# **Clean Water Solar 7**

TRL # 3-5

ORG: Clean Water, Inc.

| TECH TYPE: Deep Tech

#### SUMMARY

This proposal aims to investigate and test the incorporation of fractally mandated dimensional transitions at different levels of solar cells to enhance their efficiency based on exponential and fractal transitions of energy. By strategically integrating fractally mandated dimensional transitions, such as spherical absorbers and coatings, we aim to improve energy absorption and distribution to optimize the overall performance of solar cells along with experimental testing, modeling, and manufacturing advancements.

#### Team

Our interdisciplinary team comprises Gregory Friedlander who developed the fractal mathematics, a physicist and electrical engineer and materials scientists. Led by Gregory Friedlander, a pioneer in fractal solar energy research, our team boasts a combined experience of over 50 years in relevant domains.

## **Problem/Solution**

PROBLEM: One challenge in solar energy is the low conversion efficiency of solar cells. The most common materials used for solar cells are organic compounds and silicon, which have conversion efficiencies of about 8% and (up to) 25%, respectively.

#### SOLUTION

Prior designs do not fully exploit the fractal nature of energy or the electron-photon interaction along fractal pathways. Using our model based on the fractal transitions we will improve the conversion efficiency of solar cells.

This is not a solution to one problem. By defining the fractal underpinnings of all dimensional features of the universe this technology will make an unprecedented impact on multiple areas of energy and chemistry; perhaps on all of these areas.

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## **IMPACT/PROGRESS**

By strategically positioning fractally mandated dimensional transitions within solar cells, we can precisely control energy absorption and distribution, resulting in a minimum 10% increase in energy conversion efficiency. Current conversion is 20-25% for silicon-based cells of solar radiation. A 10% increase based on better modeling is a modest goal. This improvement will enable more effective utilization of solar radiation and the dispersion and utilization of otherwise damaging heat.

It is hard to understand the impact of the progress, but it is best considered by looking at the science. Information physics has been around conceptually since 1945, almost as soon as binary programming came into existence, the idea of information as a state of matter also came into existence. A spontaneously arising simulation should leave clear evidence of its existence.

We have developed and filed patents related to that evidence; opening the door to a new era of innovation.

