

# Gölu-H<sub>2</sub> Off-Grid Energy from Ethanol

gölu-H<sub>2</sub>

Hydrogen | Electricity | Water | CO<sub>2</sub> | Food | Fuel

## Lower-Cost, Cleaner, Safer Power

Gölu-H<sub>2</sub> transforms renewable ethanol into clean, versatile, and economically viable hydrogen for transportation, off-grid energy, heat, water and food production, and green CO<sub>2</sub> generation, capture, and removal. Our mission is to deliver resilient, climate-positive solutions that accelerate the global transition to sustainable, circular energy systems.



### Produce Carbon-Negative Renewable Hydrogen

Generate carbon-negative renewable hydrogen on-site



### 24/7 Off-Grid Power

For micro-grids and remote sites when integrated with a fuel cell



### Pure Water Generation

9,000 L/day of clean drinking water when generating power

### Modular Solutions

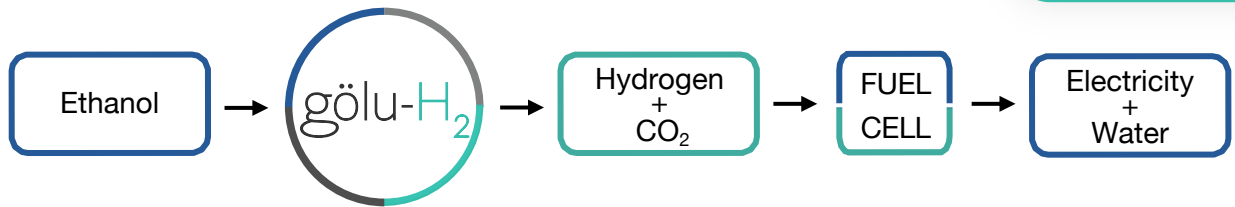
1.25 Tons Hydrogen<sub>/day</sub>

1 MW or 25 MWh<sub>/day</sub>

4,800 Tons CO<sub>2</sub> offset<sub>/yr.</sub>

3,650 Tons CO<sub>2</sub> captured<sub>/yr.</sub>

Power ~1,000 homes



## Modular Energy Independence for a Sustainable Future

### Continuous Benefits per Unit



#### Provide Training & 24hr. Support

To clients to operate, maintain, & service



#### Capture Atmospheric CO<sub>2</sub>

Additional revenue from 10 Tons<sub>/day</sub> CO<sub>2</sub> sales and credits



1,250 kg/day Off-Grid Unit

## Techno-Economic Comparison

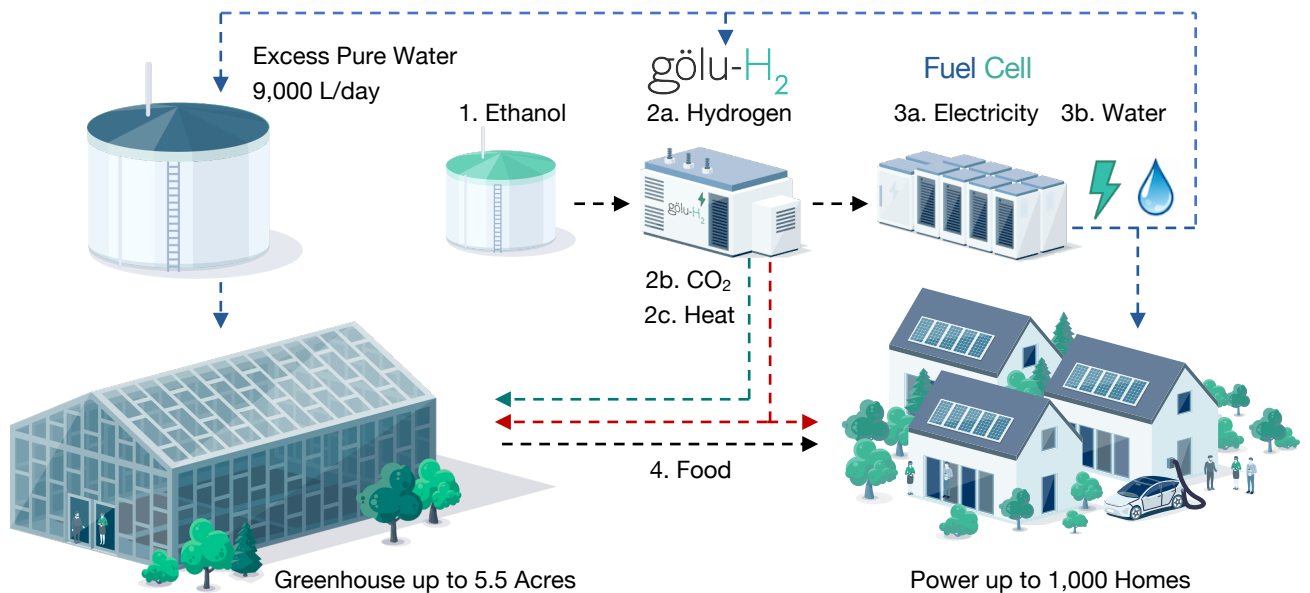
1MW Systems	Footprint	24/7 Reliability	Carbon Impact	LCOE
Gölu-H <sub>2</sub> + Fuel Cell	0.05 Acres	Yes	Carbon Negative	\$0.13 \$/kWh
Solar PV + BESS	25 Acres	No	Zero	\$0.29-\$0.37 \$/kWh
Wind + BESS	100 Acres	No	Zero	\$0.25-\$0.30 \$/kWh
Diesel Genset	0.05 Acres	Yes	High CO <sub>2</sub> Emissions	\$0.33-\$0.45 \$/kWh

## Total Delivered Power Cost Comparison benefits even for grid-connected Gölu customers

	Gölu-H <sub>2</sub> + Fuel Cell	Diesel Genset	Rural Grid Power
Input Fuel	Ethanol \$0.19/kWh	\$0.33-\$0.39/kWh	Grid \$0.10/kWh
CO <sub>2</sub> Credits	-\$0.18/kWh Credit	Penalties	Penalties
CO <sub>2</sub> Impact	-930 T/MWh <b>reduction</b>	690 T/MWh emitted	530 T/MWh emitted
CAPEX + Fees	\$0.12/kWh	\$0.02/kWh	\$0.13-\$0.20/kWh
<b>Total Cost</b>	<b>\$0.13/kWh</b>	<b>\$0.35-\$0.41/kWh</b>	<b>\$0.23-\$0.30/kWh</b>

Where carbon credits are available, \$350/T BECCS and \$95/T Alberta offset credits. No carbon penalties were considered in this comparison. Alberta grid 0.53 T CO<sub>2</sub>/MWh

## Circular Sustainable Solution



Global Patents Filed & Approved | International Awards | Commercial Unit Deployed 2026

## Standard Unit Specifications

Gölu-1250	
Footprint	8' X 40' Container
Connections	Ethanol Flange   DM Water Flange   Power 3 Phase    Hydrogen Flange   CO <sub>2</sub> Flange
Inputs	Ethanol 93-115 gal/hr   DM Water 21-26 gal/hr   Power 21-31 kWh/hr ~35 kVa transformer
Outputs	Hydrogen 1.25 T/day   CO <sub>2</sub> 10 T/day
H <sub>2</sub> Gas Output	Purity >99.997%   Ambient temperature   Pressure 150-200 PSI   Max Flow: 52 kg/hr
CO <sub>2</sub> Gas Output	Purity >95%, Ambient temperature, Pressure <15psi Max Flow: 416 kg/hr
Heat Output	10 MWh/day

Performance depends on site conditions. The content of this document may contain technical inaccuracies or typographical errors. SBI reserves the right to make changes or updates at any time without prior notice.