

The Mercurius Times



From wood waste



From Municipal waste



From scrap paper



Into diesel.

A Novel Biorefining Process To Debut

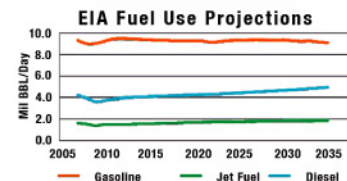
Who was Mercurius Ter Maximus and why was he chosen as a symbol to represent the goals of a company? He is a combination of the gods of writing and of magic in their respective Greek and Egyptian cultures. Thus, the Greek god of interpretive communication was combined with the Egyptian god of wisdom as a Roman god of astrology and alchemy. His divine influence over alchemy, which had the goal of turning a plentiful element (lead) into a precious rare element (gold), seemed to fit neatly into the goal of Mercurius Biofuels (MB) to commercialize an exclusively licensed process using a novel catalytic approach that produces green chemi-

cals and fuels (gold) from cellulosic material including municipal wastes, agricultural and forestry production residues or any source that is made up of cellulose or hemi-cellulose (lead). Mercurius Biofuels, a limited liability corporation (LLC) that was founded in 2008, will focus its efforts on producing cellulosic diesel as a final output with the ability to produce several green chemicals along the way. As the commercialization program proceeds MB will start diversifying its final product line to firstly include cellulosic kerosene (jet fuel) as well as gasoline additives.

Focus On Diesel Fuel

Mercurius Biofuels chose to concentrate its efforts on cellulosic diesel due to the fact that diesel is an underserved segment (27%) of the total liquid fuels market (220 billion gallons of consumption per year), which translates to 59.4 billion gallons of diesel being consumed each year. Virtually all the investment and production of biofuels to date has been concentrated on the gasoline segment of the market; almost exclusively with ethanol production from grains and sugar crops. In addition, the United States depends on diesel for the vast majority of its commercial shipping on road, rail and sea and therefore has a national security and economic imperative to diversify its fuels production and usage. To this end the United States congress (controlled by Democrats) passed an omnibus energy bill in 2007, signed into law by a Republican president, which mandated a renewable fuels standard known as RFS2. This mandate calls for 2 billion gallons of advanced biofuels to be produced by 2012 and

blended with current fuel stocks. The goal of the mandate is to produce 21 billions gallons of advanced biofuels by 2022. By using the aforementioned 27% of the liquid fuels market that diesel occupies then the mandated market size ranges from 540 million gallons of advanced biofuels in 2012 to 5.6 billion gallons by 2022. This represents a very large market to satisfy and will require the full production capacity of every possible company with all the different processes that can be successfully and sustainably brought to the market. Adding to this mandated market is the fact that the EIA has projected that over the coming decades demand for gasoline will decrease while the consumption for diesel and kerosene (jet fuel) will increase.





Mercurius Biofuels is at the forefront of cellulosic diesel production technologies. Our exclusive process is more efficient and less expensive than traditional methods.



Bio-Crude created from Bio-Waste

Mercurius Biofuels has a patent pending exclusive license to a novel Biorefinery process for producing diesel, and green chemicals from cellulosic materials. The process uses several components that are found in both the pulp and paper industry and the petroleum refining industry. The journey begins with the delivery of cellulosic material (in this case municipal waste paper and cardboard) to the Biorefinery. The first step is to treat the material in an acid hydrolysis bath (similar to pulp and paper mills) to create what could be called a bio-crude and a solid char product that acts as a carbon sequestration material suitable for various applications ranging from fertilizers or soil enhancers

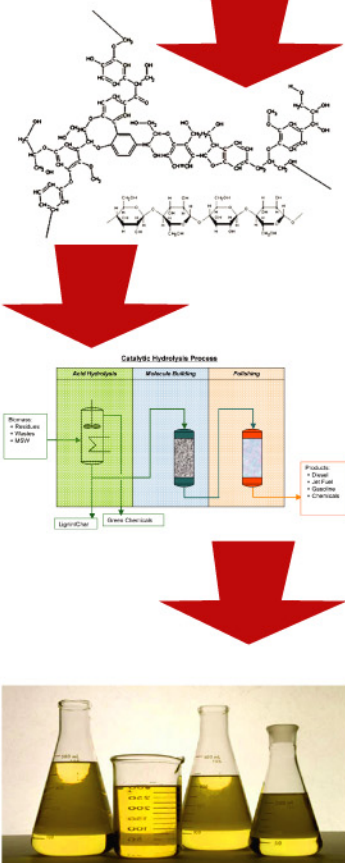
to fuel for biofuel power generators. It is at this stage of the process that several bio-chemicals can be extracted for sale at a very low cost of production. This bio-crude is then processed through catalytic conversion into usable carbon chains resembling the liquid fuel products desired (similar to petroleum refining). The final step in the process is a hydrogenation process to polish and add stability to the molecules produced in the previous step. Again, this part of the process is well known in the petroleum refining industry and does not represent a technology risk. The final products are drop-in blend ready for use in the general liquid fuels market.

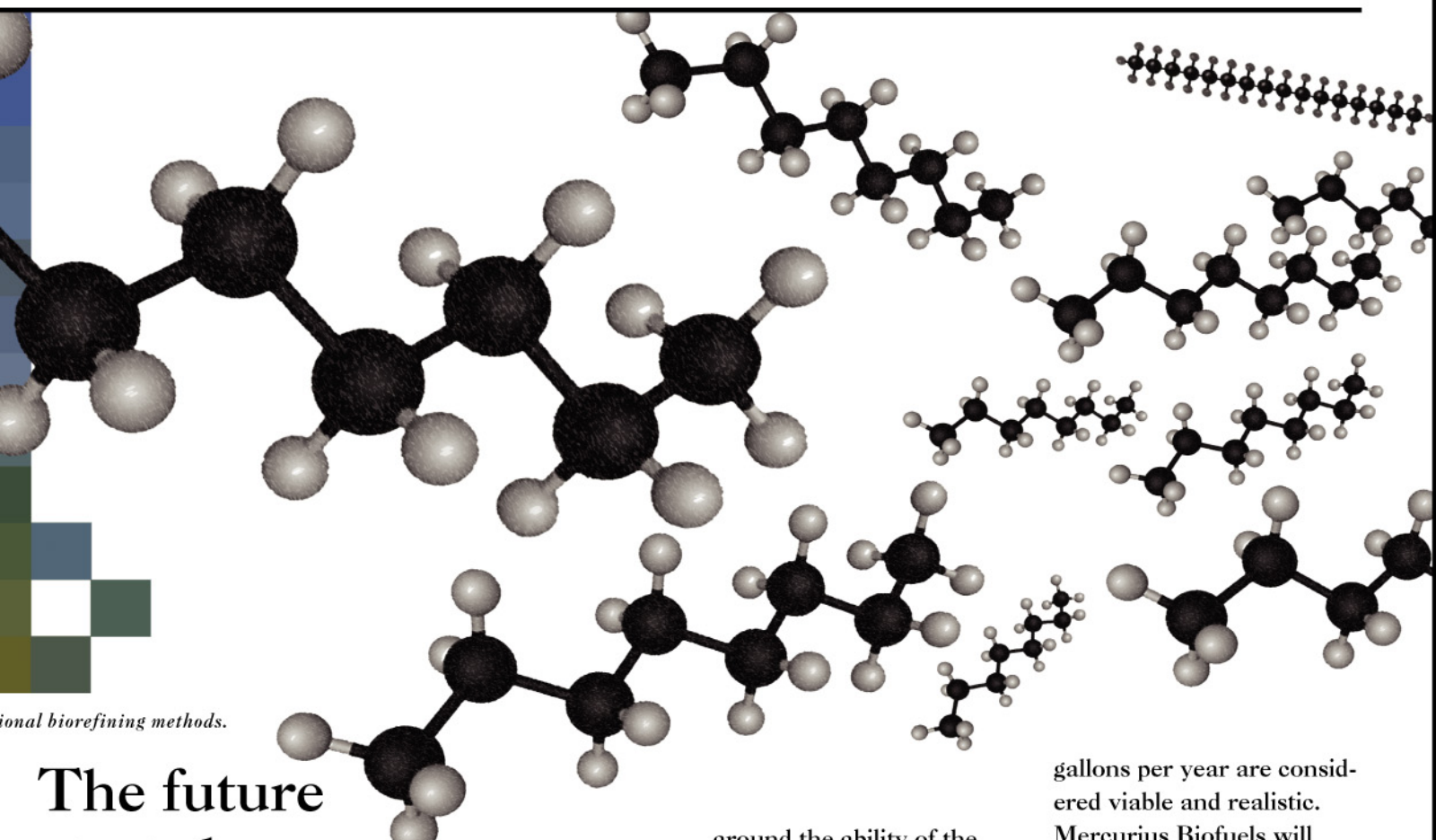


Unlike other Biorefining processes Mercurius Biofuels does not require costly food crops to operate.



Mercurius Biofuels utilizes a wide variety of cellulosic waste materials to produce fuel including municipal waste, paper, corn stover, agricultural and forest waste.





itional biorefining methods.

The future starts here

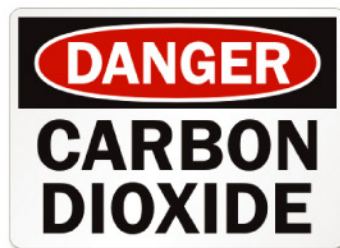
Mercurius Biofuels has achieved small-scale bench testing success and is now seeking funding to build a continuous production pilot plant to showcase its ability to scale up its catalytic process to produce green chemicals and biofuels at a commercial level. This will require an investment of \$5 million and a time period of two years to complete the build out and reach full production of 14,000 gallons of cellulosic diesel a month. At \$4 a gallon for our diesel product and \$178,000 in sales for auxiliary byproducts this production level translates into \$850,000 in annual revenue.

After completion of the pilot plant and its full-scale production for one year

Mercurius Biofuels will start construction of its first commercial facility in 2013 with the goal of starting production in 2014 and reaching full-scale production by 2015. The full-scale capacity of the initial commercial plant is expected to be 34,000 gallons of diesel per day or nearly 12.5 million gallons per year. Again, at \$4 a gallon for our diesel product and almost \$12 million in sales for auxiliary byproducts MB will achieve nearly \$62 million in annual revenues. The level of revenues that Mercurius expects to achieve leaves plenty of room for the possible lengthening of this time line due to unforeseen construction or other delays. Any concerns

around the ability of the market to absorb this quantity of production should be allayed by the fact that this is a very small fraction of the need that has to be met with respect to the federally mandated biofuels content as set out in the RFS2 legislation. Once the initial commercial plant has been completed and fully operational for at least 6 months Mercurius Biofuels would start creating a network of plants throughout the United States and Canada with an emphasis on matching potential sites with the appropriate sized plant volume production to fit feedstock, existing infrastructure, and off-take capabilities. Mercurius believes that plants with a production range of 5 million gallons per year to 40 million

gallons per year are considered viable and realistic. Mercurius Biofuels will have the capacity to self fund the construction and operation of at least one new plant a year but that could be leveraged up to two or three if the expected interest from Local, State and even Federal governments to engage in a public/private partnership is achieved.



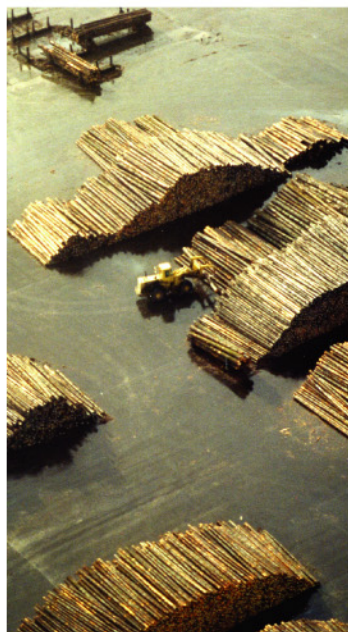
The exclusive Mercurius Biofuels process does not produce CO₂, in fact carbon dioxide sequestration is an important aspect of this process.





Mercurius proposes a multi-level, community based education and workplace training program to bring back new life to formerly prosperous rural communities.

Mercurius envisions bringing life back to previously prosperous paper, timber, and agricultural rural areas that have seen their businesses disappear and their younger generation fall into despair. Mercurius intends to help turn that around by using its RESCUE initiative (*Renewable Energy & Sustainable Cooperative Upwardly-mobile Education*). MB proposes an initiative to create a multi-level, community based education and workplace training program in its Biorefinery communities that will provide upwardly mobile education and training opportunities in skills that could lead to participation in the renewable energy and sustainability sector initially but would



Perennial crops represent 35.2% and forest waste 12.8% of the 1.3 billion tons of excess biomass inventory available for conversion to fuel.

lead ultimately to the wider business community while at the same time giving individuals and communities renewed hope for their



Mercurius' refining technology allows communities to use bio-waste instead of food crops or primary forest for fuel.

future. These social and economic initiatives will give Mercurius Biofuels greater access to public and private investors that are predisposed to triple bottom line projects. Mercurius Biofuels will be simultaneously pursuing international sub-licensing opportunities leveraging our successes here in the United States. Mercurius believes that the revenue potential for sub-licensing

its patented and proven production processes combined with its production services capabilities will be significant and will alleviate the difficulties in operating independently in foreign markets.

