

# Scalable Green Hydrogen Energy: Production, Refueling, and Power

# Pitch 2024



### Disclaimer

This presentation ("Presentation") has been prepared by HNO International, Inc. (the "Issuer" or the "Company"), and is being delivered to the recipient (the "Recipient"). The Presentation and the information contained herein is Confidential and shall be kept confidential. Delivery of this Presentation to anyone other than the Recipient is unauthorized and any reproduction of this Presentation, in whole or in part, or any attempt to divulge its contents, in whole or in part, without the prior written consent of the Issuer is prohibited.

This Presentation has been prepared solely for the purpose of providing a preliminary introduction to the opportunity described in the Presentation to assist a limited number of parties in deciding whether they wish to proceed with a further review of this opportunity. Information contained herein has been obtained from management of the Issuer and other sources which are deemed reliable, but no representations or warranties are made by Issuer or any of its respective affiliates, employees or representatives as to the accuracy or completeness of such information or any other information (whether written or oral) made available in connection with any investigation of Issuer. The Issuer has not independently verified any of the information set forth in this Presentation. Only those particular representations and warranties which may be made in a definitive agreement when, as and if it is executed, and subject to such limitations and restriction as may be specified in the definitive agreement, will have any legal effect.

This Presentation does not constitute an offer or solicitation to sell or purchase any securities. The information contained in this Presentation does not purport to contain all of the information that a prospective purchaser may desire. In all cases, interested parties should conduct their own investigation and analysis of Issuer and the information contained herein. The information contained in this Presentation is not to be used for any other purpose. Except as otherwise expressly indicated, this Presentation speaks as of the date hereof. The Issuer does not undertake any obligation to update the information contained herein, correct any inaccuracies that may become apparent or provide the recipient with access to any additional evaluation material. The delivery of this Presentation does not imply that there has been no change in Issuer's affairs after the date hereof. This Presentation is not a prospectus, disclosure document or offering document, and does not constitute an offer or invitation to apply for securities under any law. In particular, this Presentation shall not form the basis of or be relied on in connection with any contract or commitment whatsoever.

This Presentation contains forward-looking statements. All statements other than statements of historical facts contained in this Presentation, including statements regarding the Company's future results of operations and financial position, financial targets, business strategy, plans and objectives for future operations, are forward-looking statements. The Company has based these forward-looking statements largely on its current estimates of its financial results and its current expectations and projections about future events and financial trends that it believes may affect its financial condition, results of operations, business strategy, short term and long-term business operations and objectives, and financial needs as of the date of this presentation. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described under the heading "Risk Factors" in the Company's filings with the Securities and Exchange Commission (the "SEC"). Moreover, the Company operates in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for Company management to predict all risks, nor can the Company assess the impact of all factors on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking events and circumstances discussed in this Presentation may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

The Recipient should not rely upon forward-looking statements as predictions of future events. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, the Company cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither the Company nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Except as required by law, the Company undertakes no obligation to update publicly any forward-looking statements for any reason after the date of this presentation, to conform these statements to actual results or to changes in the Company's expectations. The Company's filings with the Securities and Exchange Commission are available to the Recipient and the Recipient should read the documents the Company has filed with the SEC for more complete information about the Company. The Recipient may get these documents for free by visiting EDGAR on the SEC Web site at www.sec.gov.



### Who We Are

## HNO International (HNOI) is a green hydrogen product development company.

We develop hydrogen production and dispensing technology to support the implementation of a global zero-emission energy infrastructure.

**Our mission:** to provide cost-effective, modular, scalable systems that produce, compress, store, and dispense hydrogen.

#### **Company Highlights:**

- Over 15 years in hydrogen R&D experience
- Intl patents for hydrogen system components
- Strong partnerships with industry leaders
- Publicly traded (OTC: HNOI)





### **Common Challenges**



### Lack of Infrastructure

Large, centralized hydrogen facilities result in prohibitive costs and complex logistics. This stunts the scalability, adaptability.



### **Cost and Time**

Current hydrogen production projects have projected costs in the billions, with project timelines of 5+ years. This limits the widespread integration of hydrogen technology.

Confidential

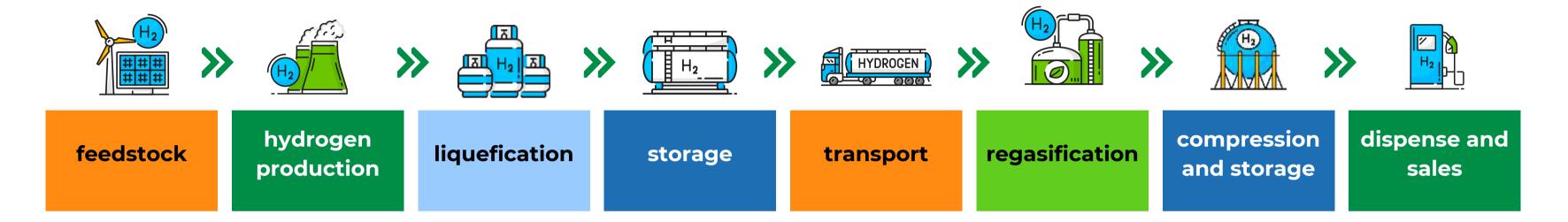


### Market / End Users

Penetrating the market and reaching end users can be difficult due to limited infrastructure, distribution networks, and awareness.



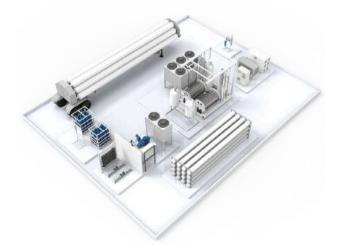
# **The Hydrogen Distribution Dilemma**



- Limited production availability
- Hydrogen losses in transport
- High costs of distribution
- High carbon footprint in distribution



## **Our Solution**





40' Containers in 2025

**SHEP**<sup>™</sup>

Scalable Hydrogen Energy Platform



CHRS<sup>™</sup>



Upgraded dispenser

**Compact Hydrogen Refueling Station** 





### Scalable Hydrogen Energy Platform



40' Containers in 2025

### SHEP is a scalable hydrogen energy platform built on a 1.25MW alkaline electrolyzer that produces up to 500kg per day of compressed green hydrogen from water. This platform caters to a diverse and flexible set of energy needs, with integrated software to manage the production and sale of hydrogen across any hydrogen network.

#### **Specs**

- 500kg/day
- Smaller footprint
- 350/700 bar
- Green or grid power

### Capacity

- 70 class 8 semi trucks per week
- 140 buses per week
- Up to 100 vehicles per day
- Up to 200 forklifts per day
- Up to 500,000 kWh of energy with fuel cell per month



# **CHRS**<sup>TM</sup>

### Compact Hydrogen Refueling Station





#### **Upgraded dispenser**

CHRS is a **compact hydrogen refueling station** designed to produce, store, and deliver high-quality, fuel cell-grade green hydrogen from water using an electrolyzer. CHRS is scalable and represents a green future for communities and entities seeking to embrace hydrogen-based technologies.

#### **Specs**

- Dispensing
- 220-240V
- 350/700 bar

#### Capacity

- Slow and fast fill
- Up to 1/kg per minute



## **Safety and Standards**

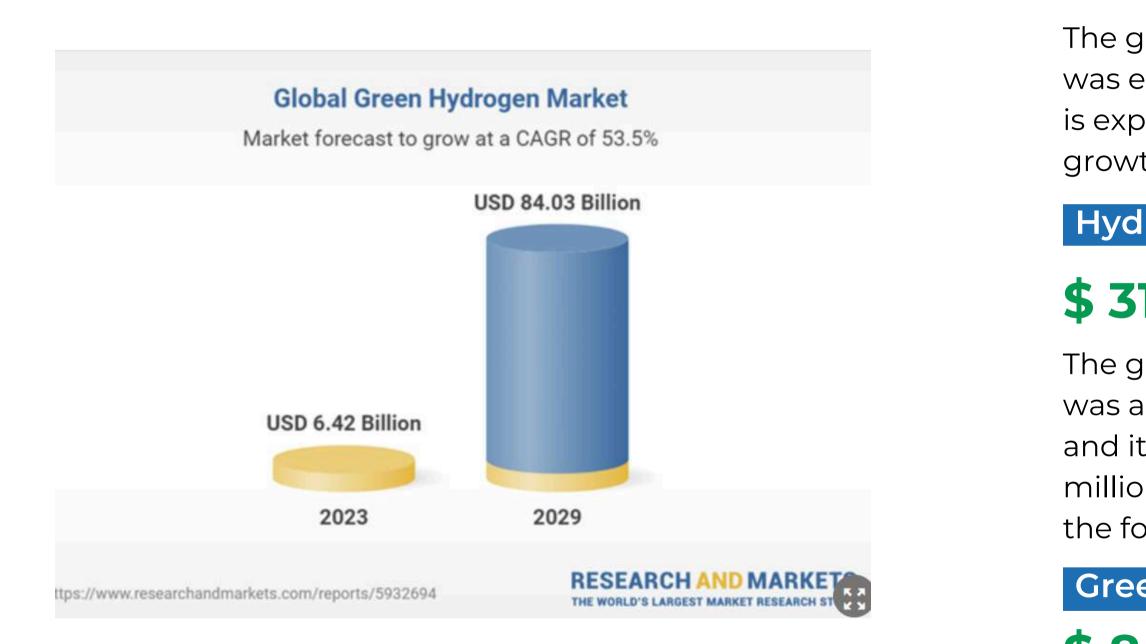


### **Our equipment is built to key hydrogen** standards and codes:

- American Society of Mechanical Engineers (ASME): • ASME B31.12, ASME section VIII
- API RP 500, IEC 60079 series, IEC 61508, CSA B51, UL 508A, OSHA 1910.103.
- EPA regulations, NEMA 250 International Fire Code (IFC) • International Organization for Standardization (ISO): ISO 22734, ISO 14687-2019 • National Electric code (NEC): • NFPA 70, NFPA 2 and NFPA 55



### Market Size



The hydrogen market is gradually expanding in both the United States and globally. This growth is driven by the increasing need to establish a hydrogen infrastructure to support the expansion of production and refueling efforts. Confidential

The global green hydrogen market is expected to grow at a CAGR of 53.53% from 2023 to 2029, reaching USD 84.03 Billion by 2029.

#### **Current Hydrogen Production**

### \$170.14 Billion

The global hydrogen generation market size was estimated at USD 170.14 billion in 2023 and is expected to grow at a compound annual growth rate (CAGR) of 9.3% from 2024 to 2030.

#### Hydrogen Refueling

### \$ 311.05 Million

The global hydrogen fueling station market size was accounted for USD 311.05 million in 2022, and it is expected to surpass around USD 1,495.16 million by 2032, growing at a CAGR of 17% during the forecast period 2023 to 2032.

#### Green Hydrogen

### \$84.03 Billion



### Go To Market







Our Company leverages 15 years of hydrogen expertise and collaboration with experienced integration partners and sub-system providers.



With our unique capabilities, we are strategically developing regional and local hydrogen production facilities for industry.



# **SHEP Production and Refueling**

### **One SHEP can fuel:**

- 70 semi-trucks per week
- 140 buses per week
- 100 vehicles per day
- 200 forklifts per day
- 500,000kWh w/ fuel cell per month





Hydrogen truck refueling and rest stop



Hydrogen bus bay with solar roof

Confidential



Hydrogen passenger vehicle rideshare program



Hydrogen garbage trucks



# H2 Facility | Colorado Springs, Colorado

### **Clean Hydrogen Production and Refueling**

With our electrolyzer manufacturer Element One Energy, we have successfully completed our alkaline electrolyzer prototype, capable of producing 100 kg per day of fuel cellgrade hydrogen.

This prototype serves as a crucial step in validating our operational proof of concept. The initial results have been promising, demonstrating the efficacy of our scalable hydrogen technology.

#### **Specs**

- 100 kg per day of compressed fuel-cell grade hydrogen
- Alkaline electrolysis







# Flagship Facility | Katy, Texas

### **Green Hydrogen Production and Refueling**

HNOI is spearheading the development of a localized, scalable, green hydrogen production and refueling facility in Houston's Energy Corridor in Katy, TX, strategically located near major highways and commercial/industrial zones.

#### Specs

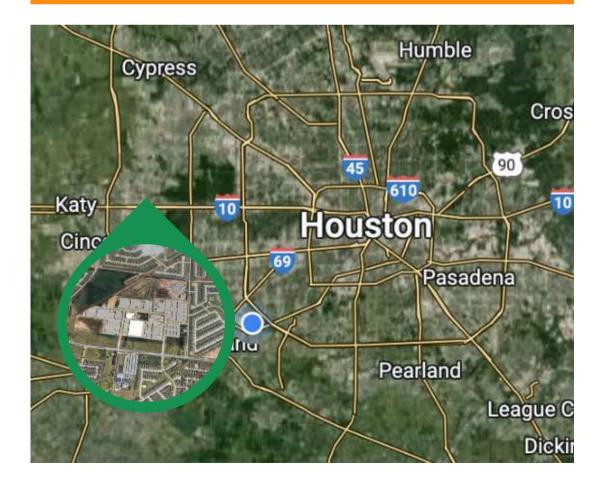
- 500 kg per day of compressed fuel-cell grade hydrogen
- Two hydrogen fueling stations
- Alkaline electrolysis
- Renewable Energy Credits (RECs)

### Capacity

- 70 class 8 semi trucks per week
- 140 buses per week
- Up to 100 vehicles per day
- $\circ~$  Up to 200 forklifts per day



**Currently Under Construction** 







# **Developing Hydrogen Infrastructure for Truck Fleets**

HNOI is coordinating with semi-truck fleet operators in California to place 8 hydrogen production and refueling facilities along key trade and transport routes.





# **Hydrogen Grid and Energy Storage**





Hydrogen enables reliable power for communities, datacenters, currency mining, and more



### **Power Generation**

With a fuel cell, a single SHEP can produce enough hydrogen *in one month* to generate one year of electricity for:

- 50 homes
- 28 crypto miners

### **Grid support**

Uninterrupted baseload electricity with renewables, hydrogen, and batteries help to provide grid stability and reliability.

### Load management

Batteries provide energy during high peak loads and absorb unused energy during lower power consumption.





## Fuel Cell Generator

### **Green Electricity for Digital Currency Mining**

HNOI is developing a demo for a 6 kilowatt hydrogen fuel cell generator to energize bitcoin miners.

Mining facilities require a stable and substantial power supply, often leading to significant energy consumption and carbon emissions.

Our goal is to offer low-cost, energy production for the power intensive Bitcoin mining and High Performance Computing (HPC) data centers, promoting sustainability, reliability, and efficiency in the industry, behind the meter.







# Hydrogen in the News

US lays foundations of new hydrogen industry (link)

Vehicle manufacturer unveils America's first hydrogen garbage truck (link)

The Global Green Hydrogen Market Is Expected to Grow at a CAGR of 53.53% from 2023 to 2029 (link)

HNO International Spearheads Scalable Hydrogen Energy Platform (SHEP™) to Pioneer Green Hydrogen Production in 2024 (link)

Korea Unveils World's First Hydrogen Fuel Cell Powered Apartment Complex (link)

# **Today's Energy Challenges**

Why the US Grid Isn't Ready for the Energy Transition (link)

Power-Hungry AI Datacenters Could Push the US Grid to the Limit (link)







**Don Owens** Founder, Chair



**Paul Mueller** President, CEO



**Jasmine Louis** FVP





Hossein Haririnia CFO



**Greg Heller** CTO



**Brian Hill** VP of Sales, Partnerships



**Kristina Mabry** Director of Programs



**Misty Martinez** Investor Relations



Imperial Riverside San Bernardino San Diego



### **Technical Partners**





### Associations











### **Contact Us**



**Don Owens** Founder and Chair dowens@hnointl.com



#### **Paul Mueller CEO** and President

pmueller@hnointl.com

### **Follow Our Journey**



### hnointl.com

DISCLAIMER: This report (also commonly referred to as a "pitch deck") is for informational purposes only and is not intended to constitute an offer to sell any security of HNO International Inc. This report contains certain forward-looking statements that involve important known and unknown risks and uncertainties that could cause the actual results, performance, or achievements of the Company to be materially different from the results, performance, or achievements expressed or implied in any forward-looking statements made by or on behalf of HNO International Inc. These risks and uncertainties include, but are not limited to, those relating to HNO International Inc.'s growth strategy, customer concentration, outstanding indebtedness, competition and other risks associated with a business venture. The words "believe," "expect," "anticipate," "intend," and "should" and similar expressions identify forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date the statement was made. HNO International Inc. undertakes no obligation to update the material contained in this presentation document. There is no guarantee of a liquid market, gain on investment or protection of loss of investment.





#### **Jasmine Louis**

**Executive Vice President** 

jlouis@hnointl.com

