# DRIVING CHANGE FOR





#### FORWARD LOOKING STATEMENT



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- > 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;
- Competition 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 States securities laws. This presentation/document is not a prospectus or a public offering in any jurisdiction.

## **OUR VISION**



- We are dynaCERT Inc., a growing energy sector company based in Toronto, Canada
  - listed on the TSX.V
- We specialize in developing, manufacturing and distributing Carbon Emission Reduction Technologies to a global diesel engine marketplace
- Throughout our years in business we have developed and improved a proprietary electrolysis unit that generates hydrogen and oxygen on demand to:
  - address the growing global requirements to reduce emissions
  - provide economic benefits by offering better fuel economy for diesel engines world-wide

#### Our future is exciting | Our perspective is global | Our mission is achievable

#### INVESTMENT HIGHLIGHTS



- Leading provider of Carbon Emission Reduction Technologies to reduce emissions and improve fuel efficiency in diesel powered combustion engines
  - Proven, proprietary and patented technologies
  - Ability to monitor and monetize carbon credits
- Industry creator/leader protected by high barriers to entry
- Near-term growth potential reflecting late stage trials and certification processes
  - in large target markets, Canada, USA, South America, Europe, South Asia, Middle East
  - across vertical market segments for trucks, reefer trailers, buses, heavy construction, mining equipment, electrical power generators, marine & locomotive
- Compelling value proposition to end users
- Attractive business model with strong margins
- Experienced and seasoned management team and board to realize success

## WHY HYDROGEN WORKS



- Hydrogen (H<sub>2</sub>) gas is an ideal catalyst for improving the thermodynamics of internal combustion engines, especially diesel-powered engines, because of its unique electro-chemical characteristics.
- The hydrogen and oxygen produced from dynaCERT's HydraGEN™ system does not replace or displace diesel fuel.
- Instead, the HydraGEN™ gases are used as an "enhancer" to improve the thermal efficiency of the combustion of the diesel fuel by supplying a small percentage of hydrogen (H₂) to the air mixture.



Higher Combustion Temperature



Low Temperature / Energy Ignition



High Flame Speed Propagation



Easy To Produce by Water Electrolysis



Non-Toxic & Non-Poisonous



Carbon-Free, Petroleum-Free and Non-Fossil

## WHY HYDRAGEN™ WORKS BETTER



#### Taking Hydrogen To a Whole New Level

- > dynaCERT's *HydraGEN™* is a dramatic departure from what has been attempted before with similar hydrogen on-demand generation systems the only thing similar is the use of hydrogen.
- ► HydraGEN<sup>™</sup> is a product of several years of R&D in internal combustion technology, electrochemical, electrical and computer engineering and millions of kilometers of on-road testing.
- > HydraGEN™ is far superior to anything previously attempted with an on-demand hydrogen injection for the following reasons:



#### Proprietary H<sub>2</sub> & O<sub>2</sub> Gas Management System

Patent pending system for separating gasses enables optimal mixture of H<sub>2</sub> & O<sub>2</sub>.



#### Proprietary Smart Electronic Control Unit (ECU)

Patent pending state-of-the-art digital processing hardware & software



#### Advanced Proprietary Water Electrolysis System

Patent pending high output, low energy electrolysis system



#### Accredited Third Party & On-Road Validation

Results validated through both on-road & accredited 3rd party testing

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TSX:V DYA | OTCQB: DYFSF | FRA: DMJ

## **EMISSION BENEFITS**



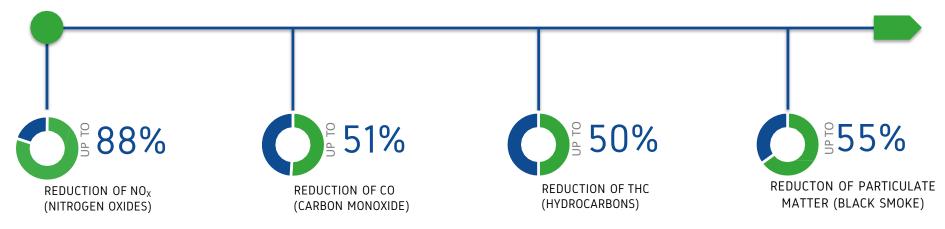
#### *HydraGEN™* Lowers Emissions Substantially

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**



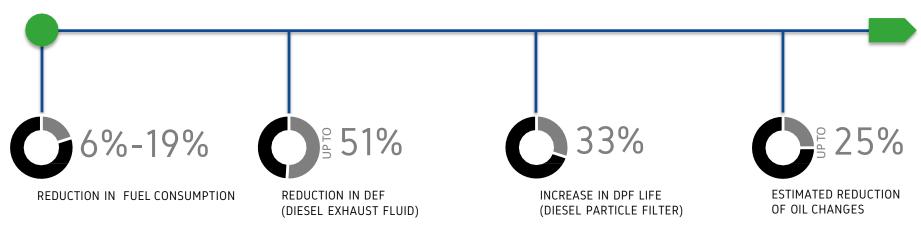
#### **Lower Consumption and Maintenance**

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 VERIFICATION



- 2016 ➤ 3<sup>rd</sup> party testing from UOIT confirmed the performance of the *HydraGEN*<sup>TM</sup> Technology
- Developed Patent Pending "Smart" Electronic Control Unit (ECU) the brains of the *HydraGEN™*
- 2017 > Successful refrigerated trailer testing on a 2.1 Litre diesel engine completed
- 2018 > 3<sup>rd</sup> party testing and verification by the PIT Group in Montreal
- 2018 > Independent testimonials by users In India, Canada, USA
- 2018 > TUV NORD & TUV SUD testing completed for European Homologation
- 2019 > KBA ABE European Homologation received in August 2019

## THE HG1 FAMILY



HG145B 10 to 15 litre engines



HG145R 10 to 15 litre engines



HG145-C series 40 to 100 litre engines







WEATHERPROOF



**DAMPENED** 



FOR ALL SIZES

#### THE HG2



- The HG2 unit is approximately 1/3 of the size of the HG1 model.
- The smaller size will allow for new applications on Class 2-7 trucks, as well as refrigerated trailers i.e. "reefers". (1 TO 8L litres displacement)
- The market size for the HG2 is 20 million trucks and trailers in each of North America, Europe and South Asia.
- Product commenced commercial production in 2019





DURABLE

WEATHERPROOF

**DAMPENED** 





## HIGH BARRIERS TO ENTRY



- $\triangleright$  Separation of H<sub>2</sub> and O<sub>2</sub> is a unique development
- Patent pending technology
  - Unique Electrolysis Reactor
  - Unique Processes
  - Unique ECU (Electronic Control Unit)
- Certification & validation in multiple jurisdictions significant cost & time advantage in achieving certifications, including ABE Homologation
- Global marketing strategy across multiple verticals
- Since inception, dynaCERT has spent approximately \$50 million developing and improving the HydraGEN™ Technology

## SIZE OF MARKETS



#### HG1 & HG2

- 1 Billion diesel engines operate world-wide
- 100 Million new diesel engines built worldwide every year

#### > HG2

- Targeted for refrigerated trailers
- 20 Million in each of North America, Europe, South Asia

- Diesel is still the economical means of commercial transport:
  - Goods and Food
  - Trucking locally, door to door, and globally via shipping & locomotives
  - Across provinces, states and continents
- Electrical Engines are not yet well-established
  - Very high capital cost, usage costs & servicing
  - Long battery charging time means downtime to Truckers
  - Battery weight greatly reduces payload & economics
  - Unreliable in hostile weather environments & where electrical power is expensive

## INDUSTRIES WE SERVE



#### CURRENTLY



- Trucks
- Tractors
- Reefers
- Vans
- Glider Kits
- Buses



- Off Road
- Construction
- Pumps
- Compressors
- Light Stands
- Advertising Stands
- Mining



 Power Generation

#### **FUTURE**





- Ships
- Ferries
- Tugboats
- Fishing Vessels

Locomotives

## VALUE PROPOSITION TO END USER





<sup>\*</sup>Payback model is only based on fuel savings. End users of HydraGEN™ Technology may also find cost savings from other areas such as reduction of DPF filters used, less DEF usage and less oil changes.

## **BUSINESS MODEL**



- Typical order process by end-users:
  - Demonstration (~30 days)
  - Initial Purchase & Trials (~60 days)
  - Repeat orders (~60 days)
- Various customers across global markets have completed demonstration and are into initial purchase and trials
- Significant growth opportunity as end users transition to repeat orders to supply their fleets

#### DEALER NETWORK



#### **EXPANDING INTERNATIONALLY**

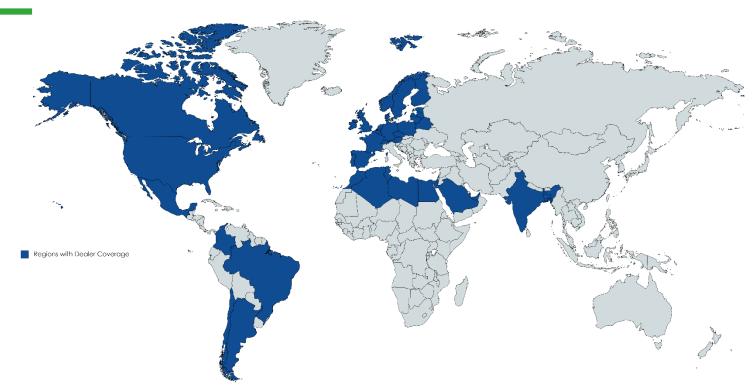
- Canada
  - Maritimes, Quebec, Ontario, NWT, Alberta, BC
- USA & Mexico
- Europe
- South America
- India
- Middle East
- Israel

## NOW TOTALLING OVER 30 DEALERS GLOBALLY

- Distributors/Dealers serve end users in their local jurisdictions, globally
- PO: 25% down payment of wholesale price
- Leave exWorks: 25% payment
- 30 days FOB site: 50% of wholesale price
- Dealers financially supported by EDC for 90% of contract value

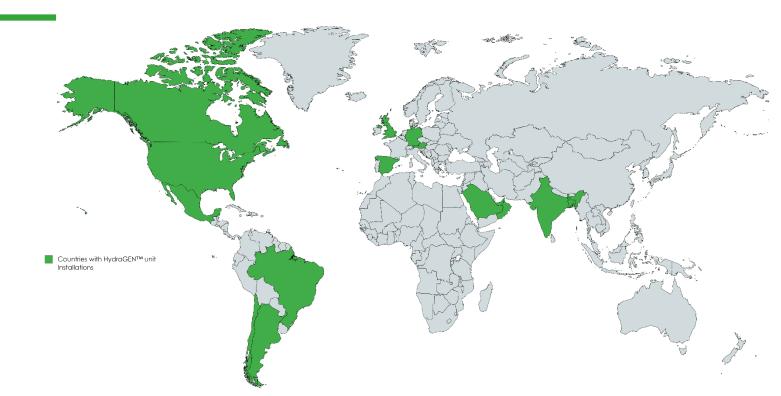
## **DEALER NETWORK — JANUARY 2020**





## INSTALLATIONS — JANAURY 2020





#### **MANAGEMENT**





Wayne Hofmann Chairman



Jim Payne President, CEO & Director

- Chartered Accountant
- Former business executive with Deere & Company responsible for mergers and acquisitions; Vice-President, Finance and President of John Deere Credit
- Treasurer of Christians For Israel, Canada, responsible for Planning and Development
- 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



Robert K. Maier COO, Chief Engineer



Enrico Schlaepfer VP of Global Sales



Jean-Pierre Colin Director & Corporate Secretary



Carmelo Marrelli CFO



Khoa Tran
Director of Finance



David Bridge
Technical Advisor

## **BOARD OF DIRECTORS**





Wayne Hofmann Chairman



Jim Payne President & CEO



Jean-Pierre Colin Director & Corporate Secretary, Strategy Consultant, former Investment Banker



Robert K. Maier, COO, Chief Engineer, Industrialist



Elliot Strashin Director, Real Estate Developer & Fnvironmental Platinum Lead Innovator, formerly MD



Richard Lu Director, CEO of International Solar Panel industry leader



Amir Farahi Government Relations Consultant

LEADERSHIP | GUIDANCE | COUNSEL

## **CAPITAL STRUCTURE**



Common Shares (as at Press Release dated December 9, 2019)	334,728,260
Warrants (@ \$0.35) (as at Press Release dated December 9, 2019)	36,014,269
Options (@ \$0.10 to \$0.94 weighted average \$0.40) (as at MD&A dated September 30, 2019)	26,030,306
$^{\sim}$ 55% management & advisory board & related parties & high net worth individuals	~ 45% retail investors

#### INVESTMENT HIGHLIGHTS



- Leading provider of Carbon Emission Reduction Technology to reduce emissions and improve fuel efficiency in diesel powered combustion engines
  - Proven, proprietary and patented technologies
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- Industry creator/leader protected by high barriers to entry
- Near-term growth potential reflecting late stage trials and certification processes
  - in large target markets, Canada, USA, South America, Europe, South Asia, Middle East
  - across vertical market segments for trucks, reefer trailers, buses, heavy construction, mining equipment, electrical power generators, marine & locomotive
- Compelling value proposition to end users
- Attractive business model with strong margins
- Experienced and seasoned management team and board to realize success

## **CONTACT US**



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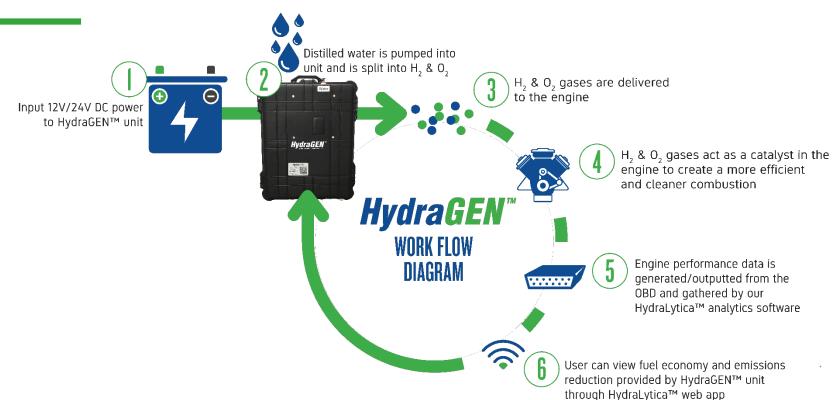
Email: <a href="mailto:nancy@irprocommunications.com">nancy@irprocommunications.com</a>



## **APPENDIX**

## WHY HYDRAGEN™ WORKS





## **OEM WARRANTY STATEMENT**



Letter or communication received from the following OEMs supporting warranty exemptions when using an aftermarket part and/or additive:

- Caterpillar
- Cummins
- Detroit Diesel / Mercedes
- Electromotive Diesel
- John Deere
- > Hitachi
- Komatsu America
- Navistar
- Volvo Trucks North America



#### **EVOLVING INDUSTRY**



- > Diesel Engines will continue to be abundant globally for a long time
  - > Trucking, Reefers, Busses, Cars, Power generators, Ships, Locomotives, Machinery
- Diesel is still the most economical means of trade i.e. moving:
  - Goods and Food
  - > Trucking locally, door to door, and globally via shipping & locomotives
  - > Across provinces, states and continents
- Electrical Engines are not yet well-established
  - > Very High capital cost, usage costs & servicing
  - Long Battery Charging Time means downtime to Truckers
    - vs readily available hydrocarbon fuel
  - > Battery Weight greatly reduces Payload
    - > Therefore trucking economics are diminished when using electrical
  - Unreliable in Hostile Weather Environments & Where Electrical Power is Expensive
- Governments looking for Solution to Pollution

# WHY HYDRAGEN™ WORKS BETTER THAN THE COMPETITION



#### Taking Hydrogen To a Whole New Level

- ➤ dynaCERT's *HydraGEN*<sup>TM</sup> *Technology* is a dramatic departure from what has been attempted before with similar hydrogen on-demand generation systems. The only thing similar is the use of hydrogen.
- ➤ The *HydraGEN*<sup>™</sup> gases are introduced into the engine's air intake without pressure and thereby do not affect an engine warranty
- The HydraGEN™ is a product of several years of R&D in internal combustion technology, electrochemical, electrical and computer engineering and millions of kilometers of on-road testing.
- ➤ The *HydraGEN*<sup>™</sup> is far superior to anything previously attempted with an on-demand hydrogen injection for the following reasons:

