)
CO_2 0

EMISSIONS burning Natural gas
NO_x <25 ppm
CO_2 72275 Ton/y

Performances related to baseload @ISO conditions



Gas Turbine Package updated design for 100% H_2

- Blue H2/NH3 production
- Pipelines
- Green power generation
- Industrial Power generation
- Data centers
- Refineries
- Offshore
- Marine propulsion

Start up with blends up to 100% H_2. Switch from NG to gas blends up to 100% H_2 on the fly

Baker Hughes ™

Baker Hughes roadmap for 100% H_2 DLN combustion

NovaLT16 full premix combustor is a novel **low NOx emission** technology, able of handling any blend of natural gas up to **pure H_2**, using neither catalysts, nor diluents or thermodynamic efficiency reduction.

	2020	2021	2022	2023	2024	2025	2026	2027	
☑ **Partial Premix combustor**	fuel flex tech and test		Partial premix tech		Combustor design & test		Full engine test		Units delivered
Full premix H_2 DLN combustor					Full premix tech		Combustor design & test		Full engine test

Clean Hydrogen Partnership

Co-funded by the European Union

Project funded by

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Education, Research and Innovation SERI

Consortium

HyPowerGT

SINTEF · Baker Hughes · LUCART · CERFACS · zhaw School of Engineering · TotalEnergies · snam · ETN Global · equinor

2 European funded projects supports the technology development:

HyPowerGT project — HyPowerGT

InsigH2t project — InsigH2t

NTNU · ARTTIC by PNO Group · Technische Universität Berlin · Baker Hughes · SINTEF · RWTH Aachen University · CERFACS · ETN Global · Università degli Studi Firenze · zhaw · ansaldo energia

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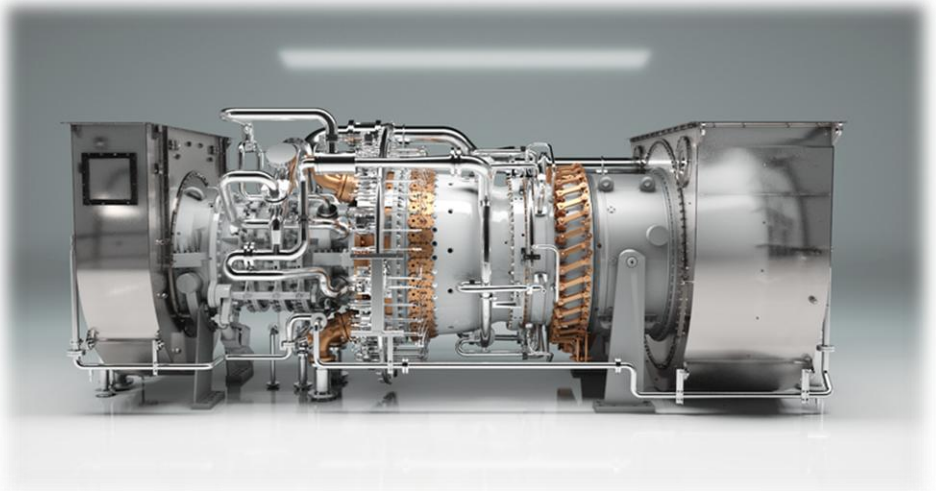
Hydrogen powered data centers: reliable and sustainable energy

The demand for data centers is accelerating rapidly, driven by AI, cloud computing and hyperscale infrastructure.

Customer requests:

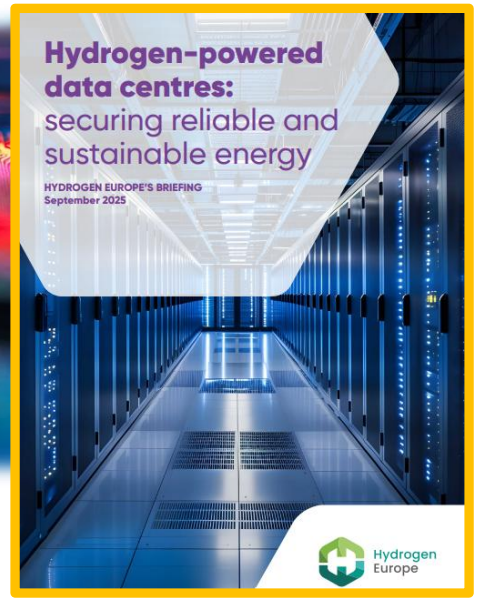
- High power demand
- Extremely variable load profile due to fluctuating computational loads from servers and cooling system
- High availability : five-9s
- Grid stability: scalable and flexible solutions
- Clean energy fuels (H2, H2NG, HVO, ..) and Integration with renewables



Full Baseload Primary Power

Bridging Power

Temporary Power



- ☑ Fast start-up
- ☑ Fuel flexibility including clean fuels
- ☑ Dual fuel capabilities
- ☑ Designed for high availability
- ☑ Low NOx emission

NovaLT™16 involvement in Data Center projects

Frontier Infrastructure's U.S. Data Center Project

Baker Hughes is supplying NovaLT™ gas turbines to power Frontier data center projects with a dedicated energy islands at Frontier's behind-the-meter (BTM) power generation sites

Project Highlights:

- Location: Wyoming, Texas
- Power: 270MW
- Gas Turbines: #16 NovaLT™16
- Packaging: Baker Hughes
- Generators: Brush 4-pole
- Gearbox: Lufkin

Strategic partnership with TURBINE-X Energy

Baker Hughes is supplying NovaLT™ gas turbines for multiple data center projects across North America

NovaLT™16 hydrogen capability is a valuable feature for our customers

NovaLT™ gas turbine is a proven technology for Data Centers, ready to deliver clean power

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