

**HYLIUM INDUSTRIES, INC.**

**POWERING FUTURE MOBILITY®**

# About Us

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- HYLIIUM INDUSTRIES, INC. was established in 2014 as a Korea Institute of Science and Technology's (KIST) venture company. Since then we have been developing the nation's first cryogenic liquid hydrogen manufacturing and storage technologies with R&D support from the Korean Government.



**HYLIUM INDUSTRIES, INC.** is the first independent developer of  
Liquid Hydrogen production / fueling / transportation / safety technologies in Korea



Hydrogen Liquefaction



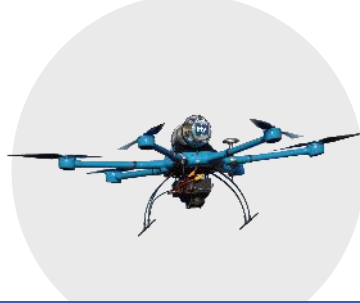
Hydrogen Storage



Hydrogen Transportation



Mobile Hydrogen Refueling

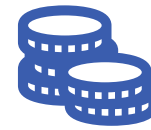


LH2 Drone

# Traction



26 registered patents  
29 patents pending,  
Russell B. Scott Memorial Award  
for Liquefaction Technology, ASME  
Certifications



Completed Series A  
investment round with a  
total of \$13M in  
investments



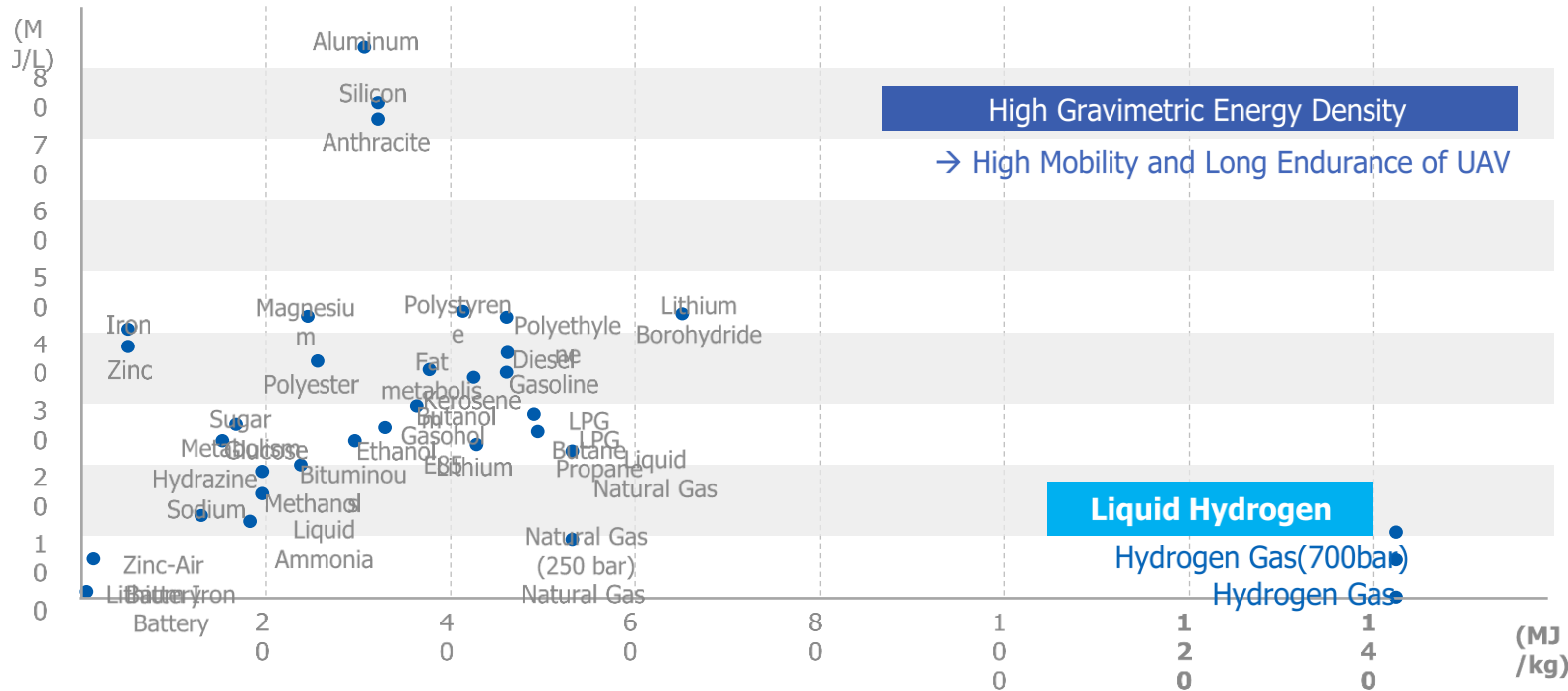
A network of 40+ customers  
and partnerships with  
Hyundai, Hyosung, SK Gas,  
Posco, Alakai Technologies,  
and etc.



2020 revenue of \$500K  
and 2021 expected  
revenue of \$2.5M

# Why Liquid Hydrogen?

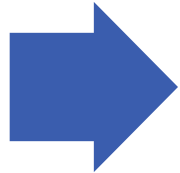
Selected Energy Densities



- + Liquid Hydrogen stored / transported at a **low-pressure of less than 3 Bar** has a **very high safety level**
- + Liquid Hydrogen comprises less than **1/800 of Hydrogen Gas volume** resulting in **higher storage efficiency**
- + Usage of Liquid Hydrogen results in **storage and transportation cost savings**

Hylum Industries, Inc. solves the safety and inefficiency issues related to high pressure hydrogen gas storage by using Liquid Hydrogen, which has the highest energy density per weight.

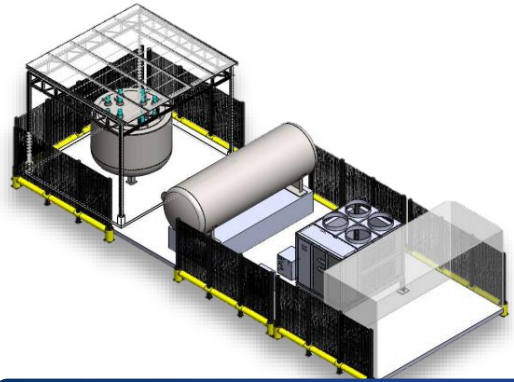
## Hydrogen Imports



## Hydrogen Liquefaction



Liquefier capacity: 10kg/day



Liquefier capacity: 100kg/day



Storage and distribution of hydrogen across the country

## Safe and efficient solution for storage and transportation of Hydrogen – LH2 Storage Tanks

LH2 storage tanks for storage and transportation of hydrogen



LH2 Storage Tank (50 – 200 L)



LH2 Storage Tank (930 L)

LH2 bulk storage tanks for large-scale storage and transportation of hydrogen



LH2 Bulk Storage Tank (2,500 – 16,000 L)

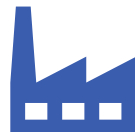


LH2 Storage Tank (1,500 L)

Can be utilized in



Refueling



Industry



Maritime

and many more...

## All-in-one solution for hydrogen transportation

Hydrogen Liquefaction Plant



Hydrogen Imports



LH2 Trailer (34,000 L)

\*in development



Hydrogen Refueling Station



Safety

Storage Efficiency

Transportation Efficiency



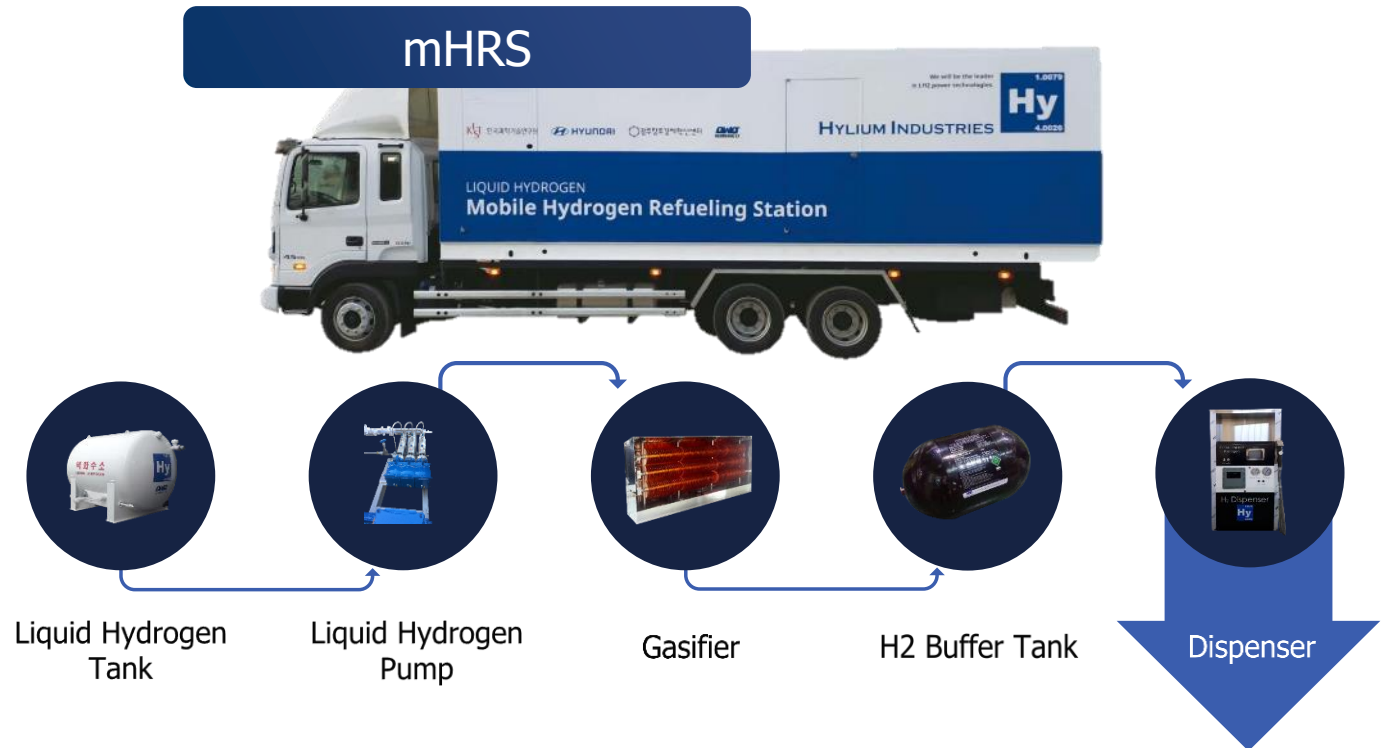
## The mHRS will provide



On-demand H2 refueling solution



Support for the growing infrastructure



## Specifications

- Carries up to **7 500 L** of Liquid Hydrogen on a 5-ton truck
- **800 bar** Liquid Hydrogen Pump
- Hydrogen fueling for **100 vehicles a day** at 700 bar with 99.995% high-purity Hydrogen

## Benefits

- **Fast** refueling
- Excellency in terms of **safety** and **storage efficiency**
- **Reduced operating and transportation costs**
- **Easy expansion** of a liquid hydrogen charging station compared to a gas hydrogen charging station
  - **Low CAPEX & OPEX**

# mHRS: Mobile Hydrogen Refueling Station - Process

## 1 Hydrogen Liquefaction Plant



## 2 mHRS



## 3



Hydrogen Truck



Hydrogen Bus



FCEV

Hylium Industries' **HylumX** is a hydrogen fuel cell powered drone operating on liquefied hydrogen. With a power pack that combines ultra-light liquefied hydrogen fuel tank an PEM fuel cell the HylumX has a **flight endurance of over 4 hours.**



### Benefits:

- Long endurance time
- Easy to refuel
- Applicable to various industrial and/or professional uses
- Long and wide range of activities due to extended endurance time
- Wide variety of accessories, more than 200 devices available

### Potential Uses:



Surveillance & Mapping



Delivery & Logistics



Precision Agriculture



Inspection & Maintenance



## 2 Import and storage of hydrogen



LH2 Bulk Storage Tank  
(2,500 – 16,000 L)

\*in development



LH2 Storage Tank (930 L)

## 3 Distribution of supply across the country



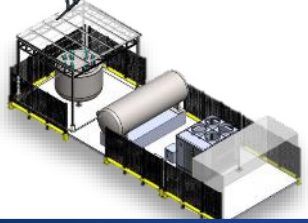
LH2 Trailer  
(34,000 L)

\*in development

## 1 Hydrogen Liquefaction and Plant Maintenance



LH2 Drone

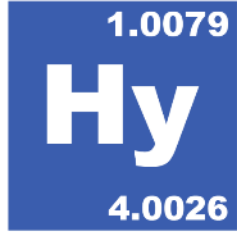


Hydrogen Liquefier

## 4 On-demand fueling for areas with limited refueling infrastructure and emergency refueling



LIQUID HYDROGEN  
Mobile Hydrogen Refueling Station



“Hylium is also very open to global investors for the series-B fundraising planned next year”



**HYLIUM INDUSTRIES, INC.**



Hydrogen Liquefaction



Hydrogen Storage



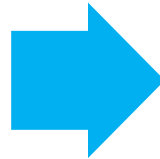
Hydrogen Transportation



Mobile Hydrogen Refueling



LH2 Drone



Market and Infrastructure Development

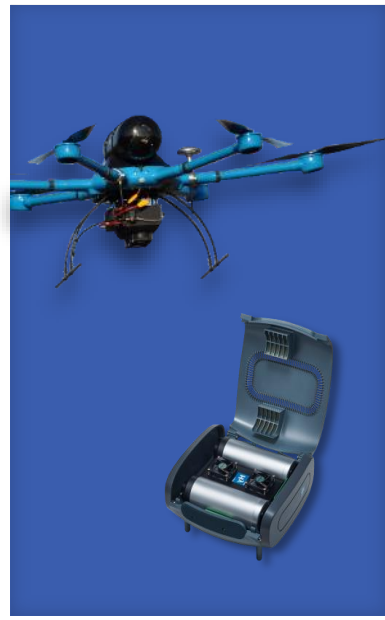


Customer Management



HRS

Mobile Hydrogen  
Refueling Station  
  
Hydrogen Refueling  
Station



LH2 Mobility

LH2 Drone  
  
Drone Power Pack



LH2 Tank

LH2 Storage Tank  
  
LH2 Fuel Tank  
  
LH2 Bulk Tank  
  
LH2 Trailer Storage



Hydrogen Liquefaction

Hydrogen Liquefier



Hydrogen Safety

Hydrogen Leak  
Detection Paste & Tape

# CONTACT US:

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