

ACCELERATE

YOUR CO₂ COUNTDOWN

Blue hydrogen is a market driven path
to decarbonization



Honeywell
UOP

THE HYDROGEN ECONOMY IS HERE. ARE YOU IN?

Ready today, Honeywell H2 Solutions is a suite of proven carbon capture technologies to help you meet stringent emissions goals and gain fast, profitable entry into the growing hydrogen economy.

THE KEY TO DECARBONIZATION IS HYDROGEN

The stakes—and opportunities—have never been higher. Aggressive climate targets could increase the demand for blue hydrogen as a low-carbon energy vector sevenfold in the next 30 years.¹ In the US alone, this could create \$750 billion in revenue and 3.4 million jobs by 2050.² Globally, this could mean \$2.5 trillion in revenue and 30 million jobs by 2050.¹

Hydrogen is a clean-burning fuel that can decarbonize hard-to-abate segments when

it's combined with carbon capture. Blue hydrogen can be an economical solution for decarbonizing petrochemical, refining, steel, cement, transportation, and power generation businesses. A versatile, valuable energy carrier, lower-carbon hydrogen is a market-driven path to decarbonization.

YOUR COST-EFFECTIVE PATH TO BLUE HYDROGEN

Honeywell Blue H2 Solutions is applied pre combustion, helping monetize carbon capture and enabling further investment in the hydrogen infrastructure.

Our Carbon capture technologies are applied in post combustion applications and provide a profitable path into the emerging hydrogen economy.

Capturing CO2 from hydrogen production is relatively low cost compared to other carbon-capture options because a significant portion of the CO2 is available at high pressures and high concentrations.

¹Hydrogen Council. Hydrogen—Scaling Up. (Analytical support provided by McKinsey & Co.)

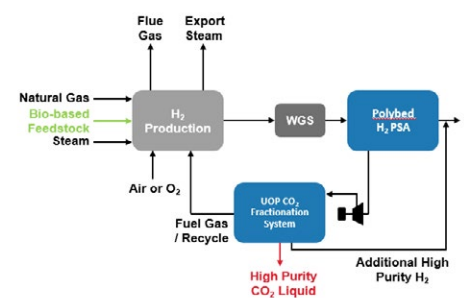
²Fuel Cell & Hydrogen Energy Association. Roadmap to a US Hydrogen Economy. (Analytical support provided by McKinsey & Co.)

³Honeywell. (2021, April 12). Honeywell Technology Enables Large U.S. Carbon Capture and Storage Project [Press release].

OPTIMIZE CARBON CAPTURE AND HYDROGEN RECOVERY

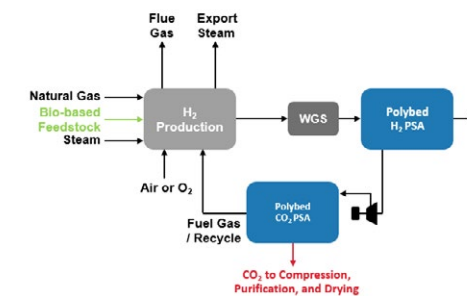
Honeywell UOP technology can help you retrofit existing assets and transform idle units into revenue generators. With up to 99% carbon recovery, Honeywell H2 Solutions' commercially proven cryogenic, pressure swing absorption (PSA), and solvent technologies can be tailored to your needs.

CO2 Fractionation System



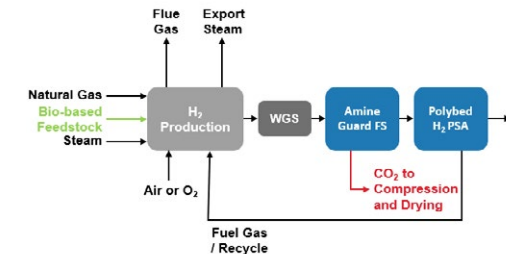
- ~10–20% additional H₂ recovery in retrofit applications
- Ultra-high-purity CO₂ liquid (99.0–99.9+ mol%)
- Liquid CO₂ product ideal for rail or ship transport
- No steam usage for carbon capture

Polybed™ CO2 PSA



- Lowest CAPEX compared to cryogenic and solvent systems
- Optimal when lower CO₂ purity or recovery is acceptable
- No steam usage for carbon capture

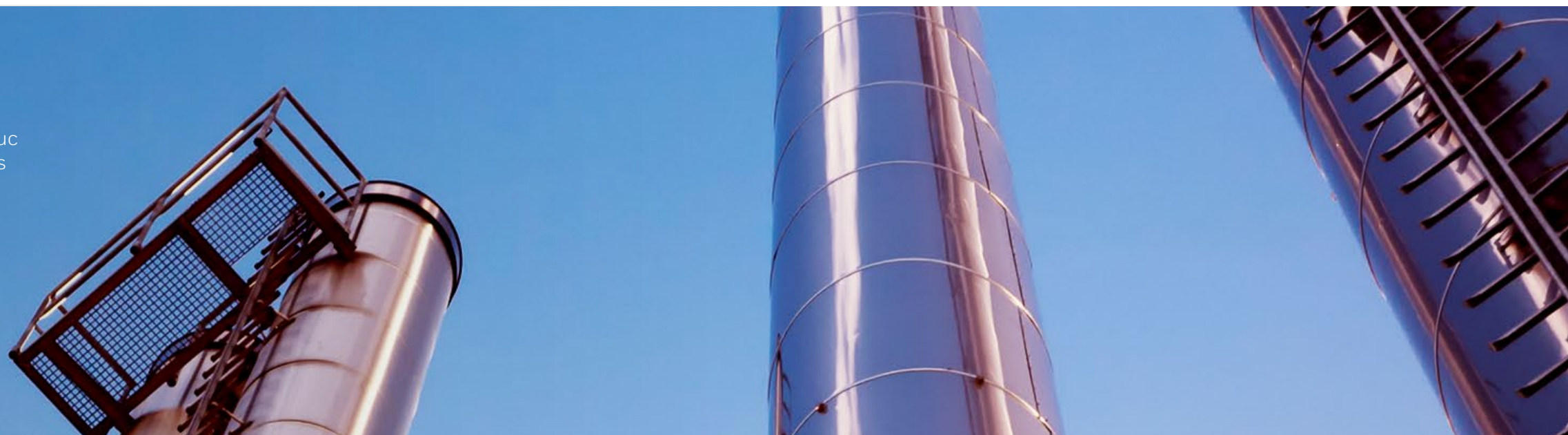
Amine Guard™ FS on Syngas



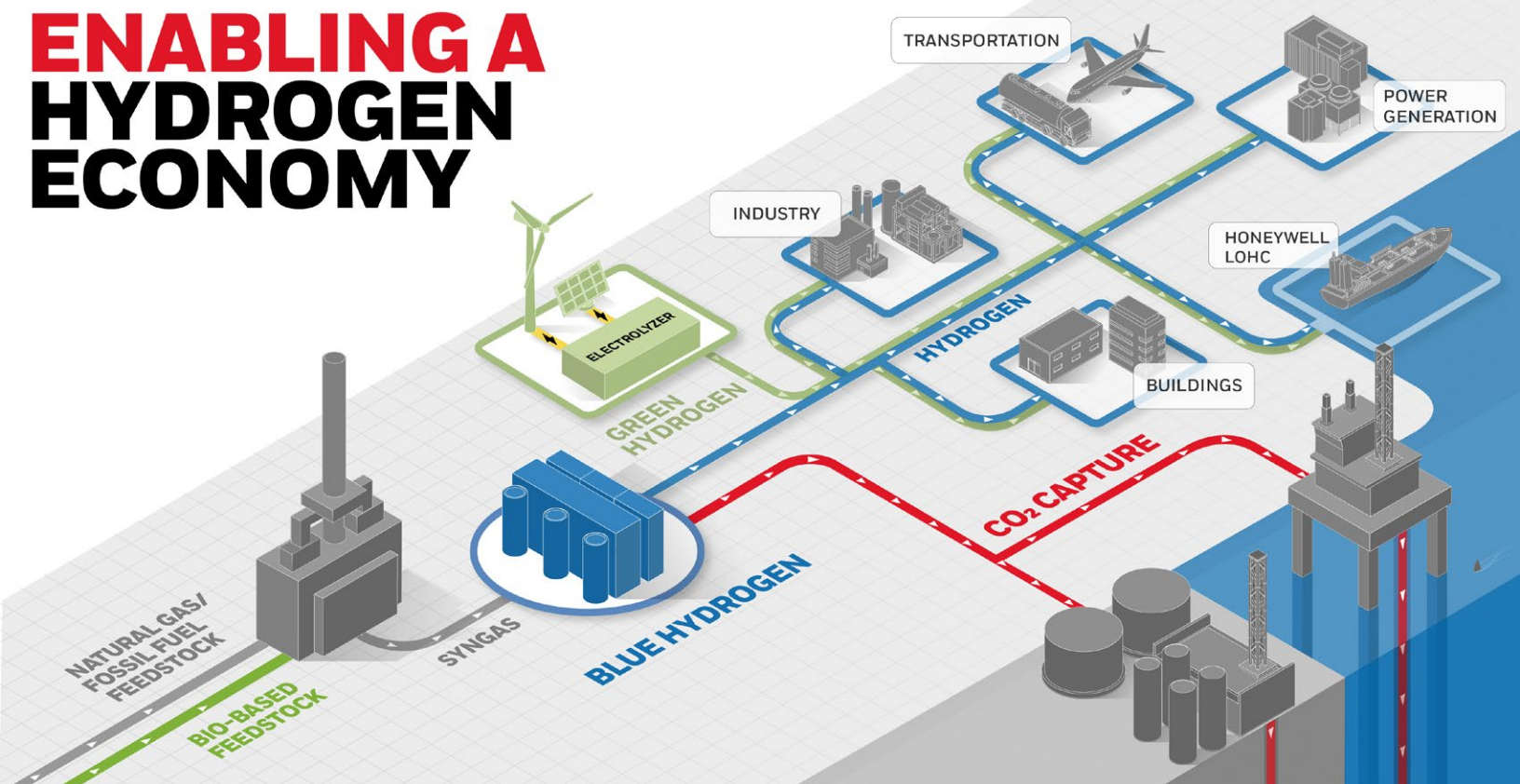
- Lowest electricity requirement compared to cryogenic and PSA systems
- Requires significant LP steam usage
- Vast UOP experience in solvent technologies

“By implementing Honeywell UOP’s proven technologies for the capture of CO2 and hydrogen purification, we will significantly reduce greenhouse gas emissions. This project will allow for market access to blue hydrogen, as well as support the domestic growth of the hydrogen economy.”³

— Dan Williams, Managing Director of Wabash Valley Resources.



ENABLING A HYDROGEN ECONOMY



RECREATE YOUR FUTURE

Technical innovation in adsorbents, membranes, cryogenics, and solvents, along with process design and control expertise, make UOP the industry's choice to provide technology and equipment for your new installation or revamp — from initial development to commissioning and startup.

ACCELERATE YOUR CO2 COUNTDOWN

Honeywell technologies across the hydrogen value chain — H₂ production, transportation, distribution, end-use, and safety — paired with our leading carbon capture and storage technologies make us ideal experts in creating a reliable and lucrative hydrogen economy.

Honeywell UOP
25 East Algonquin Road
Des Plaines, IL 60017-5017, U.S.A.
Tel: +1-847-391-2000

www.uop.com

Honeywell House
Arlington Business Park
Bracknell, RG12 1EB
United Kingdom

Honeywell International Sdn Bhd
Avenue 10, Bangsar South City,
UOA Corporate Tower, Lobby B,
No. 8, Jalan Kerinchi,
59200 Kuala Lumpur, Malaysia.

©2022 UOP LLC. A Honeywell Company
All rights reserved

Honeywell
UOP