

# Gölu Hydrogen Technologies Inc.

*negative carbon hydrogen generation from renewable Ethanol*



# DISCLAIMER

This presentation contains forward-looking statements that relate to the Company's current expectations and views of future events. In some cases, these forward-looking statements can be identified by words or phrases such as "forecast", "target", "goal", "may", "might", "will", "expect", "anticipate", "estimate", "intend", "plan", "indicate", "seek", "believe", "predict", or "likely", or the negative of these terms, or other similar expressions intended to identify forward-looking statements. The Company has based these forward-looking statements on its current expectations and projections about future events and financial trends that it believes might affect its financial condition, results of operations, business strategy and financial needs. Forward-looking statements are based on certain assumptions and analyses made by the Company in light of management's experience and perception of historical trends, current conditions and expected future developments and other factors it believes are appropriate and are subject to risks and uncertainties. Although the Company believes that the assumptions underlying these statements are reasonable, they may prove to be incorrect and there can be no assurance that actual results will be consistent with these forward-looking statements. Given these risks, uncertainties and assumptions, prospective purchasers of common shares should not place undue reliance on these forward-looking statements. Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks, uncertainties, assumptions and other factors, including those listed under "Risk Factors" in the prospectus. Although the Company bases these forward-looking statements on assumptions that it believes are reasonable when made, the Company cautions investors that forward-looking statements are not guarantees of future performance and that its actual results of operations, financial condition and liquidity and the development of the industry in which it operates may differ materially from those made in or suggested by the forward-looking statements contained in this presentation. In addition, even if the Company's results of operations, financial condition and liquidity and the development of the industry in which it operates are consistent with the forward-looking statements contained in this presentation, those results or developments may not be indicative of results or developments in subsequent periods. Given these risks and uncertainties, investors are cautioned not to place undue reliance on these forward looking statements. Any forward-looking statement that are made in this presentation speaks only as of the date of such statement, and the Company undertakes no obligation to update any forward-looking statements or to publicly announce the results of any revisions to any of those statements to reflect future events or developments, except as required by applicable securities laws. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data.

By continuing and electing to view the presentation, you agree to the above terms, agree to maintain absolute confidentiality regarding the information contained in the presentation and further represent and warrant to the Company and agree that:

- 1) you will not print, copy, videotape, record, hyperlink or otherwise attempt to reproduce or retransmit (in any form, including hard copy or electronic distribution format) the contents of this presentation;
- 2) if you are accessing this presentation from the United States, you are a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act); and
- 3) irrespective of where you are resident or incorporated, you are a person who is permitted under applicable law and regulation to access and receive information of the kind contained in this website.

# WHO WE ARE

gölu-H<sub>2</sub>

a Member of SBI Group of Companies, commercializing proprietary lowest carbon renewable hydrogen generators that remove CO<sub>2</sub> from the atmosphere while producing pure green hydrogen

Invested over \$50 Million in Technology and Product Development

25,000 SF fully equipped state of the art facility with modern analytical, quality assurance, and fabrication facilities.

Technologies Protected by Global Patents

Successfully licensed green diesel and SAF technology to Royal Dutch Shell

Leaders in

- Catalyst development
- Process development & optimization
- Processor design
- Automation & controls

BK-H2 Energy has partnered with Golu Hydrogen Technologies Inc. In this partnership, both companies are working together in developing integrated and innovative solutions for the transition and deployment of zero emission technologies for the transportation and power sectors.

Harpal Kapoor, founder, BK-H2 has more than 37 years of experience in public and private sectors of transit in all phases from planning, engineering, vehicles, construction and O&M to emerging technologies. He has worked on the bus technology programs for zero emissions to include Hydrogen Fuel Cells and Battery Electric and related fueling and charging infrastructure.



gölu-H<sub>2</sub>  
Gölu Hydrogen Technologies Inc.

# BARRIERS TO HYDROGEN ADOPTION

C

O

S

T

CARBON  
FOOTPRINT

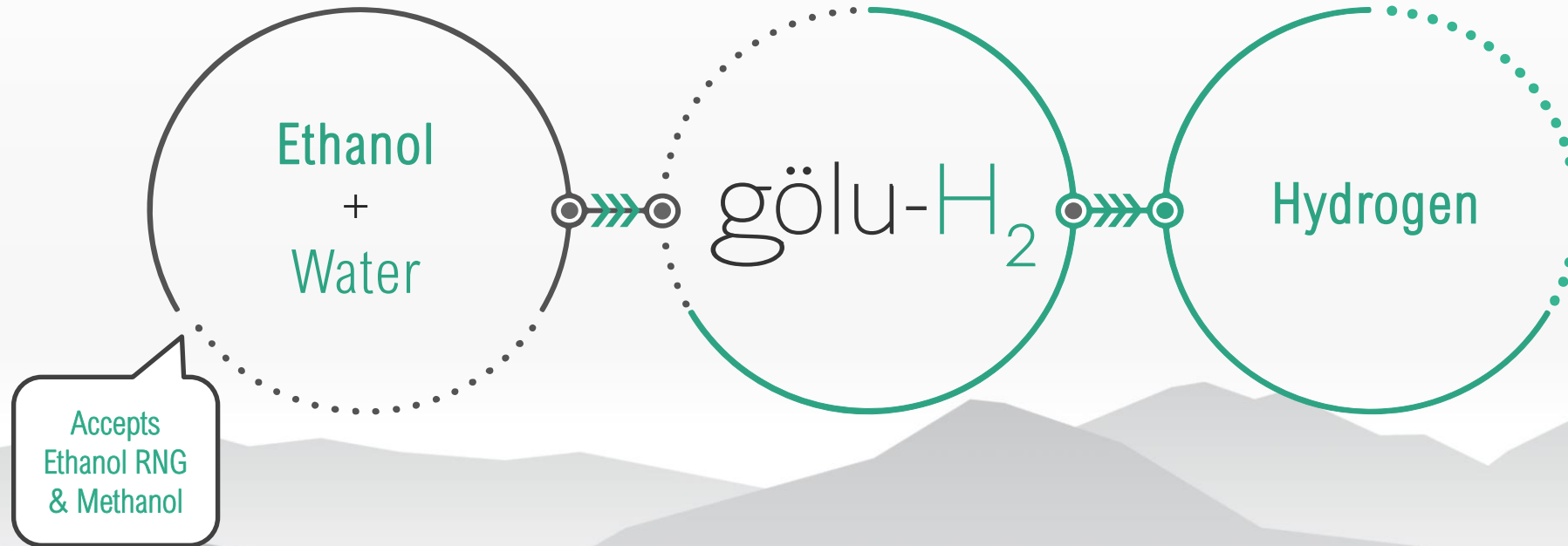
ON-SITE  
INFRASTRUCTURE

SAFETY

TRANSPORT



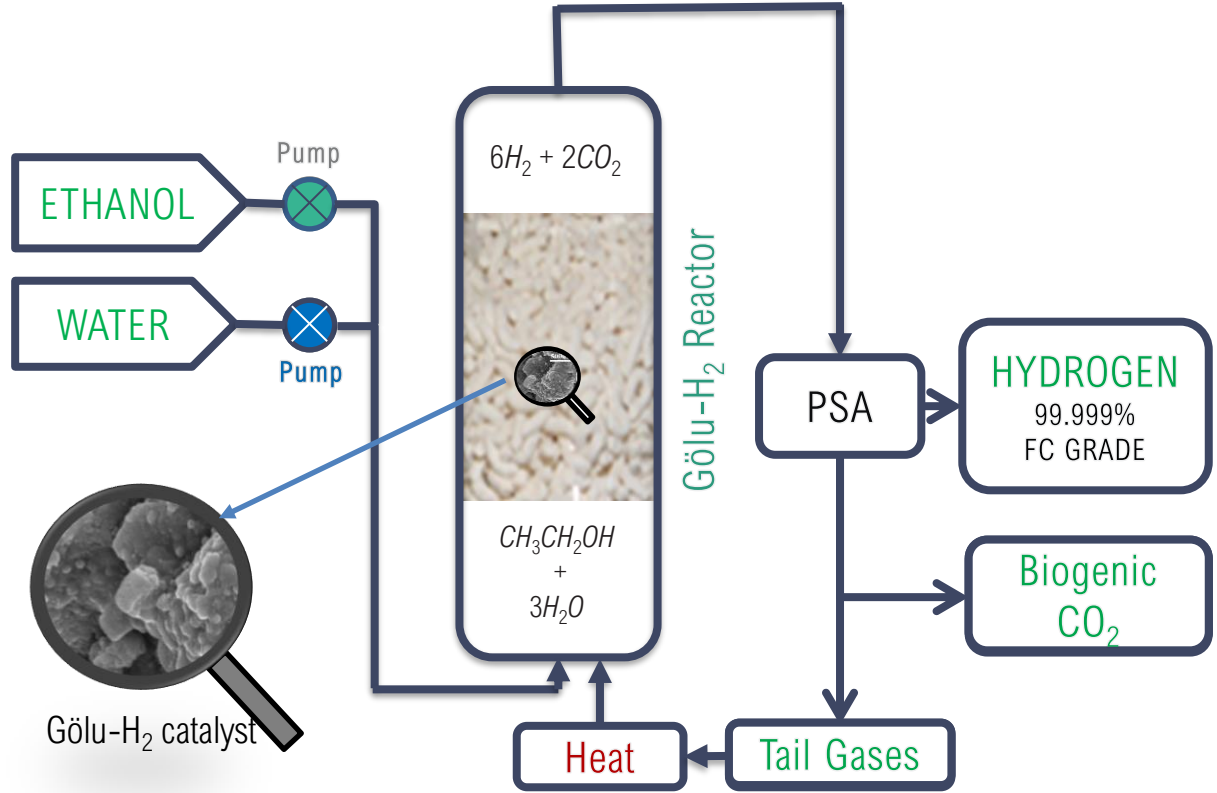
# Gölu-H<sub>2</sub> TECHNOLOGY



up to 80% water in ethanol • no SO<sub>x</sub> • no NO<sub>x</sub> • no external heat required  
zero carbon intensity process • 99.999% purity renewable hydrogen

# Gölu-H<sub>2</sub> PROCESS FLOW

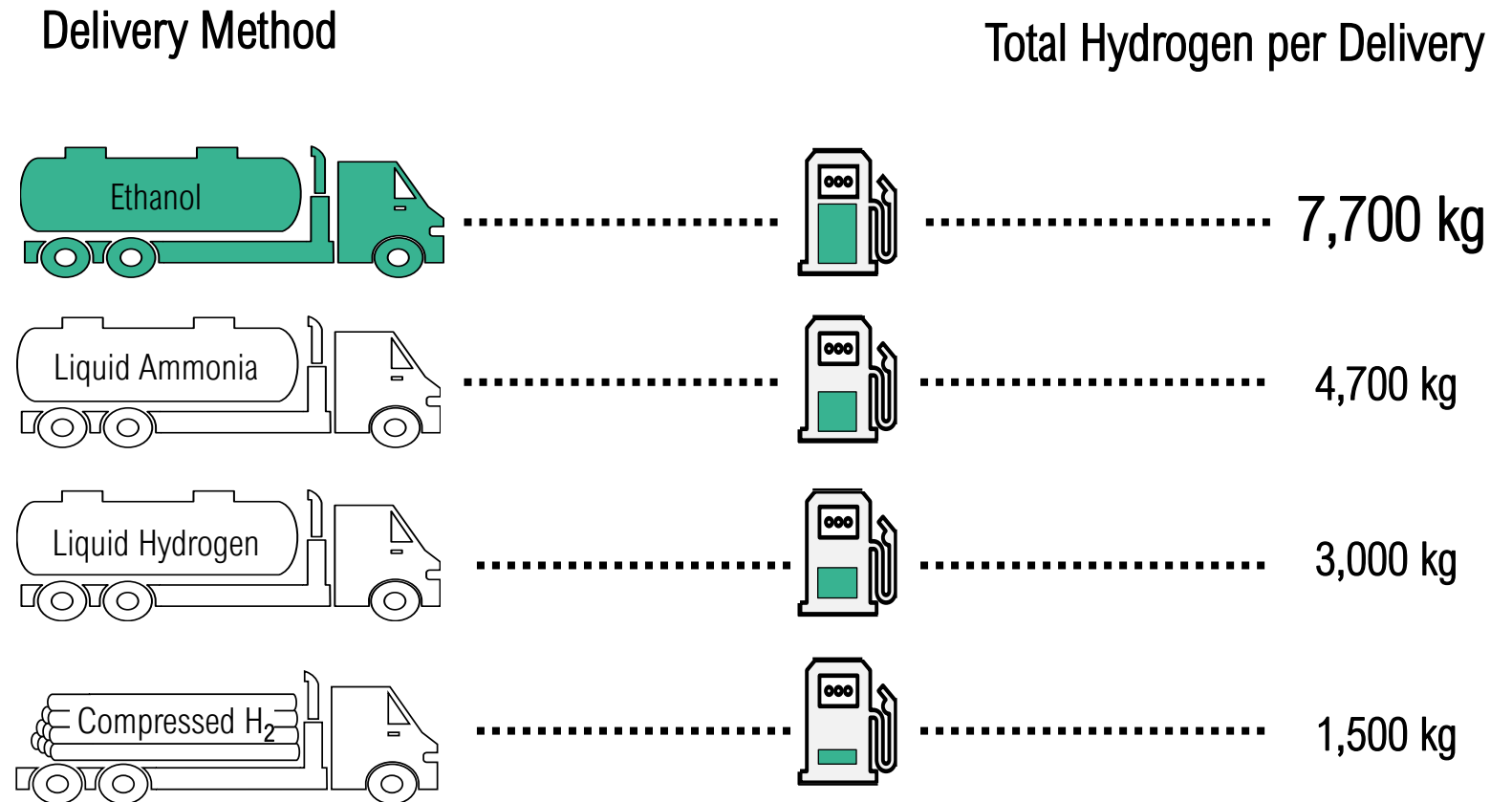
Gölu-H<sub>2</sub>



PSA – Pressure Swing Adsorption unit to purify hydrogen to 99.999% purity

# MORE HYDROGEN PER DELIVERY

- No Infrastructure Upgrades
- Increase Safety
- Reduce Number of Deliveries
- Reduce Delivery Costs





# MODULAR Gölu-H<sub>2</sub> CLEAN HYDROGEN DEMO UNIT



Stand-alone 50kg/day unit on-site

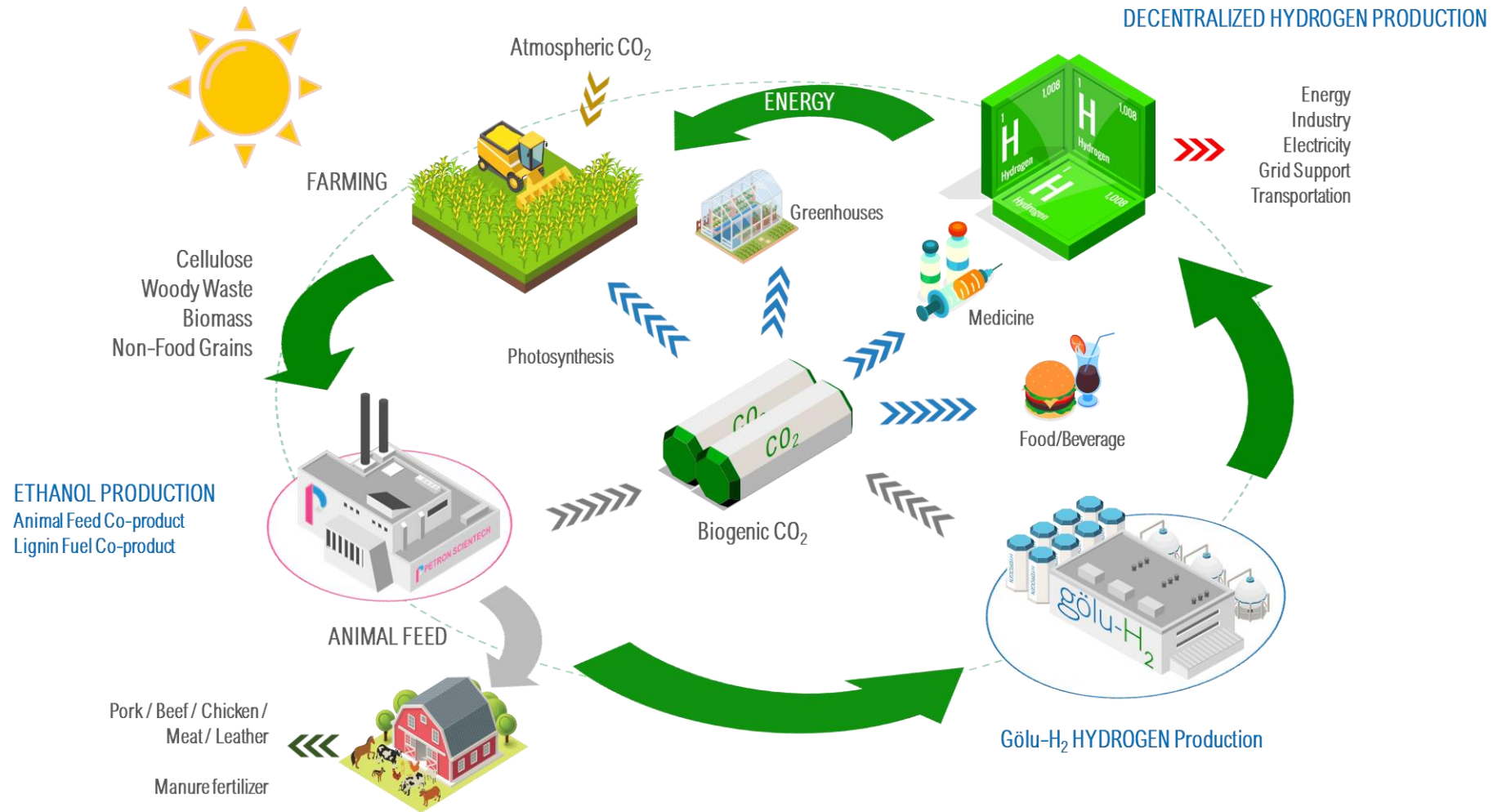
## Module Information

- ✓ 50 kg daily on-site hydrogen production
- ✓ Only Ethanol and Water required
- ✓ Deployable at site-specific capacities
- ✓ Stand-alone source of Green Hydrogen

## Applications

- ✓ PEM / SOF Fuel Cells and Microturbines
- ✓ Up to 720 kWh of power >300 kWh of heat
- ✓ Refuel 2 FCEV buses
- ✓ Charge 7 to 10 EV Buses
- ✓ Refuel 10 Toyota Mirai Cars

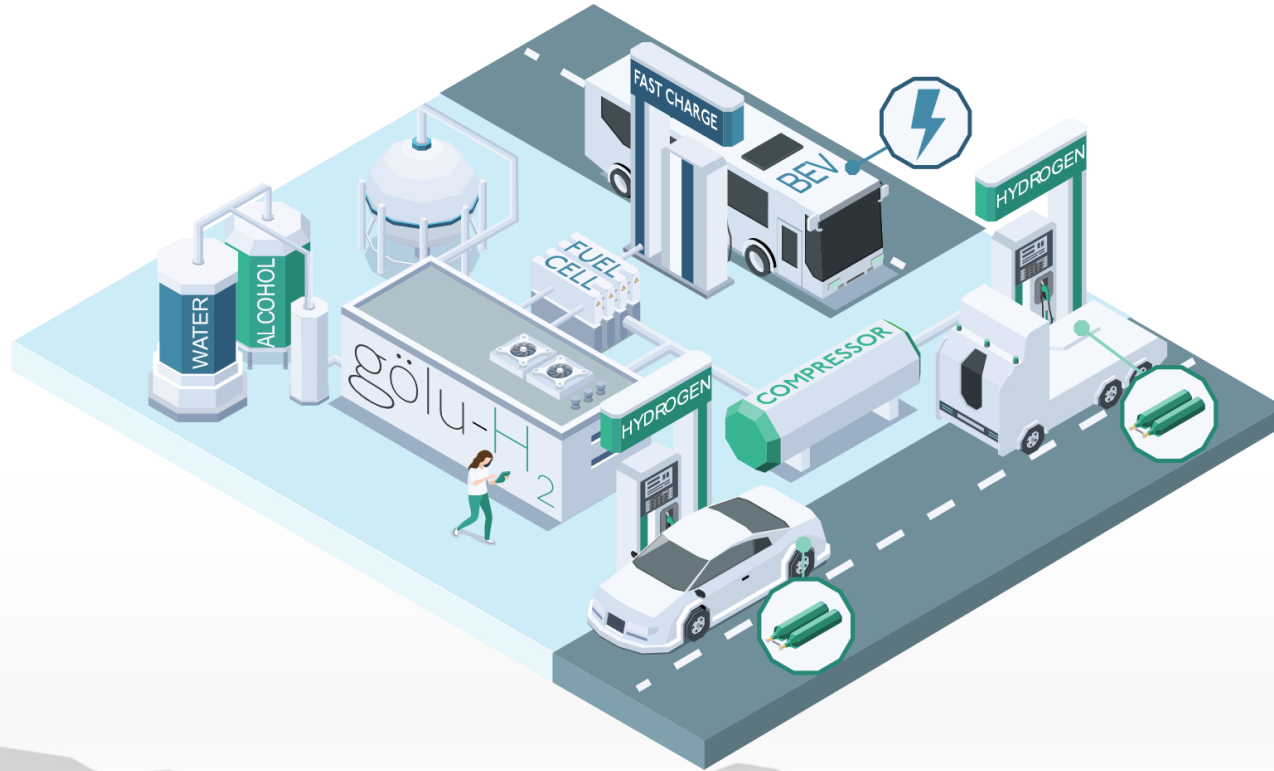
# A SUSTAINABLE CIRCULAR ECONOMY SOLUTION



- generate rural and agricultural sector jobs
- secure USA ethanol ecosystem
- ethanol repurposed for clean power and EV's

# FLEX ENERGY STATION

-To meet immediate & future Clean Energy demand



© copyright Gölu Hydrogen Technologies Inc.

## Hydrogen Generation

Hydrogen Output	
Flow	1,250 kg/day
Purity	Fuel Cell Grade (99.999%)

## Compression

Dimensions (L X W)	
Gölu H <sub>2</sub> unit	40' X 8'

## Storage

## EV Charging

Fueling Capability	
FCEV Buses	– 50/day
EV Buses	– approx. 240/day

## H<sub>2</sub> Refueling

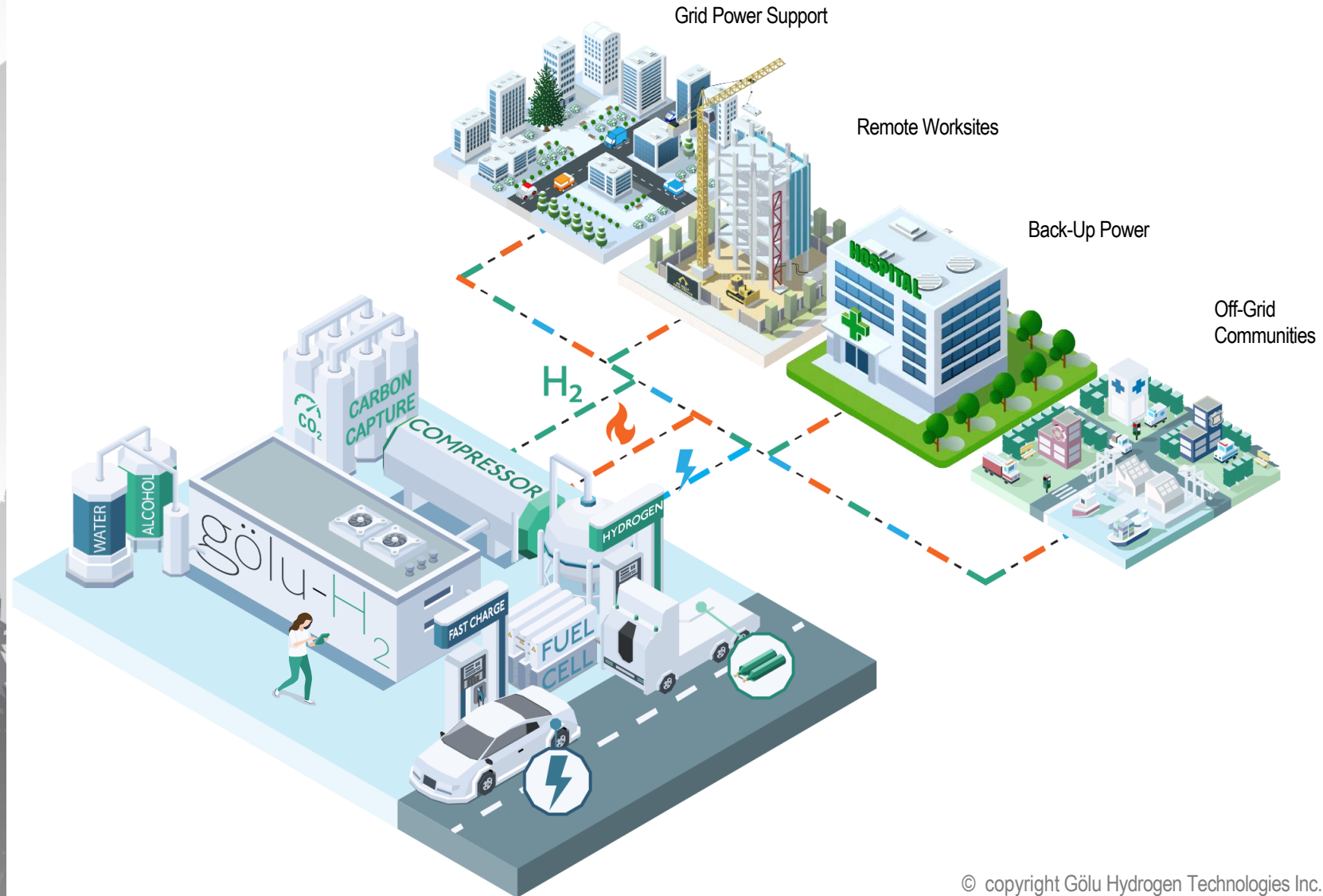
## Power Generation

Emissions	
Fossil CO <sub>2</sub>	Zero
NOx	Zero

gölu-H<sub>2</sub>

# A Complete Off-Grid Energy Solution

- Robust system
- Feedstock flexible
- Carbon neutral or negative H<sub>2</sub>
- FCEV refueling
- EV charging
- Reliable clean energy
- Carbon Capture





# Gölu-H<sub>2</sub> City<sup>©</sup>

gölu-H<sub>2</sub>

A Carbon Neutral Off-Grid  
Community Concept

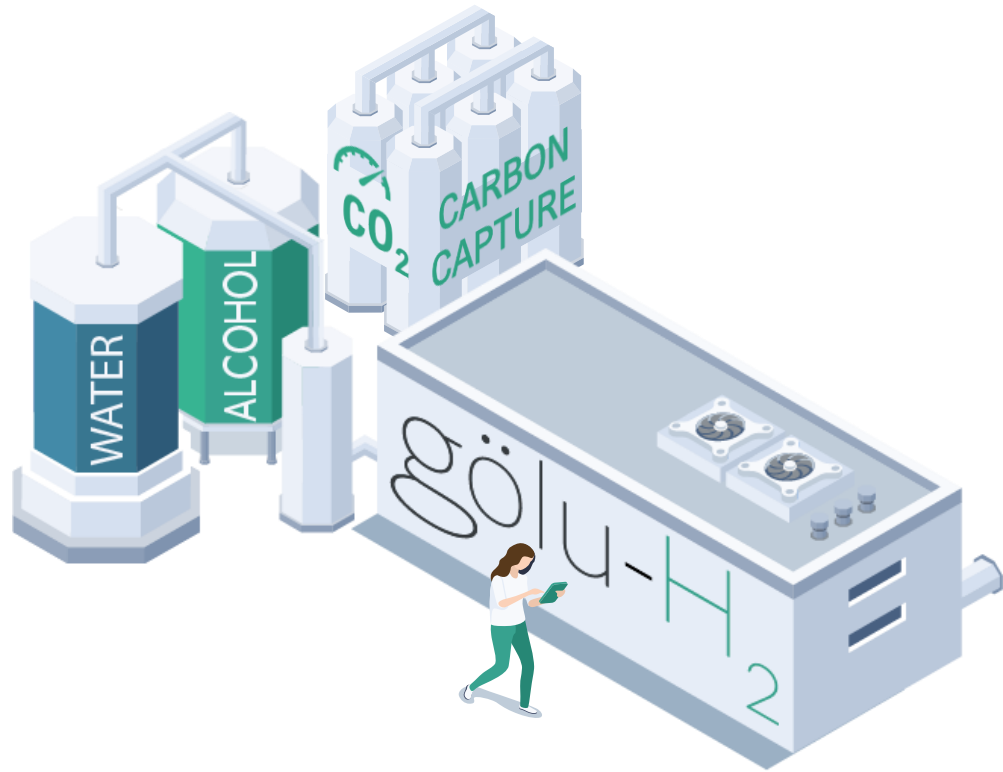
Generates On-Site:

- Green Hydrogen
- Clean Power
- Clean Heat
- Carbon Credits



**Gölu-H<sub>2</sub> Generator**  
Runs on Ethanol and Water

# STANDARD GÖLU-H<sub>2</sub> CLEAN HYDROGEN UNIT



1250 kg/day Standard Unit

## Standard Unit Information

- ✓ 1250 kg daily on-site hydrogen production
- ✓ Only Ethanol and Water required
- ✓ Deployable at site-specific capacities
- ✓ Stand-alone source of Green Hydrogen
- ✓ Eliminates >10 Tons CO<sub>2</sub> Emissions per DAY

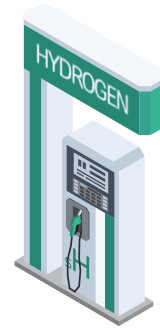
## Module Information

- ✓ PEM / SOF Fuel Cells and Microturbines
- ✓ Up to 24 MWh of power
- ✓ Refuel 50 FCEV Buses
- ✓ Charge ~240 EV Buses
- ✓ Refuel 250 FCEV Cars

# gölu-H<sub>2</sub> ADD-ONS

From industry-leading  
OEMs for a variety of  
applications

## Optional Integrated Add-Ons



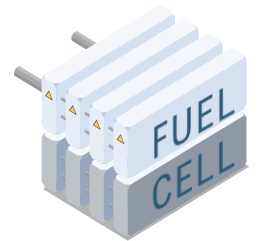
Fast H<sub>2</sub>  
Dispenser



Fast EV  
Chargers



High & Low  
Pressure  
Compression



H<sub>2</sub> Fuel  
Cell



Carbon Capture  
Systems



CO<sub>2</sub> Liquification



CO<sub>2</sub> To Dry Ice  
Solidification



# Hydrogen Fuel & Electric Power for Transit Agencies



**GOLU HYDROGEN TECHNOLOGIES INC.**





# WHY Gölu-H<sub>2</sub> FOR TRANSIT HYDROGEN

- 1) Abundantly available Ethanol as a feedstock and price stability of hydrogen
- 2) Solves the barriers to adoption of hydrogen
- 3) Small footprint for 1250 kg/day to fuel 50 Fuel Cell buses
- 4) Refuel up to 250 Fuel Cell cars
- 5) Modular units increase capacity as the Fuel Cell bus fleets grow
- 6) Provide on-site power (24 to 30MWh) for the battery electric buses when integrated with a stationary fuel cell
- 7) Circular economy with zero waste – everything is recycled or used in the human and animal food chain
- 8) DBOM & Financing options available
- 9) Low-cost of fuel and Pay-back under 1-2 years. Cost can be further reduced with carbon credits





WHY USE  
gölu- $H_2$   
TECHNOLOGY

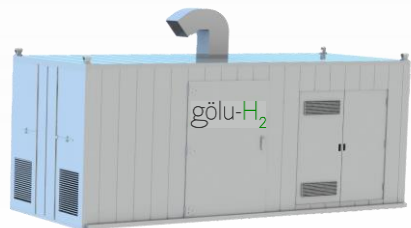
# FOOTPRINT COMPARISON



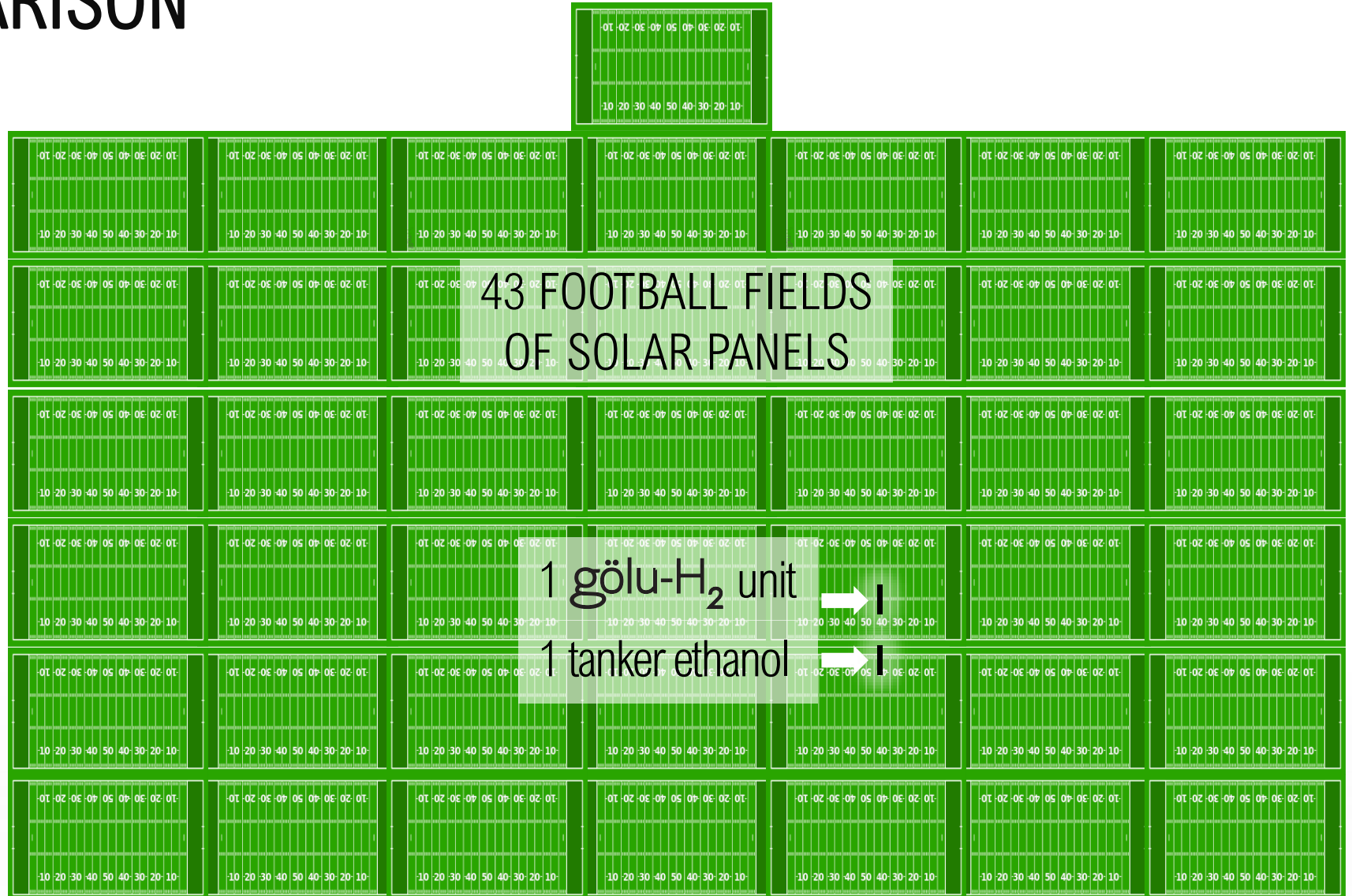
57 acre solar farm



1.5 acre electrolyzer



40' x 8' = 1,250 kg/day



1250 kg/day Hydrogen production from solar power requires 57 acres of solar cells = 43 football fields and an additional 1.5 acres electrolyzer footprint

# CONVENTIONAL HYDROGEN PRODUCTION

## ELECTROLYSIS



### Inputs

- Electricity + High Purity Water

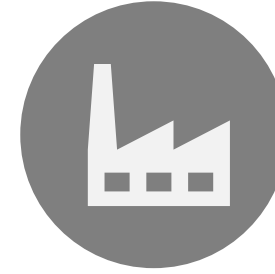
### Pros

- Renewable Electricity inputs result in renewable H<sub>2</sub>

### Cons

- Large centralized production
- Water and Electricity intensive
- High cost of production, distribution, and storage
- Cost volatility

## STEAM METHANE REFORMING (SMR)



### Inputs

- Natural Gas + Water + Electricity

### Pros

- Conventional hydrogen production method (95% Global Production)

### Cons

- Large centralized production
- Non-Renewable
- High cost of production, distribution, and storage
- Cost volatility
- Increasing cost of production with carbon taxes

# FUEL COST\* COMPARISON based on 60,000-mile average



Fuel Cost  
\$86,000/yr.  
High Emissions



Fuel Cost  
\$30,000/yr.  
Carbon Negative



Fuel Cost  
\$120,000/yr.  
Reduced Emissions

\*Estimated / actual cost will depend on prevailing diesel and ethanol prices and vehicle loads



# FUEL COST\* COMPARISON based on 100,000-mile average



Fuel Cost  
\$100,000/yr.  
High Emissions



Fuel Cost  
\$50,000/yr.  
Negative Emissions



Fuel Cost  
\$200,000/yr.  
Low Emissions

\*Estimated / actual cost will depend on prevailing diesel and ethanol prices and vehicle loads

# gölu-H<sub>2</sub>

# TURNKEY Solutions

## No Up-Front Cost

*Green-Hydrogen-as-a-Service projects for energy, transport, utility, and industrial clients globally, combining Golu-H<sub>2</sub> Tech, Finance, and Operations in a Turn-Key Solution with zero up-front costs\*.*

## Financing Packages

### Package 1

Gölu-H<sub>2</sub> Generator comes funded, maintained and insured at Zero-Cost up-front for the client.

Client owns and operates Golu-H<sub>2</sub> Generator. Client retains all H<sub>2</sub> revenue including credits and pays a fixed monthly Green H<sub>2</sub> Fuel-as-a-Service Fee for a set term, which may be recovered by a range of associated H<sub>2</sub> Credits, Carbon Credits, and Subsidies generated by the Project.

### Package 2

Gölu H<sub>2</sub> Delivers Green Hydrogen Fuel On-Site

Gölu-H<sub>2</sub> Generator comes Funded, Owned and Operated by Golu's associates, delivers Green H<sub>2</sub> Fuel on-site to power client operations or to be sold into the market. Client pays Zero-Up Front and enters a Green H<sub>2</sub> Fuel Purchase Agreement.

*\*conditions apply*

© copyright Gölu Hydrogen Technologies Inc.



# Gölu-H<sub>2</sub> OVERCOMES BARRIERS

C

O

S

T

CARBON  
FOOTPRINT

ON-SITE  
INFRASTRUCTURE

SAFETY

TRANSPORT



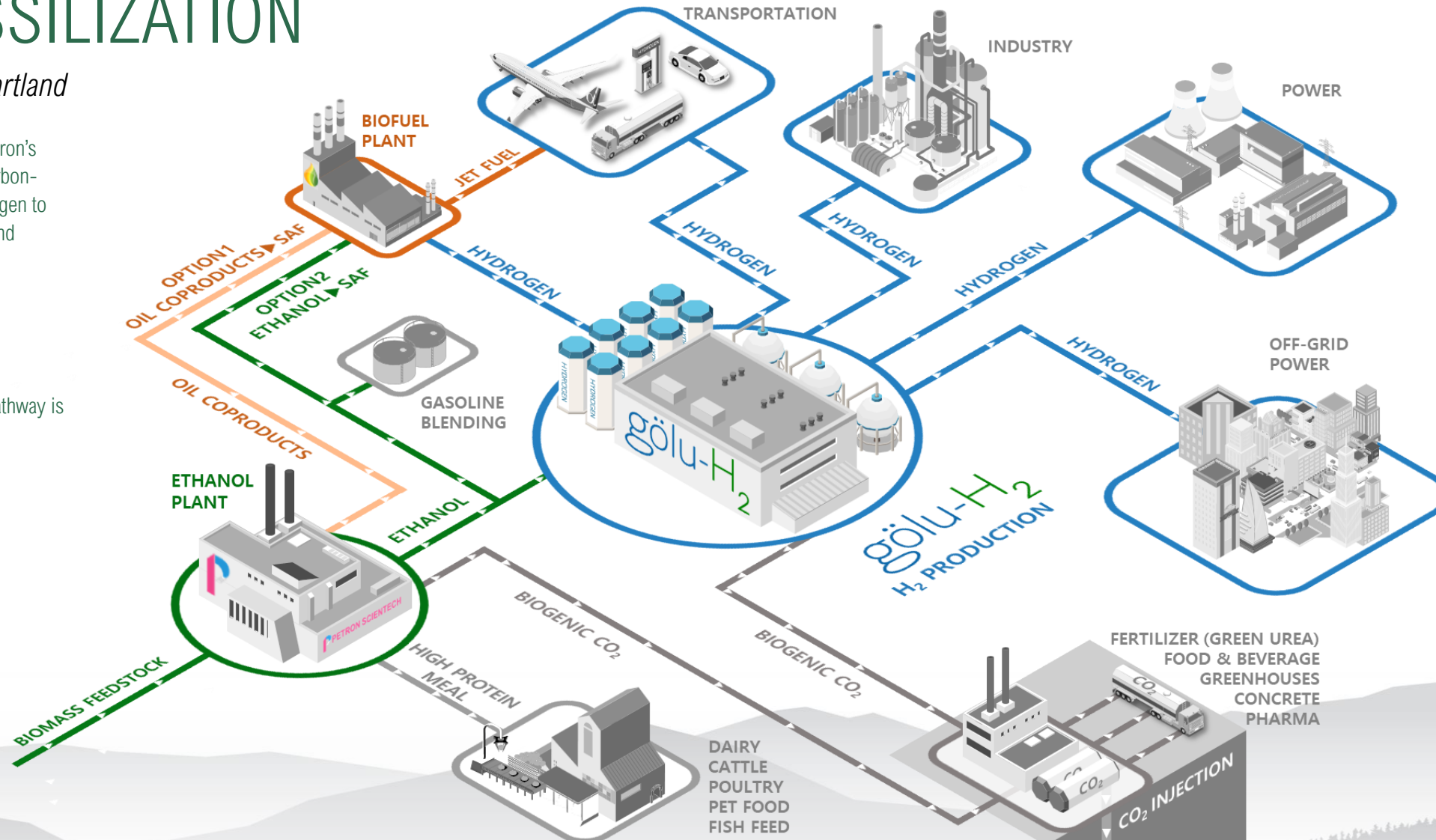


# BIOMASS HYDROGEN DRIVING DEFOSSILIZATION

*A Project in The Alberta Industrial Heartland*

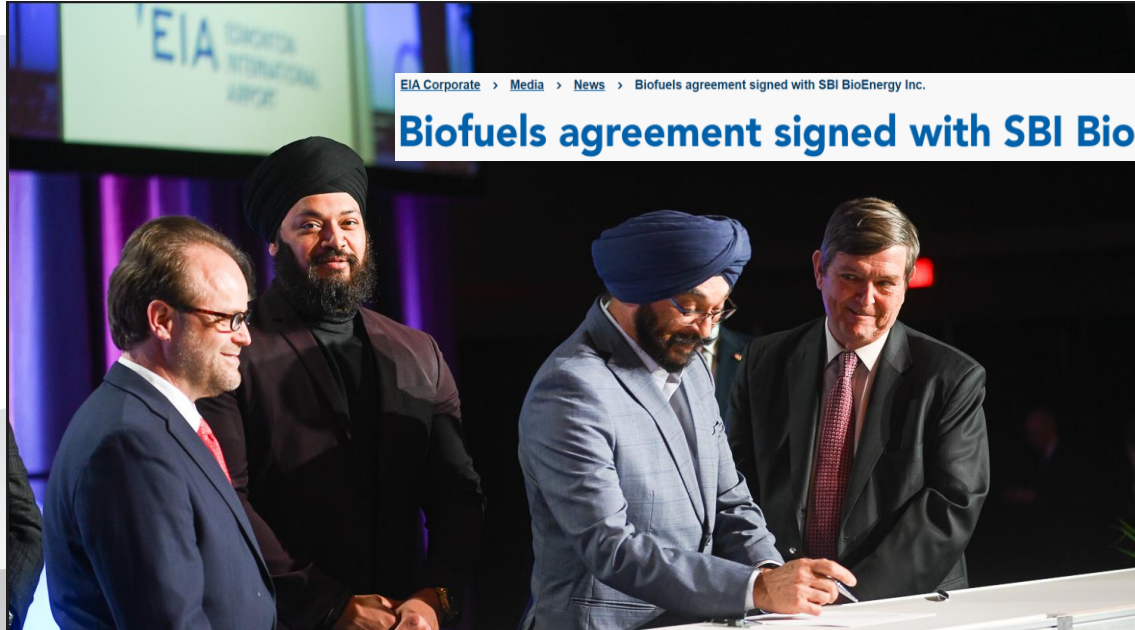
Gölu-H<sub>2</sub>, SBI's ethanol to hydrogen technology and Petron's biomass to ethanol technology converts Biomass to carbon-negative Hydrogen to replace conventional Grey-Hydrogen to decarbonize transportation, production of fuel, power and goods for everyday use.

OPTIONAL ALTERNATIVE Oil-based SAF production pathway is available at this project



# Gölu-H<sub>2</sub> GAINING GLOBAL RECOGNITION

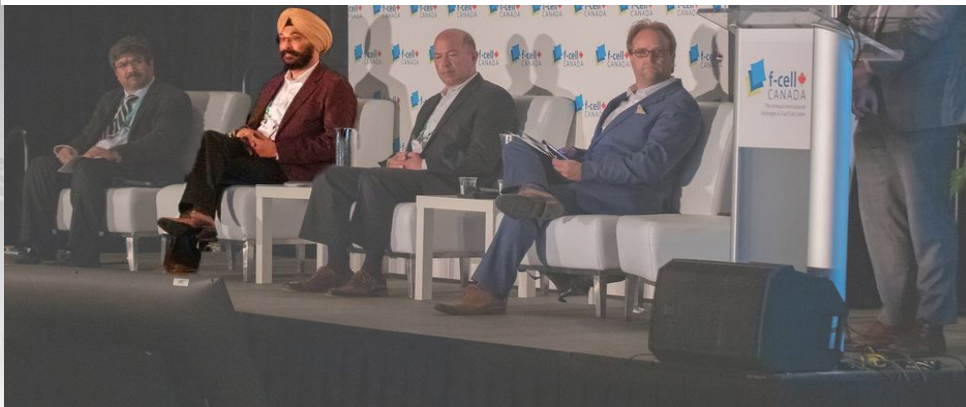
gölu-H<sub>2</sub>



EIA Corporate > Media > News > Biofuels agreement signed with SBI BioEnergy Inc.  
**Biofuels agreement signed with SBI BioEnergy Inc.**

April 27, 2022 | Hydrogen, News Releases

Edmonton International Airport to incorporate new fuels in equipment fleet



Canadian Hydrogen Convention  
**AWARDS GALA**

Sponsored by: **AIR PRODUCTS**

Hosts



**Brent Lakeman**  
 Director,  
 Hydrogen Initiatives  
 Edmonton Global



**Rachel Gregory**  
 Digital Host  
 H+ Series

The Canadian Hydrogen Awards shine a spotlight on excellence in the hydrogen industry. Recognizing leaders, innovators and trail blazers in energy, companies and individuals are recognized for disrupting the industry and promoting healthy advancement of the sector.

The 2022 Nominees Are:

**HYDROGEN PROJECT AWARD**

Sponsored by: **AIR PRODUCTS**

- AIR PRODUCTS** • Air Products Canada Limited
- ILF CONSULTING ENGINEERS** • ILF Consulting Engineers (ILF)

**HYDROGEN MOBILITY AWARD**

- AIR PRODUCTS** • Air Products Canada Limited
- CP** • Canadian Pacific (CP)
- HYDRA** • Hydra Energy
- TJ** • Técnicas Reunida

**HYDROGEN LEADER OF THE YEAR AWARD**

- ROY O. CHRISTENSEN, RET** President KT Project

**INNOVATION IN HYDROGEN TECHNOLOGY AWARD**

- gölu-H<sub>2</sub>** • Golu Hydrogen Technologies Inc.

Start Up Energy Transition  
 Global Innovation Platform

gölu-H<sub>2</sub>

## SET100 List

Top 100 Energy Start-ups of 2022

#SET100 #SET22

Powered by **dena** (German Energy Agency) in cooperation with **WORLD ENERGY COUNCIL**

I'M SPEAKING AT

# SPARK

21 - 22 JUNE  
 EXCEL, LONDON



**DENA (GERMAN ENERGY AGENCY) SET100 LIST - GOLU HYDROGEN TECHNOLOGIES INC.**

**SPEAKING AT - 13:00**

gölu-H<sub>2</sub>

Dr. Inder Pal Singh  
CEO  
+1 (780) 278 9832  
ips@sbibioenergy.com

Jagjit Singh  
Director, Business Dev.  
+1 (780) 975 9935  
js@sbibioenergy.com

[www.sbibioenergy.com/golu-h2](http://www.sbibioenergy.com/golu-h2)

