

HYDRAGEN[™] - OUR ON DEMAND ELECTROLYSIS UNIT DESIGNED FOR INTERNAL COMBUSTION ENGINES THAT SUPPLIES THE AIR INTAKE WITH HYDROGEN AND OXYGEN GASES. RESULTS SHOW INCREASED FUEL ECONOMY, INCREASED TORQUE, EXTENDED ENGINE OIL LIFE AND A REDUCTION IN EMISSIONS.

ON-ROAD / RAIL / MARINE POWER GENERATION / OFF-ROAD

How much fuel does the trucking industry consume?

The trucking industry accounts for 12.8% of all the fuel purchased in the U.S. www.Truckinfo.net

How many trucks are sold in the U.S.?

Approximate average of 192,000 per year

How big is the trucking industry?

The trucking companies, warehouses and private sector in the U.S. employs an estimated 8.9 million people employed in trucking-related jobs; nearly 3.5 million were truck drivers. Of this figure UPS employs 60,000 workers and 9% are owner operators. LTL shippers account for around 13.6 percent of America's trucking sector.

How many trucks operate in the U.S.?

Estimates of 15.5 million trucks operate in the U.S. Of this figure 2 million are tractor trailers.

How many truckers are there?

It is an estimated over 3.5 million truck drivers in the U.S. Of that one in nine are independent, a majority of which are owner operators. Canada has in excess of 250,000 truck drivers.

What is the volume of goods transported by the trucking industry?

The United States economy depends on trucks to deliver nearly 70 percent of all freight transported annually in the U.S., accounting for \$671 billion worth of manufactured and retail goods transported by truck in the U.S. alone. Add \$295 billion in truck trade with Canada and \$195.6 billion in truck trade with Mexico .

KEEP YOUR BUSINESS UP TO SPEED.



EMISSIONS

One of the primary determinants of carbon dioxide (CO₂) emissions from mobile sources is the amount of carbon in the fuel. Carbon content varies, but typically we use average carbon content values to estimate CO₂ emissions.

The Code of Federal Regulations (40 CFR 600.113) provides values for carbon content per gallon of gasoline and diesel fuel which EPA uses in calculating the fuel economy of vehicles: Diesel carbon content per gallon: 2,708 grams

Visit our CO₂ calculator (put a link on this quote from the fact sheet).

Black carbon or BC is a climate forcing agent formed through the incomplete combustion of fossil fuels, biofuel, and biomass, and is emitted in both anthropogenic and naturally occurring soot. It consists of pure carbon in several linked forms. Black carbon warms the Earth by absorbing heat in the atmosphere and by reducing albedo, the ability to reflect sunlight, when deposited on snow and ice¹.

The majority of black carbon emissions are from developing countries and this trend is expected to increase. The largest sources of black carbon are Asia, Latin America, and Africa. China and India together

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account for 25-35% of global black carbon emissions².

Recent studies and public testimony by many of the scientists cited in the IPCC's report estimate that; emissions from black carbon are the second largest contributor to global warming after carbon dioxide emissions, and that reducing these emissions may be the fastest strategy for slowing climate change³.

The European Union and United States might further reduce their black carbon emissions by accelerating implementation of black carbon regulations that currently take effect in 2015 or 2020 and by supporting the adoption of pending International Maritime Organization (IMO) regulations. Existing regulations also could be expanded to increase the use of clean diesel and clean coal technologies and to develop second-generation technologies⁴.

Hydrogen is the first element in the periodic table, meaning it has an atomic number of 1 or 1 proton in each hydrogen atom.

Atomic Weight: 1.00794 - This makes hydrogen the lightest element.

The name Hydrogen comes from the Greek words Hydro and Gen which mean water generator.

The flame speed of hydrogen is nine times faster than the flame speed of diesel. Burning diesel in the presence of hydrogen will result in overall faster and more complete combustion. This will result in higher peak pressure closer to the Top Dead Centre (TDC) and therefore will produce a higher effective pressure to do work⁵.

VISIT OUR WEBSITE FOR MORE INFORMATION ON THIS TECHNOLOGY @ DYNACERT.COM

MANAGEMENT

James Payne
President, CEO & Director

Gordon Barr
CFO

Yumey Fernandez
Interim Corporate Secretary

MARKET STATISTICS (TSX.V: DYA)

Share Price (10/10/2014):	\$0.18
52-week low/high: Market	\$0.05/\$0.20
Cap (10/10/2014) Debt:	\$16.32M
	\$1.1M
Issued and Outstanding Shares:	163.16M
P/E:	9.38
EPS:	-0.01

CONTACT: Yumey Fernandez | 501 Alliance Ave, Suite 101, Toronto, ON M6N 2J1 | Tel: 416.766.9691

1 Ramanathan and G. Carmichael, Global and regional climate changes due to black carbon, 1 Nature Geoscience 221-22 (23 March 2008) ("The BC forcing of 0.9 W m⁻² (with a range of 0.4 to 1.2 W m⁻²) ... is as much as 55% of the CO₂ forcing and is larger than the forcing due to the other GHGs such as CH₄, CFCs, N₂O or tropospheric ozone.")

2 Tami Bond, Testimony for the Hearing on Black Carbon and Climate Change, U.S. House Committee on Oversight and Government Reform 2-3 (October 18, 2007), available at <http://oversight.house.gov/images/stories/documents/20071018110647.pdf> [hereinafter Bond Testimony]

3 "Third-World Stove Soot Is Target in Climate Fight" article by Elizabeth Rosenthal in The New York Times April 15, 2009

4 Clean Air Fine Particle Implementation Rule, 72 Fed. Reg. 20586, 20587 (April 25, 2007) (to be codified as 40 C.F.R. pt. 51), available at <http://www.epa.gov/fedrgstr/EPA-AIR/2007/April/Day-25/a6347.pdf>; Press Release, European Union, Environment: Commission welcomes final adoption of the air quality directive, (April 14, 2008), available at <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/570&format=HTML&aged=0&language=EN&guiLanguage=en>

5 BARI S, MOHAMAD E. EFFECT OF H₂/O₂ ADDITION IN INCREASING THE THERMAL EFFICIENCY OF A DIESEL ENGINE. FUEL 2009;89:378-383