



*Industrial Applications
...Concept to Completion*

RENEWABLE ENERGY AND CARBON NEUTRAL SYSTEMS

Optimation has long been engaged in the support of carbon neutral and renewable energy projects and processes. Projects have been in support of research universities, start-ups and large commercial companies. We design with a broad range of process and mechanical engineering and manufacture using exotic materials and precision equipment with proven success in facilitating the use of leading-edge technologies. Clients have a single source for seamless, cost effective and timely completion of their renewable projects.

BIOFUELS, ETHANOL AND JET FUEL

We have a history in the design and construction of cellulose-based ethanol production systems. Additionally we recently completed the fabrication of a system to generate carbon neutral jet fuel from farm waste-based ethanol.

HYDROGEN

Designing and fabricating hydrogen distributing systems is something we have vast experience in. We are trained in the use of hydrogen piping, containment and distribution.

METHANOL

Optimation has fabricated skids for the conversion of methylene to methanol. This enables the conversion of flare gases, often wasted, into a valuable fuel with easy storage and clean burning.

GREEN PLASTICS

We have scaled and optimized production systems for the manufacture of green plastics. These processes use CO and CO₂ feedstocks in the manufacture of environmentally friendly plastics.

SOLAR CELL PRODUCTION PROCESSES

Roll-to-roll processing for production of systems is an area of Optimation expertise. We've also designed a major glass plant for the fabrication of flat glass used in solar arrays.

WIND TURBINES

Small, home-based, and large commercial windmills and peripherals have been designed by Optimation. This included designing a system for 3D printing of 30-foot-high concrete bases for mounting large commercial units.

PLANT GROWING AND FOOD PRESERVATION

We have assisted in design and construction of indoor, organic food growing systems, and fabricated systems used to coat fruits and vegetables with organic materials that extended unrefrigerated shelf life by days and weeks.

BATTERIES AND STORAGE SYSTEMS

Optimation has designed and fabricated lithium battery assembly and test systems and have also designed manufacturing systems for anode and cathodes manufacturing on high speed roll-to-roll processes.