EKONA™

Wondering about our technology?
Interested in partnering or investing?
info@ekonapower.com

Today's natural gas infrastructure meets tomorrow's net-zero targets.

LOW-COST, INDUSTRIAL-SCALE CLEAN HYDROGEN WHEREVER THERE'S NATURAL GAS INFRASTRUCTURE

Decarbonizing hard-to-abate sectors is a priority to ensure we meet net-zero targets and rising global demand for clean energy. Many industrial sectors and applications are challenging to electrify. Cost-effective solutions for clean hydrogen are needed to drive rapid decarbonization at the scale industry requires.

AGRICULTURE

MINING

TRANSPORTATION

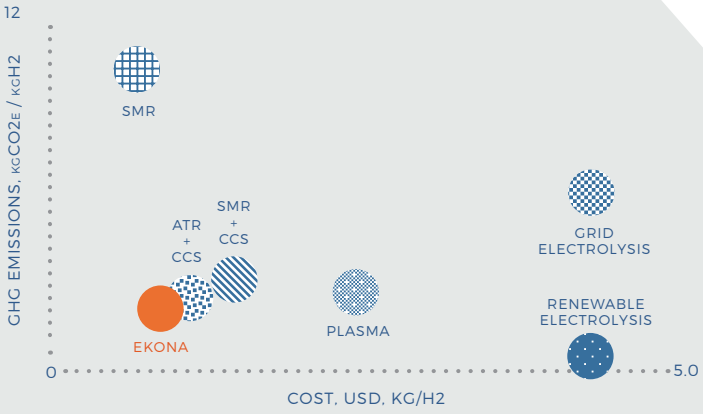
CONSTRUCTION MATERIALS

PETROCHEMICALS

ENERGY

WHY EKONA?

Ekona has developed a clean hydrogen solution that is not reliant on carbon capture and storage infrastructure, clean electricity, or water feedstock. It has the potential to achieve hydrogen production costs on par with conventional steam methane reformers, while reducing process greenhouse gases by up to 90 percent.



METHANE PYROLYSIS: A VIABLE NEAR-TERM CLEAN HYDROGEN PATHWAY

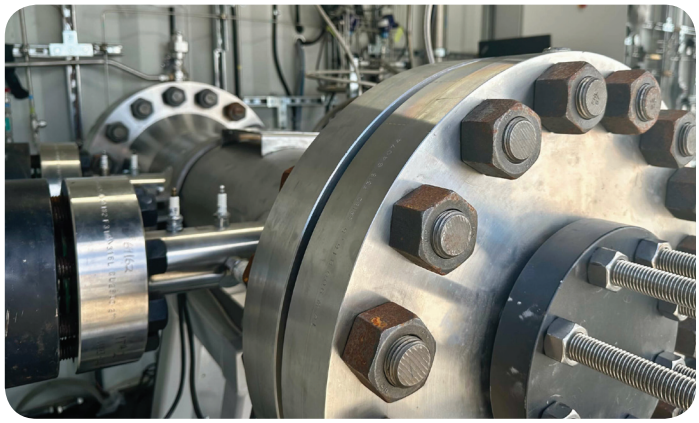
Existing production pathways for clean hydrogen are expensive and challenging to deploy. Methane pyrolysis is an emerging, environmentally friendly approach to clean hydrogen production.

Ekona is developing a low-cost, scalable methane pyrolysis solution that can be deployed wherever there is natural gas infrastructure. Ekona's solution converts natural gas into hydrogen and solid carbon, literally bringing carbon and greenhouse gas management back down to earth.

In January 2024, Ekona announced its first industrial deployment for customer validation: a 1 TPD plant at ARC Resources' Gold Creek Natural Gas Plant in Grande Prairie, Alberta.

THE XCALIBER™ REACTOR

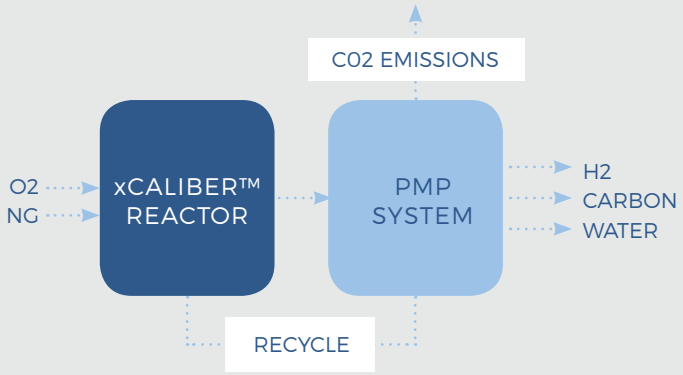
The heart of Ekona's solution is the xCaliber™ reactor, a novel methane pyrolysis platform that uses pulsed combustion and high-speed gas dynamics to convert natural gas into hydrogen and solid carbon. The xCaliber reactor is non-catalytic, low-cost, and mitigates carbon fouling issues that plague other methane pyrolysis platforms.



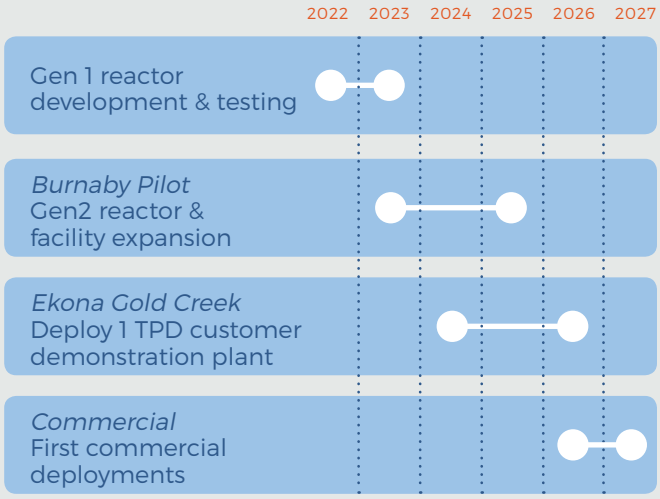
PULSED METHANE PYROLYSIS (PMP)

Preheated feedstock natural gas feeds into the reactor chamber where combustion products are also injected to create energy for the pyrolysis reaction. Products from the reactor discharges to downstream purification equipment and the process repeats.

The PMP process uses industry standard balance of plant equipment for carbon handling, hydrogen purification, compression, and thermal energy recovery, simplifying process integration and mitigating development risk.



OUR TECHNOLOGY ROADMAP



ABOUT EKONA™

Ekona's team has a proven track record taking clean technologies from early-stage development to commercialization, and a deep desire to solve hard-tech, high-impact challenges. Using an established process – methane pyrolysis – in a ground-breaking new way, Ekona has created a low-cost clean hydrogen production pathway to meet growing global demand for hydrogen, decarbonized natural gas, and greenhouse gas reductions at the scale and timing necessary to combat climate change. Learn more at ekonapower.com