

**DOCKETED**

<b>Docket Number:</b>	22-TRAN-01
<b>Project Title:</b>	Zero and Near Zero Carbon Fuel Production and Supply Funding Concepts
<b>TN #:</b>	242918
<b>Document Title:</b>	Steve Smith Comments - on Green Fuel Oil
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Steve Smith
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	5/2/2022 4:46:13 PM
<b>Docketed Date:</b>	5/2/2022

*Comment Received From: Steve Smith  
Submitted On: 5/2/2022  
Docket Number: 22-TRAN-01*

**on Green Fuel Oil**

*Additional submitted attachment is included below.*

# Steve Smith

*Research and consultation in the physical sciences*

**5100 Channel Avenue  
Richmond, CA 94804-4646  
(vox) 510-237-5986 (fax) 510-232-9921  
email [steve@consultingscientist.us](mailto:steve@consultingscientist.us)  
[www.consultingscientist.us](http://www.consultingscientist.us)**

## **Green Fuel Oil™**

Green Fuel Oil (GFO) is a new renewable-fuel-oil technology, capable of making a profit without government subsidies, and not freezing at minus 24 centigrade, thus being suitable for Jet Fuel) and entirely carbon-neutral.

Green Fuel Oil is NOT Biodiesel. It has many of the advantages of Biodiesel but none of the disadvantages.

GFO was invented several years ago, but “put on the shelf” in the face of the 2008 collapse of the credit markets. GFO is a zero-waste technology for converting natural fats, vegetable or algae oils (triglycerides) into low-viscosity diesel fuel. Some of these natural-oil feedstocks are more suitable than others to realize all the potential advantages of this new technology, with some non-food crops yielding over 1000 gallons/acre/year.

The GFO technology has been extensively validated on a laboratory scale with about a dozen different feedstocks. It is patentable. Patents have not been filed since there is no established commercialization infrastructure in existence that can economically be used to defend the Intellectual Property, at present.

Conventional Biodiesel technology produces a waste stream of about ten to twenty percent (dirty glycerin) or much more than that as dirty-water with glycerin, and requires methanol made from natural gas by a very inefficient process. It is therefore hardly

Green, although is being sold as such. Further, Biodiesel tends to freeze around zero C, making it problematic in cold weather and impractical for Jet fuel.

Green Fuel Oil, in contrast, is made by a process of Molecular Restructuring™, in which *all the atoms that go in, come out as fuel*. It is thus inherently a 100% mass-efficient process, and does not create a by-product waste disposal problem. *It does not need a Government subsidy to be profitable*. It can be manufactured to not freeze as low as minus 24 Centigrade, thus can be made suitable for Jet fuel.

GFO is a zero-carbon-footprint renewable-resource fuel whose feedstock can be grown entirely domestically, or on remote islands. Its most-preferred feedstock can even tolerate brackish ground-water. It does not require that food sources be used as a feedstock.

Green Fuel Oil can be stored for years and available when needed; it does not slowly become varnish as is the case with conventional Biodiesel.

GFO can be burned in diesel-electric generators and the energy distributed via the Power Grid. It is a matter of concern to avoid competing with the fossil-Fuel industry, thus we seek methods of commercialization that do not unnecessarily compete with road-use diesel. It can in this manner displace coal-derived electricity from the Power Grid, to support electric vehicle energy-demands.

GFO is a zero-carbon-footprint technology that supports electric vehicles, whose time is NOW.

One component of the Path Forward presently contemplated is to construct a Pilot Plant (another component being to assemble a Management Team). The Pilot-Plant would prove the engineering designs of the scaled-up laboratory processes, would be about the size of a 40-foot Shipping Container, and would have a design-capacity of 30,000 gallons-per-year (GPY). The plant engineering would be done by an established

chemical engineering company, and it could be constructed on a skid or truck-chassis. Being “not-attached-to-the-ground”, it may be located on my industrial-zoned property in Richmond, Ca, the site of Smith & Co. present operations, without any permitting issues or delays.

Bringing this or any technology to market takes more than just the Science, which already exists. It takes a management and financing team, for which partners are needed. Communications from anyone who can forward this goal are welcome.

Steve Smith