



ClearValue® Executive Summary – Agriculture

Answering Critical Market Needs – Humanity is challenged for pure water, safe nutritious food and clean energy. ClearValue® innovations are instrumental to solving these challenges. ClearValue® Innovations are designed to provide significant value-in-use, thereby, obtaining success with via traditional business, marketing and sales techniques.

Providing Value via Benefits – The ClearValue® H₂ Energy Economy® brings a value-add to the clean energy marketplace, generating clean electricity (“e⁻”) at < \$.03 per kWhr (kilo-watt-hour - effectively competing with coal, natural gas, solar and wind), hydrogen (“H₂”) at < \$3/kilogram (“kg”), pure water (yes,



convert oil into energy and pure water (“H₂O”), organic nutrients (animal and fish protein supplement), and clean transportation engines (only emit pure H₂O) that are very powerful combusting pure H₂ and pure oxygen (“O₂” - HyOx), the power of NASA rockets. HyOx® engines have 3 to 10 times the power (horsepower and torque) of hydrocarbon and are 2 are 3 times as efficient (fuel energy to wheel energy. After having so much more power, HyOx® engines operate at a 20 to 50 % savings and last 3 times longer (no carbon to wear engine parts).



Hydrocarbon combustion affects our climate and causes health issues. There is significant need for means to control hydrocarbon emissions and produce energy free of Carbon Dioxide (“CO₂”), as well as oxides of nitrogen (“NyOx”) and sulfur (“SO_x”). However, hydrocarbon fuels are the largest worldwide industry and employer. The ClearValue® H₂ Energy Economy® comprises Sunlight as its first raw material and CH₄ second; therefore, whether the CH₄ is from organic waste, a well or cracked oil, current industries and jobs are improved, while providing clean energy.



Nutrients – Organic nutrients are a byproduct of the ClearValue® H₂ Energy Economy®. All life needs nutrients.



Human, animal and plant waste contain nutrients that end up in wastewaters and landfills. Nutrients provide a safe and clean means to naturally recycle nutrients, as God and nature intended in a value-added way that benefits humanity and all of God’s Creatures. In the ClearValue® H₂ Energy Economy® every MW of power generated produces about 23 pounds of organic nutrients.

Water - Pure H₂O is a byproduct of the ClearValue® H₂ Energy Economy®, where, hydrocarbons are converted into H₂, e⁻, H₂O and organic nutrients. All life needs pure H₂O. In the ClearValue® H₂ Energy Economy®. Every MW of power generated produces about 190 gallons of pure water.



ClearValue Team – The ClearValue® H₂ Energy Economy® has been created by a team of 12 scientists and engineers, most of which are Ph.D.’s and all of which individually have over 30 years of industrial experience. Key executives and team members are: the President, CEO, Founder and primary inventor Mr. Richard Haase (U of MO Ch.E./Lamar U (Harvard) MBA), who prior to ClearValue®, has significant technology and business development/ management experience with DuPont, GE and Exxon Chemical, along with NASA technology transfer. The interim CFO is Mr. Josh Tabin (BBA Miami/MBA U Texas). The R&D Director, Dr. Fadhil Salih (PhD Physics & PHD Biology - Manchester), has extensive biological experience. Director of Architecture and Urban Planning, Dr. Juan Blanco Ruiz (BS Arch. Princeton/M. Arch. Berkley/MSHP Columbia U/M. Phil. Columbia/Ph.D. Urban Planning Columbia), has significant urban planning/architecture experience. Mr. Stan Moorehead, Product Development Manager, has over 35 years of project management experience with NASA and the DOD.

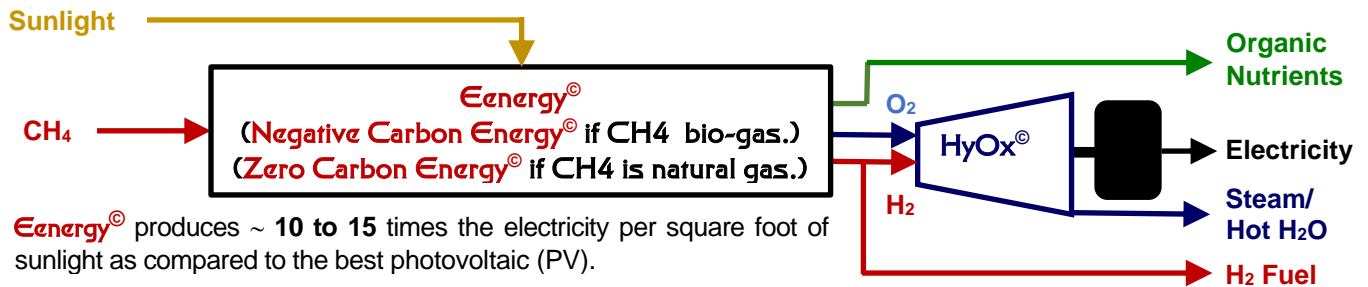
Patent Summary - The ClearValue® team has diligently innovated proprietary, viable and value-added solutions in H₂O purification, safe nutrient recycling and clean sustainable H₂ energy. The Team has been very successful to develop solutions in H₂O purification, macro and micro nutrient recycling, manufacture of H₂O purification

chemistries, noxious odor control, H₂ engines, algal sequestration/conversion of point source emissions, power generation and H₂ production, along with, H₂ management in Space Travel (NASA). Technologies owns over 120 nationally issued and/or pending patents worldwide. All can be resourced at uspto.gov and wipo.int.

HyOx[®] is an innovative H₂ combustion engine that: 1) is a surprising and significant improvement upon combustion engines known today; where, significant infrastructure exists; 2) has improved performance and reduces operating cost to less than that of hydrocarbon, 2 to 4 times the efficiency and power of hydrocarbon engines, stores H₂ at low temperature and pressure; and 3) is a variant of the familiar combustion engine, while, increasing engine life 3 times. **HyOx[®]** turbines are 65 to 70% efficient, where in strong contrast CH₄ turbines are 35 %.



Eenergy[®] - Negative/Zero Carbon Energy[®] cleanly converts CH₄ (bio-gas, natural gas or cracked oil) into H₂ at < \$2/pound and e⁻ at < \$0.03/kWhr, along with pure H₂O and organic nutrients.



Eenergy[®] produces ~ 10 to 15 times the electricity per square foot of sunlight as compared to the best photovoltaic (PV).

Agriculture - Eenergy[®] generates 6 to 15 MegaWatts (“MW”) per acre of light collection, depending on location (10 to 15 times that of photovoltaic (“PV”)), along with the byproducts of pure water and organic nutrients. Importantly, most crops grow best in indirect Sunlight and livestock need protection from the Sun. All while, our farms have acres and acres of available Sunlight. Incorporating **Eenergy[®]** and 100 acres of light collection, a farm can generate 50 to 100 MW of power, therein producing 420 to 840 million (“M”) W-hr of electricity annually; where for each \$0.01 of margin per kW-hr, a farm can thereby annually generate \$4.2



to \$8.4 M per 100 acres. Assuming a grid margin of \$0.05/kW-hr, a farm can then generate annually \$21 to \$42 M per



100 acres of light collection with **Eenergy[®]**. In 2018, humanity generated worldwide about 30 Trillion kW-hr. Incorporating clean **Eenergy[®]** on our farms, we can then meet humanity’s global power needs on only 40 to 80 M acres of farm land, while facilitating and supporting food production. A strong contrast to ethanol fuels,



which drive up both the price of gasoline and food, while not helping climate change.

HyOx[®] engines are a significant asset to agriculture. A modern farm needs large equipment: tractors, combines, etc;



where, maintenance and fuel are significant operating costs. First, as **HyOx[®]** engines operate on the combustion of pure H₂ and pure O₂, there is no carbon to wear engine parts; therefore, **HyOx[®]** engines have a useful life that is three times that of hydrocarbon. And, reduced maintenance cost is more important than just the actual maintenance cost, it is further operating time, which



is a support to the bottom line in both increased equipment usage and reduced equipment investment. Second, **HyOx[®]** internal combustion engines are 45 to 50 % efficient, a strong contrast to hydrocarbon that are only 15 to 20 %. This improved engine efficiency means reduced fuel cost. The fuel operating cost of a **HyOx[®]** engine is 20 to 40 % less than its diesel counterpart. Third, **HyOx[®]** engines have much more power and torque, as **HyOx[®]** engines essentially operate on rocket fuel, pure H₂ and pure O₂. A 3 Liter V-6 **HyOx[®]** engine can easily produce 1000 HP and foot-pound of torque.