



Investor Release – January 12, 2017

Empire Hydrogen receives Government of Canada Support for Cell Design Initiative

Sidney, BC: Empire Hydrogen Energy Systems is pleased to announce the receipt of support from the Government of Canada, through the National Research Council's Industrial Research Assistance Program. With technical expertise and funding provided through IRAP, Empire will develop a next generation hydrolysis Cell Stack with the sole purpose of improving efficiency in the output of hydrogen and oxygen accelerant gasses, thereby improving diesel engine fuel efficiency, reducing greenhouse gasses and smog.

Through IRAP, a Senior Research Officer from Vancouver will spend several days consulting at our Sidney research & production facility. We are particularly looking for his expertise in the development of electrolyte and cell plate materials to optimize accelerant gas production.

Following on this, Empire will share with IRAP in funding the costs of converting this advanced scientific research into practical designs ready for the marketplace.

Empire Hydrogen has developed a system to inject a minute amount (200ppm) of hydrogen and oxygen (H₂,O₂) accelerant gasses into a diesel engine's air intake. This causes the diesel fuel to burn faster and much more completely, resulting in a 16%-25% reduction in fuel consumption and greenhouse gasses, a dramatic reduction in smog causing diesel particulates and a 3% increase in horsepower. Typical large trucks, buses and generators use \$50,000 to \$100,000 in fuel per year. With a 20% reduction in fuel cost, Empire's system will payback in less than 1 year. Also important to large cities and truck operators

is the reduction in smog causing diesel particulates, meaning a 2/3 reduction in regen time, DPF filter cleaning and replacement, all of which have significant cost.



The Cell Stack is the engine of Empire Hydrogen's fuel enhancement system. Working under the guidance of the circuitry and control systems, the cell stack is where distilled water is converted into hydrogen and oxygen accelerant gasses.

For more information please contact Sven Tjelta or Andrew Evans at Empire Hydrogen at 778.426.0911.