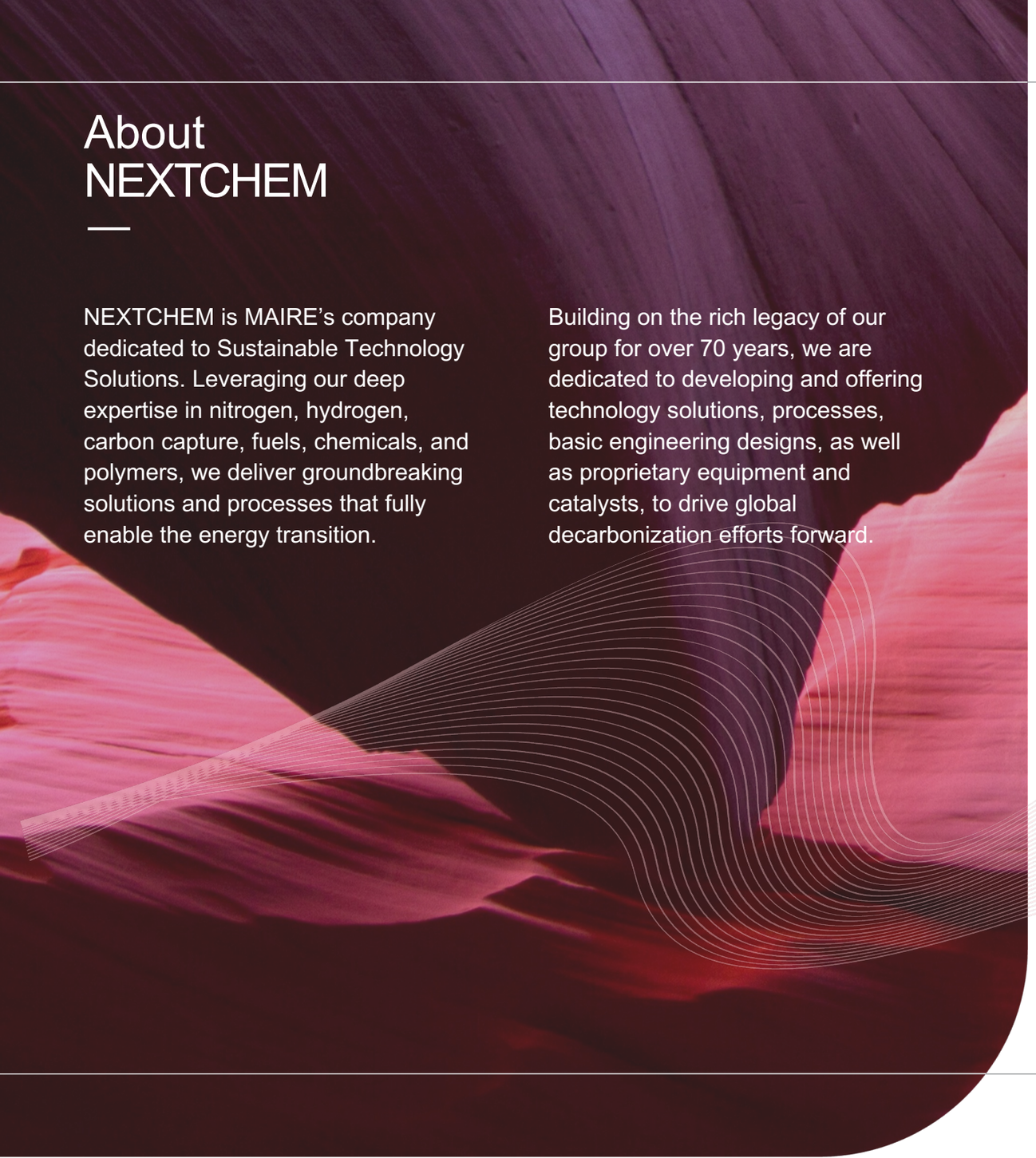
NX eBlue™

Our solution to produce low-carbon hydrogen and syngas

NEXTCHEM
MAIRE Sustainable Technology Solutions



About NEXTCHEM

NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our deep expertise in nitrogen, hydrogen, carbon capture, fuels, chemicals, and polymers, we deliver groundbreaking solutions and processes that fully enable the energy transition.

Building on the rich legacy of our group for over 70 years, we are dedicated to developing and offering technology solutions, processes, basic engineering designs, as well as proprietary equipment and catalysts, to drive global decarbonization efforts forward.

Decarbonizing industry for a greener future

Hard-to-abate sectors started to demand strong competitive decarbonization solutions to make the industry more sustainable. This is why we have developed the NX eBlue™ innovative solution to decarbonize the production of hydrogen.

Our solution to reduce natural gas usage and CO_2 emissions in hydrogen and syngas production

Blue Hydrogen production perfectly fits industrial applications and the utility sector with a high potential to produce low-carbon hydrogen.

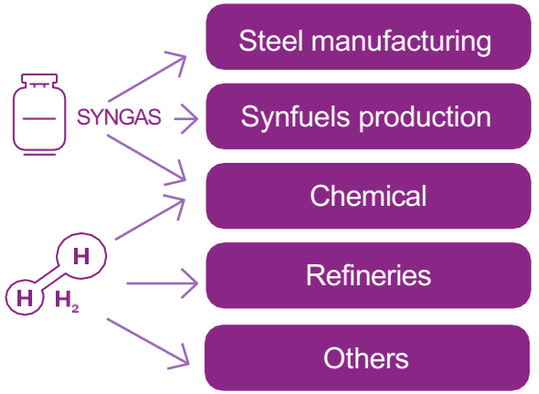
The NX eBlue™ technology leverages electrified steam methane reforming to produce hydrogen or syngas, requiring 33% to 45% less feedstock compared to any conventional production system. Thanks to the specificity of the process, CO_2 emissions are reduced by the same magnitude and are also almost entirely captured (>98%).

NEXTCHEM offers license, process design package (PDP), proprietary equipment (PEQ), digital and post-PDP services.

NX eBlue™

Reducing natural gas usage and CO_2 emissions in hydrogen and syngas production

Applications



Your benefits

1. Production adaptability (feedstock as per conventional SMR).
2. Extensive operational flexibility leveraging on a precise electric control system.
3. Environmental Efficiency: Reduced CO_2 emissions by 33% to 45% compared to ALL grey and blue steam methane reforming methods, achieving over 98% carbon capture efficiency.
4. Energy Efficiency: Use of less than one-third of the renewable energy required for electrolysis, enabling consistent hydrogen production even with limited renewable power.

Technical overview

At the heart of the NX eBlue™ process is an electric reformer design. This electric reformer incorporates commercial electric heating elements positioned around a compact arrangement of tubular reactors.

NEXTCHEM
proprietary technology