



**November 29, 2019**

**Communication on Progress (CoP)  
for the  
Global Compact of the United Nations**

**ClearValue**

The ClearValue Companies emphasizes continued support for the United Nations Sustainable Development Goals. This includes the ongoing commitment to the initiative of the UN Global Compact.

**Initiatives of ClearValue during 2018 and 2019**

During this year ClearValue has initiated contacts to install the one if not several of our clean energy technologies in New York and New Jersey in the United States, Puerto Rico, the Dominican Republic, Cuba, Antigua, Trinidad and Guyana in the greater Antilles, Belize and Guatemala in Central America, Mexico and Chile in greater Luso Hispanic America, as well as Vietnam, India and Pakistan in Asia. We also engaged in discussions to install these systems in ten regional centers in Africa from Morocco in North Africa to Liberia, Cameroon, Gabon and Zambia in West, Central and Southern Africa.

**North America**

Canada

**The Antilles, Central America and South America**

Cuba

Trinidad

Mexico

Brazil / Bolivia

**European Union and Scandinavia**

Netherlands

Finland/Norway/Denmark

Iceland

Spain

**North Africa**

Morocco

**South Saharan Africa**

Angola

Zambia

**Middle East / Persian Gulf**

Iraq

United Arab Emirates

**South Asia**

India

**South East Asia**

Vietnam

**Oceania**

Singapore

Australia

Hawaii

New Zealand



We have traveled extensively throughout the United States as well as to Puerto Rico to engage in conference presenting our technologies as well as to undertake project.

1. Southern Energy Conference in Puerto Rico, November, 2018
2. Kinetic International in Puerto Rico, February, 2019
3. Auto dealerships in Puerto Rico, March, 2019
4. Homeowners Association in Puerto Rico, March, 2019

We will attend COP 25 in Madrid, Spain December 2019. In addition, we plan to meet with the governments of Cuba and Morocco during early 2020.

Our discussions have encompassed:

1. Micro grid power systems for housing, schools and hospitals school.
2. Agricultural installations in secluded rural regions as well as industrial farms and in urban farms.
3. Water treatment systems.
4. Methane capture from sewage and dump sites.
5. Conversion of existing power facilities of varied scale.
6. Upgrading power transmission lines.
7. Conversion of petroleum-based cars.

ClearValue embraces, implements and enables the Ten Principles of the Global Compact, which address climate change, the environment, water and sanitation, food and agriculture as well as the integration of human rights, labor, and anti-corruption.

### **ClearValue has Leading Technologies in Hydrogen Energy, Water Purification and Distribution, and Nutrient Recycling to offer the World**

All who have had the opportunity to study the ClearValue's Hydrogen Energy Economy<sup>®</sup> know that is a solution, if not the solution, for the multiple treats of climate change and the current global economic paradigm represent for humanity. This because the ClearValue's Hydrogen Energy Economy<sup>®</sup> presents clean value-added solutions in both transportation and power generation, as well as provide significant support to other sustainable energy technologies.

The ClearValue Hydrogen Energy Economy<sup>®</sup> can not only solve the challenge of climate change, but the value-added by each application provides an excellent return on investment. In short, it can save the world while providing all involved with significant economic returns. No regulation is needed. No carbon credits are needed. All that the value-added by each application requires is simply to begin. Once done, traditional marketing and sales efforts provide enough market pull to drive market change on a global basis.

The CEO of ClearValue, Mr. Richard Haase, has continued to demonstrate the value of our company with the same positive reception as his presentation at COP 22 in Marrakech. This was a timely presence as Morocco presents a perfect example of all that the ClearValue Hydrogen Energy Economy<sup>®</sup> can provide. It can increase the production, storage and delivery of energy. It can provide a sure means of battery storage overnight. It can also provide increased retention of energy transmission over long distance transmission lines. All of these solutions are key to this country and its role as a source of sustainable energy for Africa and Europe as well as the Americas and the greater world.

ClearValue Hydrogen Energy Economy<sup>®</sup> can also retrofit vehicular engines to run cleaner, less expensively and much longer. This is not only crucial to retrofitting the existing fleet of vehicles of this country, but also the basis for independent industrial development in this sector.

In addition, the ClearValue Hydrogen Energy Economy<sup>®</sup> can also provide a sure source of energy, water and foodstuffs in isolated rural settlements in even the most desert-like regions. Of course, this is true of not only Morocco or all countries of the Sahara and the Sahel, but of all regions in the world subject to the effects of desertification.

And ability of the ClearValue's Hydrogen Energy Economy<sup>®</sup> to provide clean water and organic nutrients also makes it a solution for regions suffering from inundation. This includes ancient agricultural regions in Bangladesh threatened by inundation by the glacial melt of the Himalayas. And this also includes the island populations around the world threatened by the destruction of ground water table by the rise of sea level. Our conversations with government officials from Oceania have evolved into ongoing development of applications in this region. Indeed, the the ClearValue's Hydrogen Energy Economy<sup>®</sup> is also invaluable in providing clean water in regions of industrial countries where local resources have been contaminated.

The effects of climate change are true in even the Tropical countries of Central America and the Caribbean. The Americas present a telling range of challenges and opportunities for the range of issues involved in fostering sustainable ecological and cultural environments even while assuring the resources in energy and water necessary for economic development. A varied assemblage of micro / macro regions combine to make the Americas a crucible of discussion on all issues pertaining to energy and sustainability in the world today. The Americas exemplify the problematic of autonomous micro regional systems in rural areas as well as provincial and marginal urban centers. As such this hemisphere also identifies need for autonomous trans-regional grids. The energy and sustainability issues of the many indigenous peoples of this hemisphere require addressing inter weaving micro / macro regional consideration

The intrinsically multi focal conceptual condition of these insular and main land nations defines the parameters of any discussion on micro / macro energy grids in this region. Independent of their location amid the sea or on continents, all constitute insular regions. In all instances, geography imposes an insular condition on the polities that compose these regions as sub archipelagoes in themselves. Thus, condition of the Antilles Archipelago finds a mirror in the countries of its continental extensions that form Central America and Guyana. Despite their dimension, similar observations can be made on the internal complexity of the larger countries of the hemisphere. There is need to address the diverse regions of the Americas as a whole and the greater-Antilles in particular by fostering open hierarchies of overlapping energy systems in balance with their natural and cultural environments.

The intrinsically multi focal condition of the islands nations of the Antilles Archipelago and adjacent regions are a perfect scenario for delving into all that can be achieved through the development of energy systems in tune with natural and cultural environments. The solution to the sustainable energy needs of each of these countries lies in configuring all possible sources into a equally multi focal open micro / macro grids. However, this must also serve as a means of fine tuning new and emerging technologies with the objective of raising challenges on the direction to take to address the issues at hand.

The extent of urbanization of all of these countries gives an important twist to the energy /sustainability equation. All regions in the greater-Antilles focus on poly-centric urban centers bursting at their seams with urbanized yet essentially still rural zones. However, extensive road and electrical networks connect even these urbanizing rural settlements. There is enormous potential in transforming the distended urban development common to all of these islands and countries into solar and wind farms. This also requires exploring systems that can and must be built to protect habitats as centers of micro production of foodstuffs.

The initiatives of ClearValue Technologies in Puerto Rico demonstrated the value of their ability to produce potable water and oxygen as by products. The contamination of water resources on the island nation as a direct result of Hurricane Maria makes the ability of ClearValue Technologies to produce potable water locally

invaluable. Indeed, the numerous deaths due to the lack of any supply of oxygen following this hurricane was responsible for many dead. This makes the ability of ClearValue Technologies to produce oxygen of great interest to hospitals in Puerto Rico.

The ClearValue Clean Hydrogen Energy Economy is a key solution to humanity's need for sustainable and renewable energy that can be made available everywhere, from the largest metropolitan areas to the most rural. The ClearValue<sup>®</sup> Solution produces no emissions of carbon, nitrogen or sulfur. The ClearValue<sup>®</sup> Solution attacks both challenges of transportation and power generation. It can be used to redesign/convert transportation engines that combust hydrogen with higher power and improved efficiency. The ClearValue<sup>®</sup> Solution can be used to harvest 80% more electricity from the infrared spectrum of solar panels and generate 80% more electricity from natural gas.

The potential imprint of the ClearValue<sup>®</sup> Solution includes:

1. Electricity Generation and Storage
2. Transportation
3. Industry
4. Agriculture and Aquaculture (food production)
5. Energy System Efficiency
6. Water purification.

Indeed, the extent of the ClearValue<sup>®</sup> Solution imprint makes it worthy as a novel seedbed of sustainable technology change.

The ClearValue<sup>®</sup> Solution to these applications uses methane or natural gas and Sunlight to generate electricity, produce hydrogen, provide pure water and produce algae that can be used either as a high protein animal or fish food, or as a fertilizer. The pure water is a product and conversion of otherwise emitted methane or bio-gas, which is the most harmful greenhouse gas, being over twenty (20) times the effect of carbon dioxide.

Often, energy production is intermittent or remote to metropolitan areas, such that, energy storage and transmission efficiency become critical. The ClearValue<sup>®</sup> Solution is a benefit to all power grids having to balance generation with demand. This is especially true with wind and solar systems. In the case of storage, wind is primarily available at night and sunlight available only during the day; however, power is needed continuously. With ClearValue, excess power can be stored as hydrogen and oxygen with only a 12 – 15 % energy loss and the subsequent electrical power generated at 70% efficiency, thereby storing and resupplying power to the grid at 60% efficiency. Further in transmission, electric power losses are near 20% for every 1000 miles, where in contrast, hydrogen and oxygen transmission losses are only 4% (80% savings). Therefore, depending on generator location, grid design and demand, the ClearValue<sup>®</sup> Solution can be a significant asset to improve the reliability and economics of power systems.

Thus, the ClearValue<sup>®</sup> Solution not only provides reliable and affordable energy anywhere, but also effectively eats carbon that would otherwise enter the atmosphere and improves upon existing infrastructure. This places ClearValue<sup>®</sup> in the special position of defining a new condition of negative carbon energy. This effectively establishes a new market to curtail climate change by going beyond zero carbon emissions to the capability of removing some of the most dangerous hydrocarbons from the environment. This condition is especially valuable in polluted environments that exist in conditions of contamination and spread of infectious disease. In addition, the ClearValue<sup>®</sup> Solution is valuable in the struggle against desertification. The production of pure water makes the ClearValue<sup>®</sup> Solution a source to transform remote zones to inhabitable ones; this is especially critical in areas that have been reduced to dessert.

All of this makes the ClearValue<sup>®</sup> Solution key to generating electricity, as well as, producing water from methane that is produced by waste treatment systems, most notably wastewater treatment systems and garbage dumps. This gives the ClearValue<sup>®</sup> Solution immense value to establish secure autochthonous sources of electricity and water in degraded or remote sites, in metropolitan and rural areas alike. The ClearValue<sup>®</sup> Solution provides systems to transform sites with no infrastructure that have been forced to become impromptu settlements into true centers of refuge.

The damage wrought on the region by the latest hurricane season, however grave, merely exacerbated existing infrastructural inadequacies across the board in water, sanitation, energy, communications, housing and transportation as well as food. And these inadequacies find their reflection in ample politico social inequalities. The destruction wrought on the Antilles reconstruction of the island nations of the Antilles requires replacing infrastructures already aged and outdated for the needs of the peoples inhabiting this region inadequate. This condition recommends responding the destruction brought by this hurricane season by rising to the occasion to address larger social and environmental structural problems. The number and diversity of the political entities in this region advises engaging two or more organizations in a consortium. Here it is advisable to coordinate efforts with the objectives of the Sustainable Development Goals set out by the United Nations.

The ClearValue Hydrogen Economy<sup>®</sup> has direct and cumulative effects on achieving the sustainable development goals proposed by the United Nations. All rests on goal 7; affordable and clean energy. ClearValue Technologies also address goal 6: clean water and sanitation. And this entails goal 8, decent work and economic growth and goal 9: industry, innovation and infrastructure. By using methane and natural gas as a fuel ClearValue Eenergy<sup>®</sup> has direct impact on goal 13, climate action. And the ability be placed in a variety of settings and size unites also addresses goal 11, sustainable cities and communities. Together the production process also directly address goals 1, 2, 3, 4, 5, 10, and as well as 12, 14, 15. Given that the plan to deploy ClearValue technology through joint ventures with peoples in countries around the world it also helps to promote goals 16 and 17.

The hydrogen-based technologies of ClearValue<sup>®</sup> offer a host of applications extending from new and more powerful forms of energy production to maximizing other existing forms to generating clean water and nutrients as by products. The installation of this technology makes it possible to retrofit the existing energy systems of everything from industrial plants to automobile, bus and truck engines for more efficient, greater and thus profitable energy production. This technology can increase the productivity of renewable energy resources such as solar panels by 60% to 80%. It can also increase the productivity of electricity produced from wind turbines and natural gas pipelines by minimizing loss through transmission over long distances. In addition, the installation of this technology makes possible to sanitize and harness the methane produced by dumpsites and biomass for the production of clean electricity. Last but not least because hydrogen technology energy production produces extremely clean water as a by-product, it is capable of addressing the threat of global warming wherever it is applied.

All of this stand in marked contrast with the standard practice of the petroleum and natural gas companies. They site, drill and extract such deposits using pipe-lines designed exclusively to extend directly to large national plants or ports of export. These pipelines are effectively designed to ignore the country sides and inhabitants through which they run. The economic benefits of such installations devolve solely to their operating companies. Host countries receive at best an honorarium as benefit. And given the inequities of international finance all benefit of this wealth are directed exclusively to repay debts accrued to pay for the construction of the infrastructure of the pipeline.

It is clear that hydrogen technology energy production possesses multi-faceted promise for any country or region that may choose its introduction. The hydrogen technology of ClearValue<sup>®</sup> possesses a rich potential

of possibilities for the creation of complementary macro and micro grid installations necessary to address the highly insular extent of energy needs in rural and well as urban habitats. As the list of possible applications sketched above suggests, the hydrogen technologies of ClearValue® can be installed as a retrofit to existing macro grid energy plants and fleets of public utility vehicles. They can be installed as stand micro grid systems for rural villages and marginal urban communities. And they can also be installed as part of the new infrastructure for solar and wind turbine farms along with their carrying and distribution lines.

In addition, the installation of ClearValue hydrogen technology as part and parcel of new petroleum and natural gas drill sites and pipelines will produce more efficient and cleaner systems. Indeed, the design of the run for these pipelines can be transformed into the basis of a system capable of empowering local communities by serving as sources of power and water.

ClearValue possesses great promise for countries such as Mali. However, the extent of this value can only be ascertained by a review of the countries needs on site through a thorough feasibility study. The implementation of the hydrogen technology of ClearValue in Mali can also make this country the centerpiece of a virtual energy revolution in all countries in this region and as well as greater Africa.

The destruction of the habitats of island, rural, marginal urban areas of developing and developed nations alike is responsible for massive migrations of refugees from countries to cities if not from one continent to another. These displaced populations have been forced into improvised marginal settlements without adequate water or sanitation. This only intensifies future macro problems in climate and political unrest. Any real solution must focus on micro problems on site by resolving access to water, food and dignified livelihood.

All rests on the urgent need to empower impoverished insular, rural and marginal regions. However, the cost of bringing energy and waste services to island nations is often prohibitively expensive.

The answer is to create sustainable farming assuring necessary water, nutrients and energy. The solution lies in using natural organic waste -currently an agricultural by-product- as a raw material to produce H<sub>2</sub>, fuel and close the carbon energy loop, while reducing the cost of operations. This will enable the developing world to use their own waste to provide energy, water and nutrition with units from 10 kW to 1 GW. And this economy is adaptable to even the smallest and most isolated settlements as a source for energy, water and nutrients.

The recent meetings of UN Habitat underscored the need to address the asymmetries between rural and urban areas of all countries of the world as a fundamental part of any effort to confront the effects of climate change laid out in the 17 Sustainable Development Goals. These concerns were subsequently incorporated into the Paris Accord of COP 21.

ClearValue® is a firm that possesses technologies at its disposal that are fully capable of addressing the multiple threats of climate change in all of their complexity. Our technologies can have a game changing effect on helping to achieve all of the Sustainable Development Goals proposed by United Nations Habitat. And in keeping with this spirit ClearValue participated in the COP 22 conference in Marrakesh and will attend COP 25 in Madrid.

Together these ClearValue® technologies work to foster our Hydrogen Energy Economy®. The charter of ClearValue® calls for the donation of 20% of all profits to aid the peoples of the world in confronting the effects of climate change. In this special emphasis is placed on empowering the developing world. This will foster the diffusion of its technologies in favor of the development the energy, water and foodstuffs.

Indeed, the ClearValue Hydrogen Economy<sup>®</sup> has direct and cumulative effects on achieving the sustainable development goals proposed by the United Nations. All rests on goal 7; affordable and clean energy. ClearValue Technologies also address goal 6: clean water and sanitation. And this entails goal 8, decent work and economic growth and goal 9: industry, innovation and infrastructure. By using methane and natural gas as a fuel ClearValue's Eenergy<sup>®</sup> has direct impact on goal 13, climate action. And the ability be placed in a variety of settings and size unites also addresses goal 11, sustainable cities and communities. Together the production process also directly address goals 1, no poverty; 2, zero hunger: 3, good health and well-being; 4, quality education; 5, gender equality; 10, reduced inequalities; as well as 12, responsible consumption and production; 14, life below water; and 15, life on ground. Given that the plan to deploy ClearValue Technology through joint ventures with peoples in countries around the world it also helps to promote goals 16, peace justice and strong institutions and 17, partnerships for the goals.

One key case in point serves a vehicle for demonstrating this axis of development. The people living in the shantytowns on the margins of capital cities -today's "*global cities*"- form an indispensable part of asymmetrical economies of the contemporary world. It is clear that the marginal populations of such cities generate surplus values in absolute terms that are transferred from the informal to the formal economy. Climate change cannot be addressed without addressing this injustice. However, the asymmetry between marginal populations and citizens integrated into the formal economy persists as an integral part of accepted development protocols. The Hydrogen Energy Economy<sup>®</sup> can address this and other wrongs by serving as a dynamo of economic development capable of addressing all Sustainable Development Goals as an interconnected whole.

The multi scalable applicability of ClearValue<sup>®</sup> enables our company to address the interface between these parallel economies. Most importantly, they enable eliminating the asymmetries that keep the rural and marginal urban peoples of the world on the edge of starvation. Our technologies can retool existing electrical and water works to make them more efficient. This can take countries where current energy production can cost of 50 cents per kilowatt or more to 2 cents per kilowatt.

ClearValue<sup>®</sup> technologies can also retool and empower rural communities to overcome the effects of both desertification, in places like the Sahel, as well as inundation, in places like Bangladesh. In addition, the technologies of the Hydrogen Energy Economy<sup>®</sup> can also empower marginalized communities living in the shantytowns of the world as well as reinvigorating traditional agriculture and production.

The world suffers dearly from blind rejection of the rural as the embodiment -allegorical as well as literal- of "*traditional*" backwardness. Innovation today requires the promotion of ruralization as a celebration of millennial truths embodied in local knowledge against the mindless acceptance of globalizing urbanization. ClearValue<sup>®</sup> is predicated on a firm belief that traditional local knowledge and genuine innovation are fully compatible and complementary. To this end ClearValue<sup>®</sup> provides technology that addresses the need for energy, water and organic natural food stocks even as it removes carbon from the environment. ClearValue<sup>®</sup> combine traditional knowledge and modern innovation to provide humanity with efficacious capability to improve our air, water and soil. Specifically in energy, the Hydrogen Energy Economy<sup>®</sup> offers powerful tools for rebalancing human and natural environments through re-enabling rural habitats to obtain energy in a manner compatible with what you have termed "*ecological agriculture*".

Key to all is our Eenergy<sup>®</sup> Solution that uses methane as fuel source, thus removing carbon from the atmosphere. Aside from increasing electrical production from solar panels by over 50%, these technologies also produce clean water, oxygen and hydrogen as well as a source for animal feed.

Indeed, the Hydrogen Energy Economy<sup>®</sup> is an important and innovative new system capable of harvesting 60% more electricity from the infrared and visible spectrums in combination, as well as, generating 80% more electricity from natural gas, as well as, producing ultra- pure water and high protein animal feed in the process. Most importantly, among the technologies that comprise this system, Eenergy<sup>®</sup> removes otherwise released carbon from the atmosphere. As such, this technology addresses the need to abate carbon emissions recognized as the key to slow, if not reverse, climate change by most of the member states of the United Nations in Paris last December.

Thus the imprint of the ClearValue<sup>®</sup> Hydrogen Energy Economy<sup>®</sup> includes:

1. Electricity Generation and Storage
2. Transportation
3. Industry
4. Agriculture and Aquaculture (food production)
5. Energy System Efficiency
6. Water purification, and especially
7. Abatement of significant carbon emissions into the atmosphere

This range of applications show that the Clean Hydrogen Energy Economy<sup>®</sup> is a key solution to humanity's critical need for clean, sustainable and renewable energy everywhere, from the largest metropolitan cities to the most rural of areas.

Often energy production is intermittent or remote even in metropolitan areas, such that, energy storage and transmission efficiency is critical. The Hydrogen Energy Economy<sup>®</sup> is a benefit to all power grids having to balance generation with demand. This is especially true with wind and solar panel systems. In the case of storage, wind is primarily available at night and sunlight available only during the day; however, power is needed continuously.

With the Hydrogen Energy Economy<sup>®</sup>, excess power can be stored as hydrogen and oxygen with only a 12 – 15 % energy loss and the subsequent electrical power generated at 70% efficiency, thereby storing and resupplying power to the grid at 60% efficiency. Further in transmission, electric power losses are near 20% for every 1000 miles, where in contrast, hydrogen and oxygen transmission losses are only 4% (80% savings). Therefore, depending on location, grid design and demand, the Hydrogen Energy Economy<sup>®</sup> can be a significant asset to improve the reliability and economics of power systems.

Thus, the Hydrogen Energy Economy<sup>®</sup> not only provides reliable and affordable energy anywhere, but also produces no emissions of carbon, nitrogen or sulfur. Indeed, carbon that would otherwise enter the atmosphere is converted into electrical power, hydrogen, water and animal protein feed. This places the Hydrogen Energy Economy<sup>®</sup> in the special position of defining a new condition of **negative carbon** energy. This effectively establishes a new market to curtail climate change by going beyond zero carbon emissions to the capability of removing some of the most dangerous hydrocarbons from the environment, methane.

Eenergy<sup>®</sup> uses methane or natural gas and Sunlight to generate electricity, produces hydrogen, provides pure water and produces algae that can be used either as a high protein animal or fish food, or as a fertilizer. In this way the Hydrogen Energy Economy<sup>®</sup> transforms bio-gas or methane -which as you know the most harmful greenhouse gas with over twenty (20) times the negative effects of carbon dioxide emissions into the atmosphere- into perhaps the greatest tool at the disposal of humanity in addressing the threat of global warming.

This gives the Hydrogen Energy Economy<sup>®</sup> immense value in establishing secure autochthonous sources of electricity and water in degraded or remote sites in metropolitan and rural areas alike. This capability is also especially valuable in making the Hydrogen Energy Economy<sup>®</sup> key to generating electricity, as well as,



generating water from methane that is produced by waste treatment systems, most notably wastewater treatment systems and garbage dumps.

All of this has special value in addressing polluted environments that exist in conditions of contamination and spread of infectious disease. In this way, the Hydrogen Energy Economy<sup>®</sup> provides systems capable of transforming sites with no infrastructure that have been forced to become impromptu settlements into true centers of refuge. The production of pure water is an invaluable tool for making remote zones habitable. This is especially critical in the struggle against desertification.

Finally, the HyOX<sup>®</sup> component of the Hydrogen Energy Economy<sup>®</sup> provides humanity with a clean and efficacious means of transportation, where, pure hydrogen and oxygen are combusted in an innovative redesign of the internal combustion engine that is at least three times more efficient than that of hydrocarbon engines in use today and up to ten times more powerful, releasing only pure water as an exhaust. Indeed, the value, as well as, the imprint of the Hydrogen Energy Economy<sup>®</sup> makes a worthy investment as a novel seedbed of clean sustainable technology change.

