

New Generation Fuel

Baltimore Biofuel Producer Utilizes New Technology Process

For more than 100 years, the primary process to produce diesel heating oil has been a chemical refining process called transesterification.



Now a company in Baltimore, MD company has created a process to produce diesel derived from biomass utilizing emulsification technology.

New Generation Biofuels Holdings, Inc. (321-363-5100), opened a 5-million-gallon-per-year (MMGY) plant Feb. 26 in Baltimore, producing a new type of diesel and fuel oil replacement derived from vegetable oils and animal fat feedstocks—but it is still not biodiesel.

The new biofuel, called NGB “Classic” Formula Biofuel, can be used to replace No. 2, 4 and 6 oils and is made utilizing a proprietary emulsification process originally invented by an Italian.

“We use emulsification because it is a precision blending process,” said New Generation Biofuels Chief Marketing Officer Phil Wallis.

The biofuel New Generation is producing, Wallis said, is made up of vegetable oil, approximately 20% water, and proprietary ingredients used to produce a stable emulsifier.

“This technology is not actually new,” Wallis added. “We have all watched the food and pharmaceutical industry make stable emulsions for years utilizing some of the additives utilized by the food and pharmaceutical industries to make a stable emulsion.”

“Classic Formula is designed to be a replacement for petroleum diesel, fuel oils and kerosene,” Wallis said.

Fuel Characteristics

Wallis explained that the water added in the process provides two key benefits. The first benefit is that the water becomes an atomizer and the second is that

the water reduces nitrous oxide (NOX) emissions. This biodegradable biofuel also reduces sulphur dioxide (SO₂) as it has virtually no SO₂ for industrial users and contains no sulfur.

“Our testing so far shows a 30% to 60% reduction in NOX in combustion turbines (GE and Pratt and Whitney) and in industrial boilers (Cleaver-Brooks) compared to No. 2 fuel oil heating oil,” Wallis noted.

Because the feedstock is not transesterified, there are no co-products such as glycerin.

“Our current applications have included combustion turbines for utilities, commercial and industrial boilers boiler and generators,” Wallis said.

As of late March, the plant has already contracted with two new customers, Catoctin Mountain Growers, Inc., Keymar, MDA for up to 370,000 gallons per year, and Delta Chemical Corporation, Baltimore, for up to 371,000 gallons per year. A third customer, Taunton State Hospital, Taunton, MA, will also be supplied in April.

Myke Feinman, editor

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