Summary of the technology

The EA patented system consists of anodic and cathodic plates designed to facilitate the dissociation of hydrogen and oxygen in water using minimal electrical current, regardless of water conditions. The resulting gases, present at micron and nano-bubble levels, naturally increase the dissolved oxygen (O_2) and hydrogen (H_2) in water. Nano-bubbles optimize the interaction between water and organic elements, providing several benefits:

- Adapted to greenhouses, hydroponics, or farms of all sizes for irrigation or foliar (spray) delivery systems using solar panels or low-cost DC power. This water has been shown to increase yield, decrease nutrient load and shorten harvest time by up to two weeks.
- Hydrogen Peroxide (H_2O_2) & ozone (O_3) are also generated as natural pesticide alternatives.
- In regenerative agriculture, EA plates boost dissolved oxygen in fertilizer teas as well as foliar or irrigation water delivery, enhancing soil conditions.
- The technology in form of simple aerators or flow-through reactors can be adapted to disinfection sprayers with low cost in-situ generation of hypochlorite chlorine using salt.
- Adding salt and vinegar produces hypochlorous acid (HOCL), a chlorine sanitizer safe for humans, animals, and plants. HOCL can be used in hospitals, refugee camps, farms, fisheries, livestock pens, and chicken coops to reduce the spread of pathogens and viruses.
- Noxious algae blooms can be controlled with rear mounted skiff aerators dispensing aquatic animals safe HOCL. Land-based systems can be designed for long-term control.
- In wastewater treatment, the technology can be adapted to enhance biological systems by increasing dissolved oxygen levels, providing cost-effective chlorination, optimizing ozone applications, and improving reverse osmosis systems.
- Trucks, tractors or cars can use EA water produced HHO gases powered by the vehicle's alternator and injected into the intake manifold to reduce fuel consumption and emissions by up to 30%, without major engine alterations.
- The technology enhances yeast production, which has multiple applications in baking, brewing, insulin production, and other biotechnological industries.
- Aerators can supply disinfected water to remote areas or disaster zones using solar power and basic carbon filters.