

We are Baker Hughes

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Chairman of the Board - Nuovo Pignone

Florence, Italy

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- \$595M in research investment
- 17 global innovation centers
- 8 additive manufacturing centers
- 3,066 patents awarded in 2020

We are an energy technology company

Taking energy forward is the core of our growth strategy

OUR AMBITIONS

Reach net-zero carbon emissions by 2050

Lead in energy transition and digitalization and be a critical decarbonization partner

Deliver the highest efficiency, productivity outcomes for broader energy and industry

How we innovate

Industrial Innovation

Digital Innovation

New technology and venture

We see three hard truths:

#1

Without major acceleration, the industry will not meet net-zero targets

While technologies in use today can deliver significant emission reductions, they are insufficient on their own to meet the Paris Agreement goals. We need a dual approach to implement efficiency measures today and invest in new energy solutions for the future.

#2

There's no scenario where hydrocarbons disappear, so efficiency matters

For at least the next 30 years, oil and gas will continue to play an important part of meeting global energy demand – even in the most aggressive of energy transition scenarios. Efficiency solutions are critical to reducing emissions, representing 37% of total emissions reductions needed to meet Paris Agreement goals.

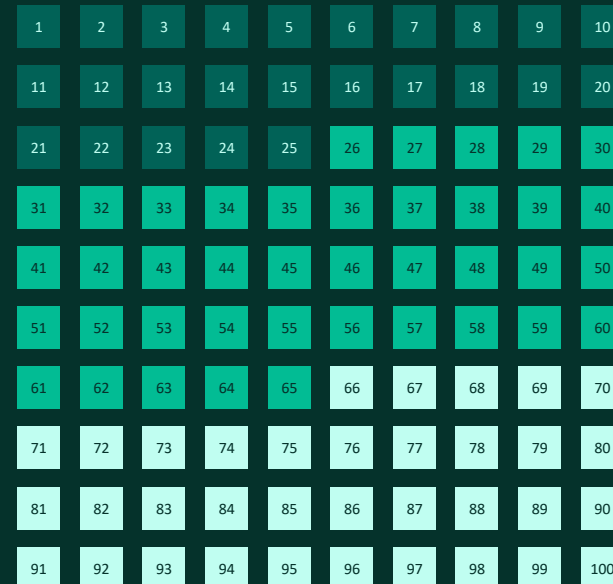
#3

There's no path to net-zero without partnership and collaboration

Our business was built on partnership and service. Today, we know this matters more than ever. We believe it will take energy producers, technology and service providers, energy buyers, policymakers, and the community at large working closely together to achieve our collective ambitions.

Why future technology is critical to meeting net-zero ambitions

% OF CUMULATIVE CO₂ REDUCTIONS BY TECHNOLOGY READINESS TO MEET NET-ZERO BY 2070



mature technologies
 early-stage technologies
 technologies currently in prototype and demonstration

Baker Hughes is experienced in handling hydrogen content

H2 Compression technology

- Long history of **handling H2 rich content** across applications
- **First H2 application in 1962** with a hydrogen compressor
- **2,000+** compressors installed
- **High Pressure Ratio Compressors** provide significant improvements in overall green H2 plant footprint, reliability, availability and weight



H2 Turbine technology

- **70+ projects** worldwide using industrial and aeroderivative gas turbines for variety of fuel mixtures with H2 content
- Complete gas turbine offering has **hydrogen capabilities** today
- Extended capabilities of **NovoLT turbine technology** to start and run on 100% H2
- Commercially available for both new projects or to leverage existing infrastructure



Strategic H2 collaboration with Air Products

Providing Air Products with advanced hydrogen compression and gas turbine technology for global projects including:

Green Hydrogen - NEOM, Saudi Arabia



Blue Hydrogen – Edmonton, Alberta, Canada



- Providing advanced hydrogen compression technology

- Providing 100% hydrogen fueled NovaLT 16 gas turbine technology... **from 100% CH₄ to 100% H₂ with same hardware**

Partnering with a world leader in hydrogen production to develop next generation hydrogen compression to lower the cost of production and accelerate the adoption of hydrogen as a zero-carbon fuel

Advancing Combustion System Development & Validation

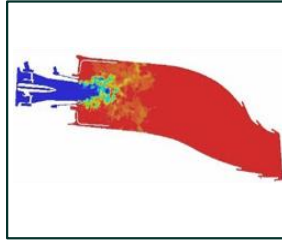
Reserach Lab for Additive Mfg. & Material testing

- Prototyping & Industrialization
- Burner sub-components
- Integral printed burners
- Single digit burners



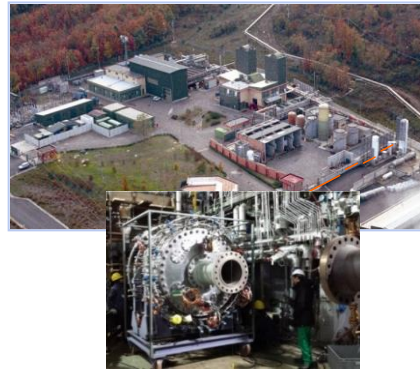
Virtual Lab Test (CFD)

- Thermo-fluid-dynamics assessment (RANS/LES)
- Dynamics by SED CFD & Thermo-acoustic approach
- Durability models



Analysis type:

- Thermal Flow Field, Flame and Shape Position
- Emissions (NOx, CO)
- Lean-Blow Out
- Combustion Dynamics
- Flame Holding Margin
- Metal Temperature
- T3.9 profile



Combustion Test Facilities

- SingleCup atmospheric pressure test
- SingleCup pressurized test
- Full-scale Annular Rig & Multican Rig

Large Network of laboratories and technology collaborations for alternative fuels combustion development



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