

# Worlds First Planetary Restoration Technology installs first systems in Israel, Africa and the United States



What if you could eliminate thousands of tons of Carbon Dioxide now flowing into our atmosphere from a major source? What if doing this also reduced the energy costs for this necessary utility service by 50%?

Today the wastewater treatment industry is evolving. What was considered a nuisance, and something that needed to be disposed of is now recognized as a potential renewable resource opportunity in water, energy and agricultural

products.

The “Utility of the Future” as the new utility is being regarded will not just treat the wastewater to the latest regulatory threshold, it will convert the wastewater into valuable products creating a new circular economic dynamic from something that up until now just cost a lot of money to get rid of. One “Utility

of the Future” company, Aquagen Infrastructure Systems, Inc. evolved through the collaboration of two unlikely organizations, Lewis Bay Research Center, Inc. a non-profit coastal ocean research organization and Aquagen Infrastructure Systems, Inc. a Cape Cod “Utility of the Future” company formed to provide the community with a solution for wastewater treatment in a consumer based model.

The result is a world class breakthrough in wastewater treatment that exceeds all current treatment levels while eliminating thousands of tons of atmospheric carbon dioxide pollution now adding to our current greenhouse gas crisis. Up until now this greenhouse gas pollution was accepted as a necessary element in dealing with the wastewater crisis. And as with global warming and ocean acidification nutrient pollution from poorly treated wastewater is at crisis levels across the globe. The breakthrough is pretty simple, micro algae. Algae

represent one of mother nature’s most important tools for maintaining the planet. Algae in the world’s oceans have maintained the atmospheric balance between oxygen and carbon dioxide for billions of years. Roughly half of the oxygen you are breathing right now came from these tiny plants. And when the ocean waters become too nutrient rich, the algae bloom and consume the nutrients as food while utilizing sunlight and chlorophyll to convert carbon dioxide into oxygen. This natural process has been at work for billions of years.



The Lewis Bay Research Center, Inc. was formed as a result of a general water quality decline across Cape Cod resulting from a distorted reliance on on-site wastewater disposal. This global scenario is the result of rapid development without infrastructure. The research focused on marine algae, as a result of the blooms plaguing the area along with nutrient induced eutrophic conditions. This science lead to the realization that the algae was an effort by the natural systems to control the pollution.



Joint research with Aquagen Systems lead to the evolution of a truly holistic solution that applied this algae biotechnology element in a concert with contemporary wastewater elements that resulted in some truly remarkable results. Not only did the algae prove to be a key element in the elimination of the nutrient pollution, but the photosynthetic byproducts of carbon dioxide conversion into oxygen resulted in the elimination of the atmospheric carbon dioxide normally produced in treating wastewater, and the elimination of the need for mechanical aeration, a lion's share of energy used to treat wastewater.



Strategic collaboration with a like-minded technology start-up from Israel Aquanos Energy, who met at WEFTEC 2013 resulting in a partnership that has resulted in the Aquagen Infrastructure Systems, Inc. "Utility of the Future" solution. This fully integrated utility technology platform represents an international collaboration that has resulted in the worlds first planetary restoration system that converts the community wastewater crisis into a renewable resource platform in energy, water, agriculture and biotech products for community resiliency, sustainability, and economic revitalization. The partnership has resulted in projects in Isreal, Africa and the United States.

Aquagen Infrastructure Systems, Inc. will be exhibiting at WEFTEC 2017 in the Innovation Pavilion in Chicago on October 2-4<sup>th</sup> 2017. Aquagen ISI will be in booth 8141.



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