

# Utilizing today's natural gas infrastructure to meet tomorrow's net-zero targets.

## LOW-COST, INDUSTRIAL-SCALE CLEAN HYDROGEN, WHENEVER AND WHEREVER YOU NEED IT.

With demand for clean hydrogen forecast to exceed more than 500 million metric tons per year by 2050, the world has a big demand/supply problem. Ekona™ Power is supporting the energy and industrial sectors to reposition themselves in today's clean-energy economy, as leaders in clean hydrogen production. How? By helping them utilize abundant, low-cost hydrocarbon resources in better ways.

### DEPLOY EKONA WHEREVER THERE'S NATURAL GAS INFRASTRUCTURE.

Ekona is literally bringing carbon and greenhouse gas management back down to earth. Using an established process - methane pyrolysis - in a ground-breaking new way, Ekona's xCaliber™ reactor utilizes pulsed combustion and high-speed gas dynamics to split natural gas into clean hydrogen and solid carbon. Generating solid carbon rather than carbon dioxide is key to mitigating greenhouse gases.

We are currently testing Ekona's xCaliber™ reactor to verify performance and integration with balance of plant components and we will be deploying our first field units starting in 2024.



CLEAN HYDROGEN

Produces 90% fewer GHG emissions than incumbent steam methane reformers.



**LOW-COST** 

Lower cost than blue hydrogen solutions.



**SCALABLE** 

Is suitable for large-scale, industrial applications.



**FLEXIBLE** 

Is deployable where natural gas infrastructure exists.



EASY TO INTEGRATE

Uses standard balance of plant equipment.

#### WHAT IS METHANE PYROLYSIS?

Methane pyrolysis is a well-established technology. In a pyrolysis reactor, methane is heated to very high temperatures in the absence of oxygen until its chemical composition changes and it splits into hydrogen and solid carbon. Sources of methane feedstock include conventional natural gas and renewable natural gas from biomass sources.



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



#### TAKE THE DIRTY OUT OF NATURAL GAS.

Natural gas is an excellent carrier of hydrogen with an established global infrastructure. Working with Ekona, energy-sector and industrial partners can meet growing global demand for hydrogen, decarbonized natural gas, and greenhouse-gas reductions at the scale and timing necessary to combat climate change.

Solid carbon also represents a significant commercial opportunity in existing and emerging global markets where solid carbon as a co-product adds economic and environmental value, not cost, to the bottom line.

#### **CLEAN HYDROGEN MARKETS**



**MANUFACTURING** 



POWER GENERATION
AND HEAT



**CHEMICALS** 



NATURAL GAS BLENDING



**MOBILITY** 



REFINING AND UPGRADING

#### **SOLID CARBON MARKETS**



**CARBON BLACK** 

CONSTRUCTION MATERIALS

OTHER OPPORTUNITIES



### ABOUT EKONA™

Ekona is developing a breakthrough decarbonization technology for economic, industrial-scale clean hydrogen production, deployable wherever there's natural gas infrastructure. Our team has a proven track record taking clean-tech companies from early-stage development to commercialization, and a burning desire to solve hard-tech, high-impact challenges. We're using an established process – methane pyrolysis – in a ground-breaking new way to create a clean-hydrogen production pathway that is pragmatic, economic, and a near-term solution to meet growing global demand for hydrogen, decarbonized natural gas, and greenhouse gas reductions at the scale and timing necessary to combat climate change.

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