

Earth Care Products, Inc.

Applying Today's Economic Models to Photosynthesis

The age-old question is: Is photosynthesis a resource? It's a major life-supporting process, but can it be developed and marketed worldwide? We have been presented with the possibility that food-first sustainable, renewable resources of biomass used for energy, chemicals, and other value-added products can be achieved. Commercial values for photosynthesis can be measured from growing biomass that desorbs the atmosphere's greenhouse gases while providing low-cost biomass worldwide for sustainable food, clean energy and other bio-based commodities.

Dr. Melvin Calvin was awarded the Nobel Prize in Chemistry in 1961 for identifying the path of carbon in photosynthesis. Over the past 50 years, with technology and education we have discovered how to measure photosynthesis. We can now place values on volumes of renewable resources in addition to the benefits of capturing greenhouse gases and sequestering fossil-based carbon.

Earth Care Products' (ECP) future growth is marketing economic values for Earth's infinite supply of photosynthesis. The company plans to develop and market worldwide photosynthesis' values, benefits, and biomass resources. The company has the opportunity to lead the markets in the natural integration of low-cost food, commercial bio-based resources and environment via photosynthesis. The company has developed proprietary processing equipment and the technology and skills to manufacture products, the know-how to market its torrefied and carbonized biomass products (T&CB) under the brand name **ACTOF**[®]. Earth's life-supporting infrastructure has long been compromised by pilfering and plundering its finite resources of fossil fuels that continue to poison and endanger our planet.

Biomass via photosynthesis will be feedstock to manufacture T&CB. ACTOF[®] products will become the choice commodity to fossil fuels. ACTOF[®] can be used for production of bio-liquid fuels and biochemicals. ACTOF[®] biocarbon can be the clean, sustainable, renewable carbon substituting all existing fossil carbon, ACTOF[®] biochar can be used for bio-fertilizer and soil amenity. ACTOF[®] variations of torrefied and carbonized biomass will be engineered for polymer fillers and other futuristic products such as carbon fiber, graphene, etc.

Now is the time to apply social and economic values to photosynthesis, Earth's most abundant sustainable renewable resource. The average rate of energy captured each year by photosynthesis globally is six to seven times larger than all the power

consumption of human civilization. As well as energy, photosynthesis is also the source of carbon in all organic compounds within organisms' bodies. All photosynthetic organisms convert around 150 to 170 billion metric tons of carbon into biomass each year. Photosynthesis desorbs greenhouse gases providing clean air that offers social and economic benefits.

Global GDP is approximately 70 trillion dollars a year. At today's energy level and the environmental costs portion of GDP, photosynthesis as a commodity would be valued at 12 to 14 trillion dollars a year. Disrupting energy markets, ECP's T&CB's ACTOF® products will be disrupting the multi-trillion-dollar-a-year markets for fossil fuels and chemicals plus their emissions abatement controls.

The most promising pathway to renewable, clean energy is biomass produced via photosynthesis. When we use energy from biomass respectfully and economically on a sustainable basis we all share one of Earth's greatest resources.

The best friend of man on earth is the tree. When we use the tree respectfully and economically, we have one of the greatest resources of the earth - Frank Lloyd Wright, American Architect.

