

# A GLOBAL SOLUTION TO REDUCE POLLUTION

October 2024 Presentation

# Forward Looking Statement



- This presentation is based upon information supplied by the management of dynaCERT Inc. (“dynaCERT” or the “Company”) and is being furnished on a strictly confidential basis, solely for use by prospective investors. Each recipient of this presentation agrees that all of the information contained herein is confidential and is not to be used for any purposes whatsoever except to assist the recipient in evaluating the Company. Each recipient agrees to keep the information contained herein in strict confidence and, neither directly nor indirectly, to reproduce or transmit in any form or by any means any of the information contained herein or to disclose such information to any person, firm, or corporation without the prior written consent of the Company. dynaCERT expressly disclaims any and all liability for any representation or warranties, expressed or implied, contained in this presentation or for omissions from it. Only those particular representations and warranties that may be made in a definitive agreement respecting any proposed transaction, if and when executed, shall have legal effect.
- This presentation/document contains forward-looking statements reflecting dynaCERT’s current forecast of certain aspects of the Company’s future. It is based on current information that has been assessed, but which by its nature is dynamic and subject to rapid and even abrupt changes. Forward-looking statements may include, without limitation, statements regarding growth projections, including financial forecasts and the projected rollout of the Company’s products. dynaCERT’s actual results could differ materially from those stated or implied by the Company’s forward-looking statements due to risks and uncertainties associated with its business, including, but not limited to:
  - The requirement for significant financing to develop and market its technology;
  - The ability to establish and maintain arrangements with industry recognized strategic partners;
  - Market acceptance of the Company’s technology and products;
  - Completion in all aspects of its business;
  - The effect of general economic, credit and capital market conditions on its business;
  - The ability to complete product development milestones and progress towards commercialization of product within the contemplated timetable;
  - The ability to attract and keep highly qualified staff and management; and
  - Changes in product profit margins due to pricing changes driven by variations in customer demand, competition, or unforeseen factors.
- The Company’s forward-looking statements should be considered in the context of these and other risk factors. All future written and oral forward-looking statements made by the company on its behalf are also subject to these factors. The company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Securities laws vary between Canadian provinces and investors should seek independent legal advice regarding compliance with applicable securities laws in connection with any investment in the Company. The Securities of the Company are not registered under United securities laws. This presentation/document is not a prospectus or a public offering in any jurisdiction

# Highlights



Carbon Emission Reduction Technology	International Growth Strategy
Diversification in Trucking, Mining, Oil & Gas	Multiple Vertical Markets
Proprietary Know-How & Patents	Leader in Hydrogen Technology
Carbon Credit Measurement	Potential Recurring Revenue
High Barriers to Entry	Dominant Competitor Advantage
Compelling Value Proposition to Users	< 1 year payback
Strong Margins	Attractive Business Model
Verra Methodology Approval October 4 2024	Carbon Credits Possible for use of HydraGEN™

# Patented Technology

# *HydraGEN*<sup>™</sup>

- dynaCERT has developed & commercialized a patented proprietary electrolyser called HydraGEN<sup>™</sup>
- Produces measured amounts of hydrogen and oxygen gases from distilled water
- Delivers H<sub>2</sub> and O<sub>2</sub> at the air intake of internal combustion engines
- Results in:
  - >More power
  - >Better torque
  - <Less fuel consumption and
  - <Less CO<sub>2</sub>, CO, and NO<sub>x</sub>

# Features

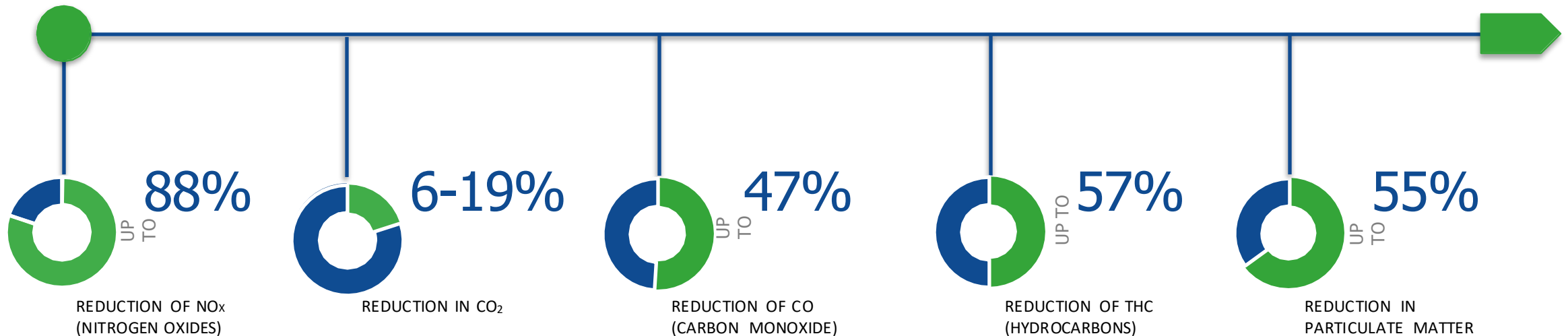
**HydraGEN™**

- On-demand, no H2 storage, no pressure, safer
- With a low power demand from the engine's battery
- Delivered to the air intake of internal combustion engines
- On trucks, mining equipment, generators, reefers, construction equipment
- < Particulate matter
- < Black smoke
- < Diesel Exhaust Fluid and < Diesel Particulate Filter

## Emission Benefits

### HydraGEN™ Lowers Emissions Substantially

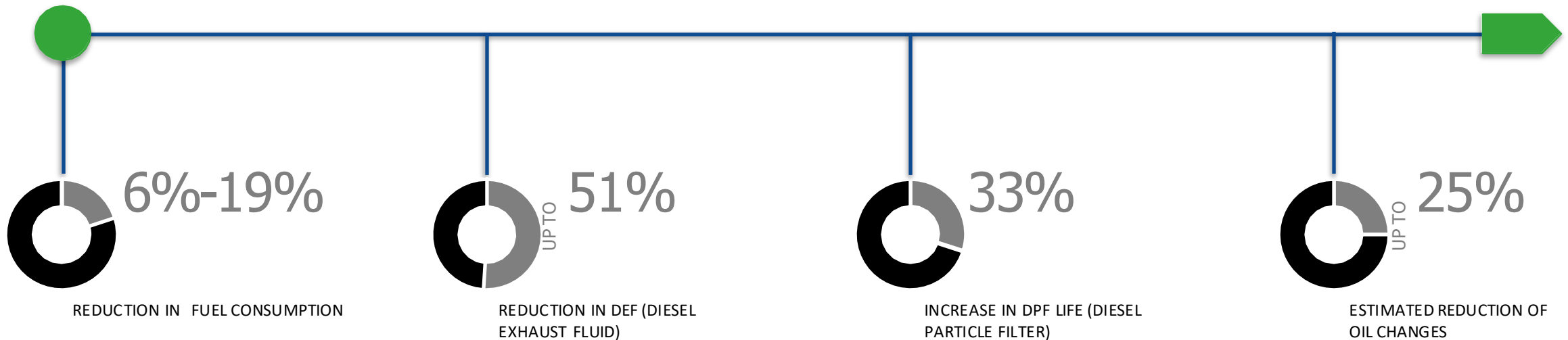
The following results have been acquired from accredited third-party verification performed by PIT Group in Montreal, Quebec, Continental EMITEC in Germany and performance testing at the UOIT ACE in Toronto, Ontario.



## Economic Benefits

### Lower Consumption and Maintenance

The following results have been acquired from accredited third-party verification performed by PIT Group in Montreal, Quebec, Continental EMITEC in Germany and performance testing at the UOIT ACE in Toronto, Ontario.



# Independent Validations



---

UOIT (University of Ontario Institute of Technology)

---

PIT Group of Canada

---

Continental EMITEC

---

iCAT in India

---

Independent Testimonials by users, globally

---

TÜV NORD & TÜV SUD testing for ABE/KBA European  
Homologation

---

Now: user “audit” with HydraLytica™

---



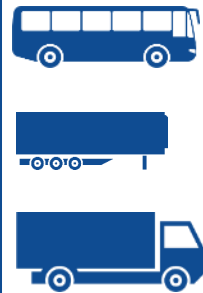


# HydraGEN™

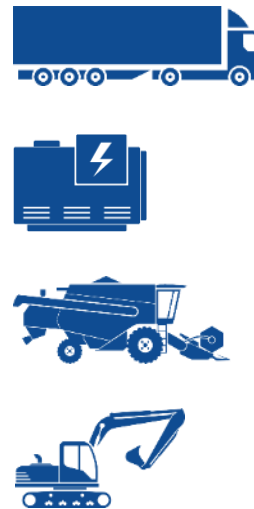
## Product Line



HG2 Series  
1 to 8 litre engines



HG1 Series  
10 to 15 litre engines



HG-4C & HG-6C series  
40 to 100 litre engines



# HG1R Series

## Greener Transportation

- Suitable for 10-15L Diesel Engines
- Reduces Fuel Consumption up to 10%
- Transportation, Passenger Transport, Power Generation, Construction, Agriculture, Mining
- Reduce your Carbon Footprint and meet ESG Goals

Warranty: 1Year Limited Manufacturer's



Certifications:



# HG2R Series

## Greener Transportation

- Suitable for 1-8L Diesel Engines
- Reduces Fuel Consumption up to 10%
- Transportation, Passenger Transport, Power Generation, Construction, Agriculture
- Reduce your Carbon Footprint and meet ESG Goals



Warranty: 1Year Limited Manufacturer's

Certifications:



# Transportation & Logistics



# Transport & Generation/Oil Fields



# Construction Application



# Transport & Logistics Application



# Results – Mining Pilots

Reducing carbon emissions, improving diesel fuel economy



**CAT797**

1.3MM Tonnes Hauled  
3,300 Cycles

**13.4%**  
Fuel Efficiency



**Komatsu  
930E**

380,000 Tonnes Hauled  
700 Hours

**11.8%**  
Fuel Efficiency

**TRIALS  
Achieved  
8%-13%  
Diesel Fuel  
Efficiency Gain**

**11.0%**  
Fuel Efficiency

**Highway  
Transport**  
1,280 Hours



**12.6%**  
Fuel Efficiency



**Dynamometer  
14L MAN Truck**

3rd Party Testing  
>Emitec/Contential



**8.9%**  
Fuel Efficiency



**CAT793**

320,000 Tonnes Hauled  
826 Hours

**2022 Trials**



*data provided by H2Tek*





# Power Generation Application



HydraGEN™ HG4C unit



Fuel Tank and Containerised Generator

# HG4C

## Greener Mining

- Suitable for 40-60L Diesel Engines
- Reduces Fuel Consumption up to 10%
- Power Generation, Heavy Mining and Construction Agreement
- Reduce your Carbon Footprint and meet ESG Goals



Warranty: 1Year Limited Manufacturer's

Certifications:



# HG6C

## Greener Mining

- Suitable for 60-90L Diesel Engines
- Reduces Fuel Consumption up to 10%
- Power Generation, Heavy Mining and Construction Agreement
- Reduce your Carbon Footprint and meet ESG Goals

Warranty: 1Year Limited Manufacturer's

Certifications:



# Mining Application Open Pit



# Target Markets - Industries Served



## CURRENT



- Buses



- Refrigerated Trailers



- Small Trucks



- Class 8 Trucks



- Power Generators



- Farming



- Construction



- Mining Equipment & Oil Drill Rigs

## INITIATED



- Small Marine Vessels



- Locomotives

## FUTURE



- Passenger vehicles

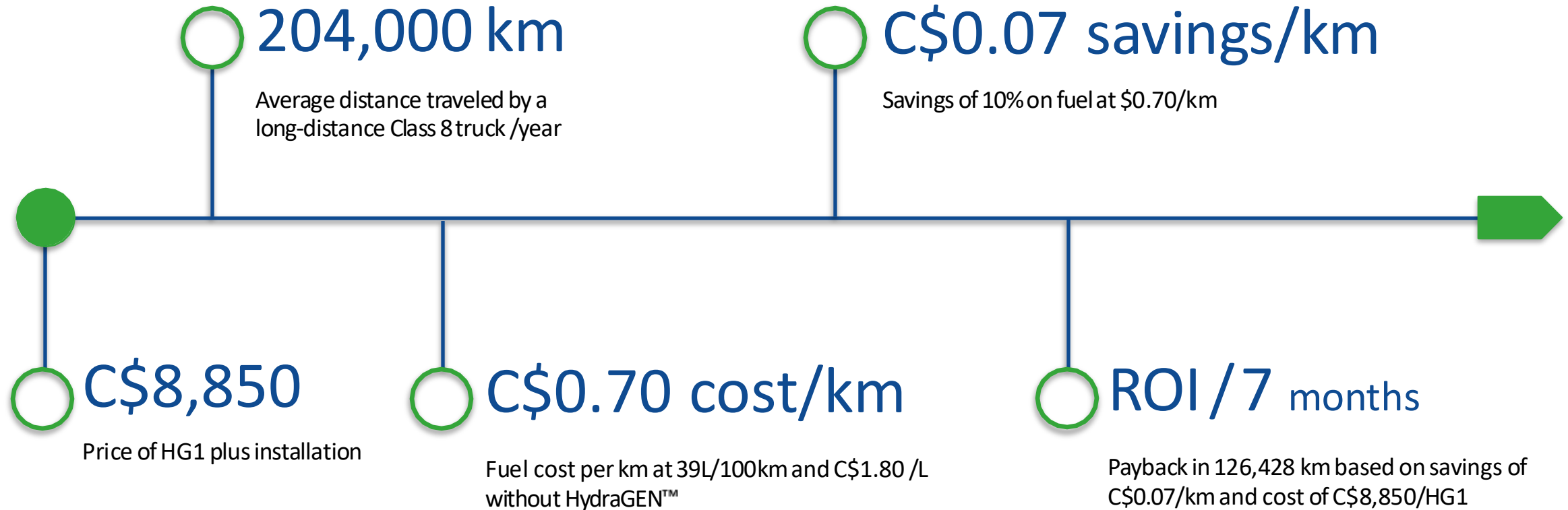


- Ocean Vessels

# Diverse Applications



# Value Proposition to End-User



\*Payback model is only based on fuel savings. End-users of HydraGEN™ Technology may also find cost savings from other benefits such as reduction of DPF Filters used, less DEF usage and less oil changes.

# Market Size

- **Total ICE Market**
  - 1 Billion internal combustion engines operate world-wide
  - 100 Million new internal combustion engines built world-wide every year
- **HG2 Market Estimate**
  - 20 Million in North America
  - 40 Million in Europe
  - 55 Million in South Asia
  - 20 Million in South America

## Europe

- 145 million trucks

## North America

- 711,000 trucking companies relying on 3.5 million drivers
- 15.5 million class 8 trucks
- 36 million trucks registered for business

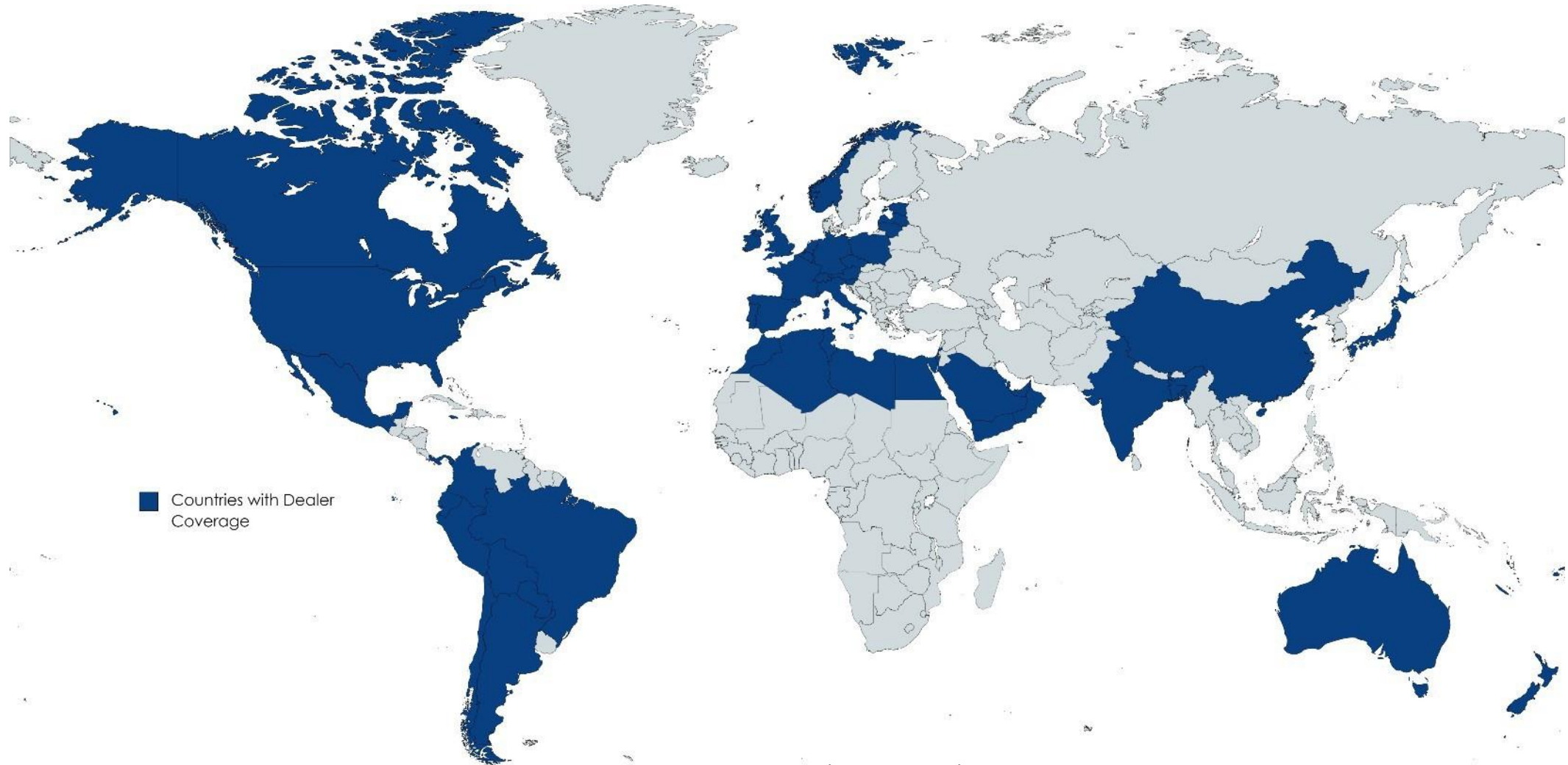
## South America & India

- 210 million trucks



# Dealer Network

48 Qualified Dealers & Agents Globally that Service 55 Countries:



# HydraLytica™ Benefits



Automated Reporting & Analytics



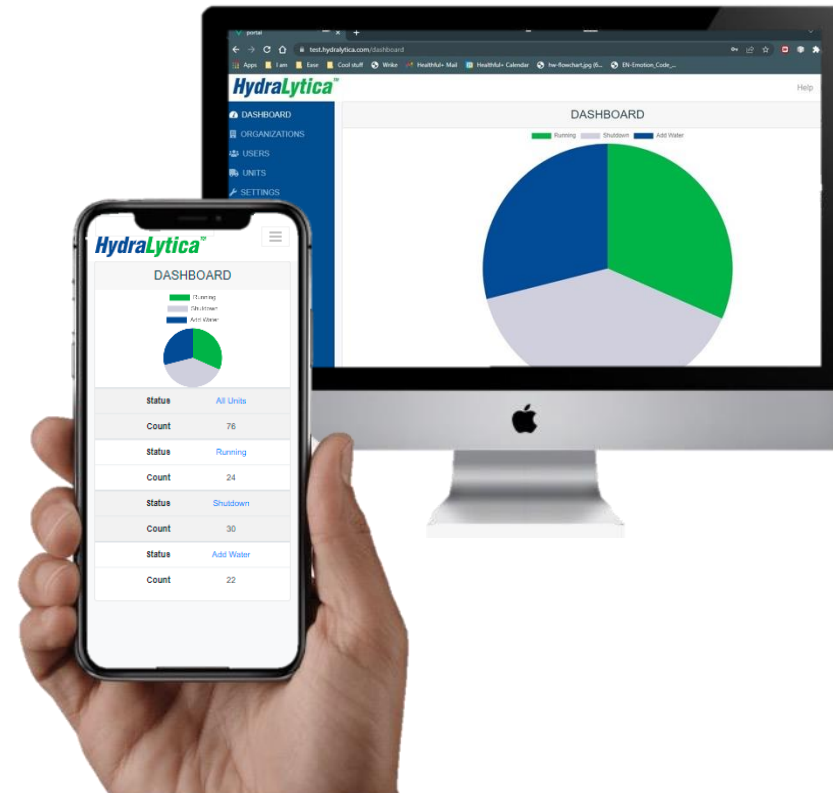
Automated fleet-wide tracking of fuel savings, emission reduction, & carbon credits generated.



Reduce Maintenance Cost



HydraLytica™ also automates fleet management for the HydraGEN™ system.



# Business Model



CAD 100,000,000 Expenditures to Develop and Commercialize	20 Years of R&D
dynaCERT Assembles Product in Toronto, Canada	Newly Upgraded Assembly Facilities
Cost of Production: 50% of Wholesale Price	Profit Margin: 100%
Products Sold Through Global Dealer/Agent Network	In Europe dynaCERT GmbH
Dealer Network Insures Local Sales, Marketing & Service	Reduces Sales & Marketing Overhead
Multiple Target Markets	Using Dealer Network Strategy
Multiple Product Versions	Adaptation to Client Requirements
Continuous R&D	Maintain Market & Product Leadership

# Comparable Technology = Trailer Skirts

## Trailer Skirts

- 90% of long-haul trucks have added skirts since their launch 9 years ago
- Skirts cost C\$3,000 can save 1% fuel

## HydraGEN™ Technology

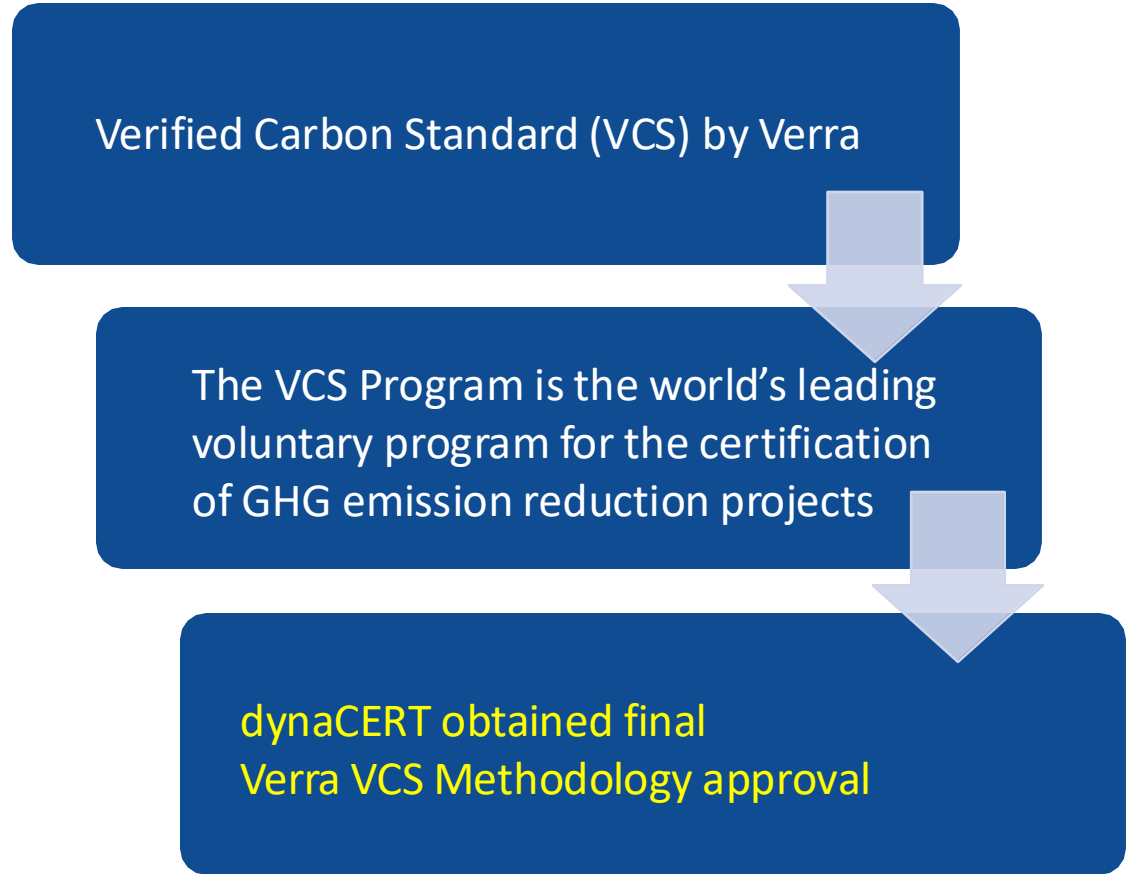
- Cost the end-user ~C \$10,000 and can save approximately 10% fuel, 1% for C\$1,000

## Comparison

- HydraGEN™ is a 3 x Better Proposition



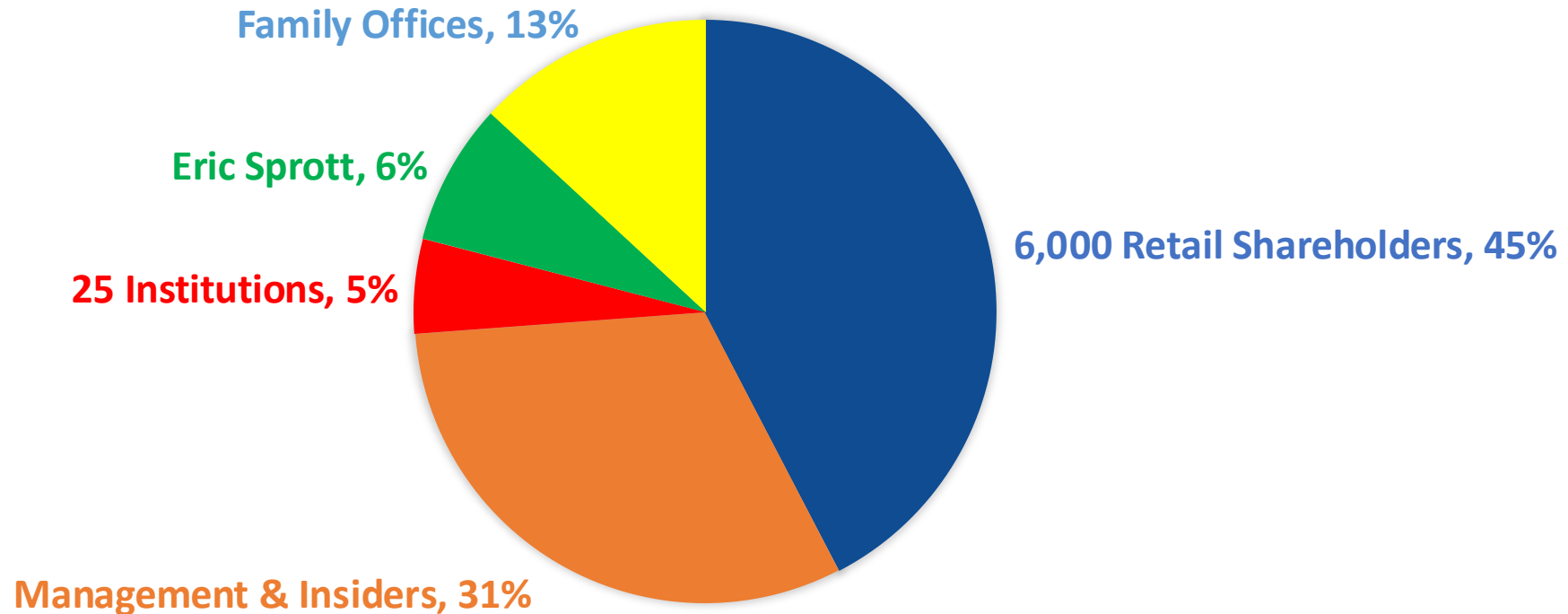
# Verra Carbon Credit



# Strong Shareholders



APPROXIMATE VALUES



# High Barriers to Entry



- ❌ Worldwide Patents + Unique ECU (Electronic Control Unit)
- ❌ Technological advantage: e.g., weather robustness, separation method of H<sub>2</sub> and O<sub>2</sub>
- ❌ Lead Time advantage: \$100 million & 20 years to develop and commercialize
- ❌ Regulatory advantage: Certification in global jurisdictions takes years
- ❌ Distribution Network advantage: e.g., 48 qualified dealers globally
- ❌ First-to-Market advantage: across many verticals, e.g., transportation, mining, oil & gas, generators, construction, and locomotive

# Positioning for the Future



- dynaCERT acquired 15% of Cipher Neutron
- 20% on a fully diluted basis (with exercise of warrants)
- Positioning in the Hydrogen Economy for the long term

Cipher Neutron

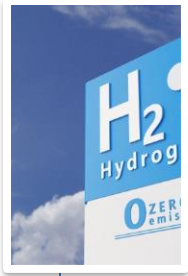


A dynamic splash of clear water against a light blue background, with a trail of bubbles falling from the center. A red rectangular box is positioned on the left side of the splash.

# Cipher Neutron

*Green Hydrogen at the lowest affordable prices.*

# About Cipher Neutron



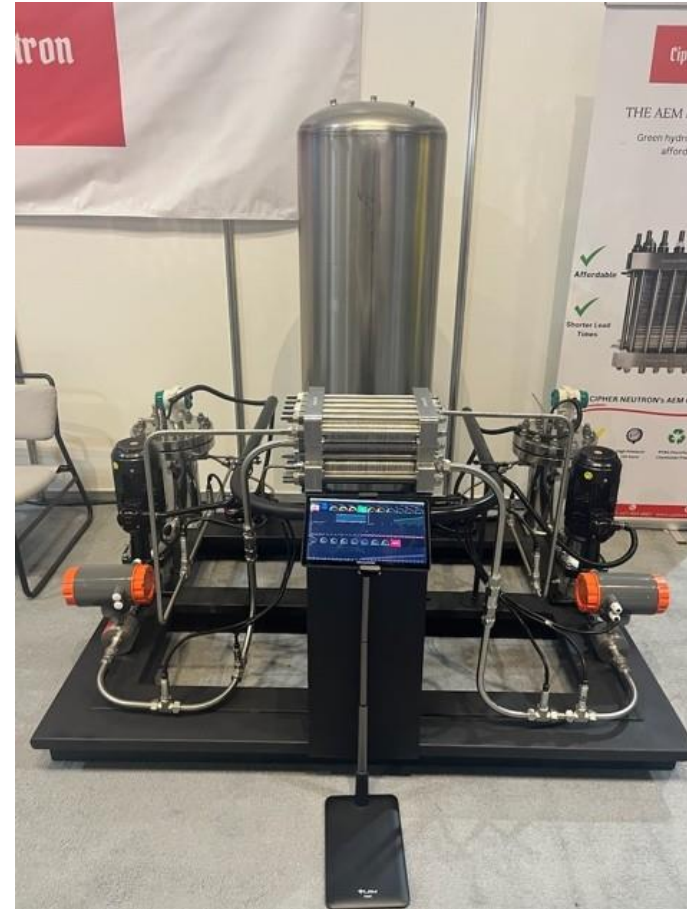
A cleantech company focused on  
**Low-Cost Green Hydrogen Generation**



North America's 1<sup>st</sup> company marketing  
**AEM Electrolyser technology**



World's 1<sup>st</sup> to apply for  
patent in innovative  
**Reversible Fuel Cell technology**



# Hydrogen Market

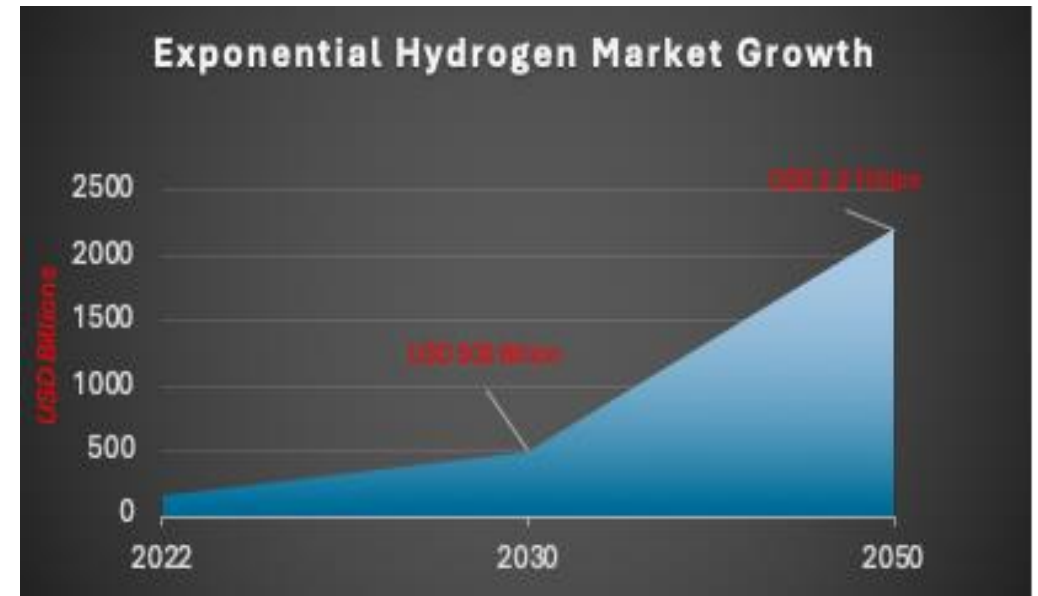
## Existing market

- Oil & Gas (USD\$40 B)
- Fertilizer (USD \$ 80 B)
- Mining (USD \$ 5 B)
- Chemical industry (USD \$15 B)
- Food industry (USD \$1 B)



## Emerging market

- Fuel Cell
- Hydrogen IC engine
- Natural Gas Blending
- Steel Manufacturing



# Cipher Neutron's AEM Electrolyser

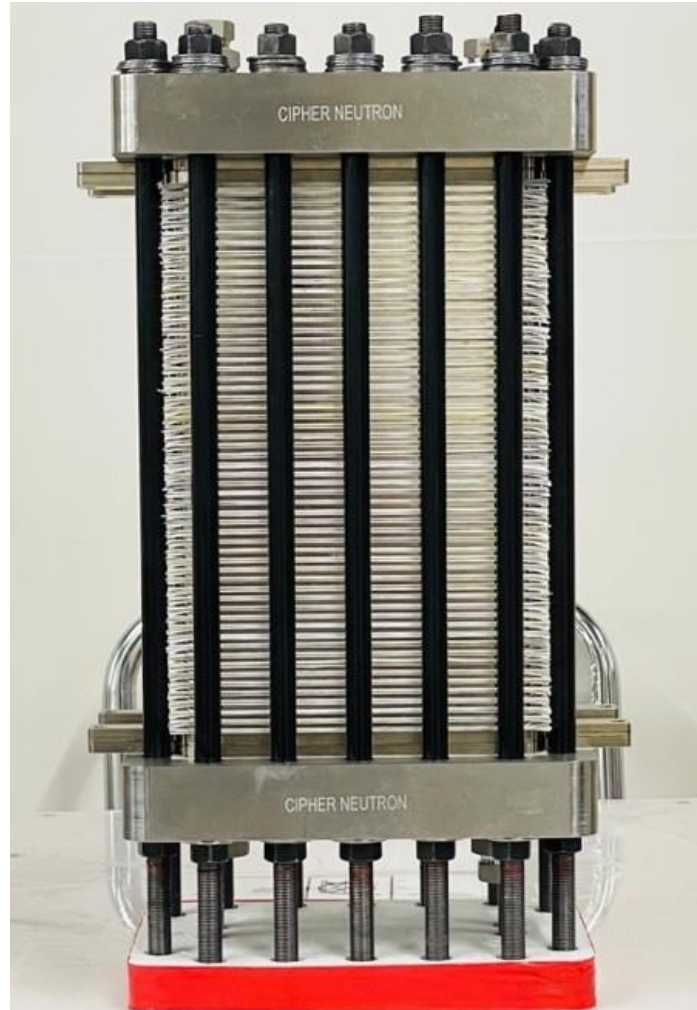
Cipher Neutron

---

A highly efficient way to  
produce Green Hydrogen

---

No use of precious metals  
as used in PEM electrolyzers



---

1<sup>st</sup> North American Company to  
launch AEM Electrolysers

---

Backed by 22 years of research and  
development

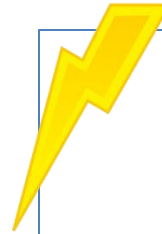
# AEM Benefits

Cipher Neutron



## Highly Efficient

82% efficiency vs industry standard of 77%



## High Ampacity

High current density (2amps/cm<sup>2</sup>) enables more H2 production per unit area



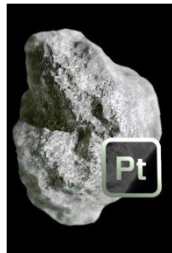
## High Pressure

Eliminates the need for expensive secondary compressors up to 30 bars.



## Compact Design

Enables light weight and smaller footprint electrolysers



## No Precious Metals

AEM Electrolysers do not use any precious metals as used in other technologies



## Price Reduction

Less than \$950 (USD) per kW

1. High Efficiency enables more hydrogen production using the same amount of energy/power. This results in lower operating costs to produce green hydrogen.
2. High Ampacity enables more hydrogen gas from a given area. Alkaline electrolysers have ampacity of around 0.1 amps/cm<sup>2</sup> Vs 2 amps in our AEM.
3. High Pressure enables easy storage of hydrogen and also eliminates the need to buy expensive hydrogen compressors to compress hydrogen.
4. Compact design enables less material required for the manufacturing of the electrolyser. This leads to lower Capex.
5. No precious metals enables our AEM electrolysers to be more sustainable and affordable. Precious group metals could also be subject to supply-chain problems coming from hostile nations.
6. Price reduction in AEM is significant due to its compact design and the elimination of expensive rare earth and precious metals.

# Future R&D of Cipher Neutron: Reversible Fuel Cell

Cipher Neutron

---

1<sup>st</sup> Company to have Reversible Fuel Cell with Graphene Storage

---

Non-compressed Hydrogen Storage



---

Single system to produce Green Hydrogen and Clean Electricity

---

Ability to replace Lithium-ion batteries

---

Patent Pending

# Future R&D of Cipher Neutron RFC Applications

Cipher Neutron

- Energy Storage
- Residential and commercial power backup
- Off-grid/remote hotels, communities, cottages, etc.
- Utilities
- Capturing surplus/off-peak power

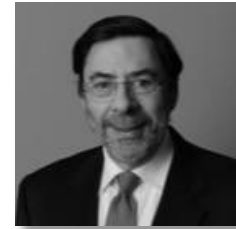


# Management



Jim Payne  
Chairman, CEO, &  
Director

- CEO of dynaCERT since 2013
- Previously CEO of privately held consulting, project management and real-estate development company
- Successfully built and managed his own private companies for more than 38 years providing experience in accounting, business leadership, and the legal aspects of governance



Jean-Pierre Colin  
Executive Vice  
President & CFO &  
Director



Khoa Tran  
Director of Finance



Bernd Krueper  
President & Director

- 6.5 Years CEO at Hatz Group
- 18 years leadership experience at Rolls-Royce Power Systems AG
- 6 years at Daimler Group
- MBA from Eberhard-Karls-University



Enrico Schlaepfer  
VP of Global Sales



Ed Cordeiro  
Director Sales  
Americas



# Contact



JIM PAYNE, Chairman, & CEO

Phone: +1416 766 9691 ext. 2

Email: [jpayne@dynacert.com](mailto:jpayne@dynacert.com)

JEAN-PIERRE COLIN, CFO, Executive VP & Director

Phone: +1416 573 4300

Email: [jpcolin@dynacert.com](mailto:jpcolin@dynacert.com)

NANCY MASSICOTTE, Investor Relations

Phone: +1416 766 9691 ext. 1

Email: [nmassicotte@dynacert.com](mailto:nmassicotte@dynacert.com)

CORPORATE OFFICE

101-501 Alliance Avenue

Toronto, ON M6N 2J1

Canada