

DOCKETED

Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	224789
Document Title:	Steve Smith Comments On Carbon-neutral electrical power support for electrical
Description:	N/A
Filer:	System
Organization:	Steve Smith
Submitter Role:	Public
Submission Date:	9/24/2018 1:05:09 PM
Docketed Date:	9/7/2018

Comment Received From: Steve Smith
Submitted On: 9/24/2018
Docket Number: 19-ERDD-01

On Carbon-neutral electrical power support for electrical

Additional submitted attachment is included below.

From: Steve Smith
To: [Energy - Docket Optical System](#)
Subject: Carbon-neutral electrical powoer supprot for electrical vehicle programs
Date: Friday, September 7, 2018 12:26:38 PM
Attachments: [Green Fuel Oil White Paper 090618.pdf](#)

Hi, DOCKET

I have seen your program developing in recent years; With so much energy-demand being moved from chemical-fuel-distribution-and-utilization to electrical-energy-distribution-and-utilization, some serious attention needs to be given to supplying more energy to the Power Grid to support this increased load.

I do not see this issue being addressed.

Naturally, this needs to be carbon-neutral and needs to be capable of implementation with minimal infrastructure development cost.

I had about 10-15 years ago developed technology to address this need; when 2008 happened I abandoned efforts to commercialize the technology, seeming no foreseeable funding to implement it and a lack of strong demand for it.

Now, the demand your program will put on the Power Grid needs to be supported all the way from the electric vehicle socket-on-the-garage-wall back-upstream to some energy-source.

Attached is a White Paper on a zero-waste-stream, carbon-neutral fuel oil that may be burned in turbines that run generators to feed energy into the power grid, and conveniently located in high-demand-regions.

--

Best regards,
Steve <mailto:steve@consultingscientist.us>

www.consultingscientist.us

<http://www.pickensplan.com/>

Note to NSA: This is not the droid you're looking for.
Move along, move along.

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
www.consultingscientist.us**

Green Fuel Oil™

Green Fuel Oil (GFO) is a new renewable-fuel-oil technology, not freezing at minus 24 centigrade, thus being suitable for diesel engine fuel as well as jet-engine fuel. It may be burned in turbine-generator-sets directly to generate electricity

Green Fuel Oil is NOT Biodiesel. It has all 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 collapse of the credit markets. GFO is a zero-waste technology for converting natural vegetable or algae oils 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.

Oilseed oils are an international Article of Commerce; there is no scarcity of it. Its physical properties are not, however, compatible with the fuel requirements of diesel piston or turbine engines.

My technology involves a “Molecular Restructuring™” that creates compatible fuel-oil with a ZERO waste-stream and is 100% carbon-neutral.

The GFO technology has been extensively validated on a laboratory scale with about a dozen different feedstocks.

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 in-truth carbon-neutral.. Further, Biodiesel tends to freeze around zero C, making it problematic in cold weather and impractical for aviation- 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 can be manufactured to not freeze as low as minus 24 Centigrade, thus can be made suitable for turbine-engine 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. Feedstocks can also be sourced Internationally, and imported in tanker ships.

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 can in this manner displace coal-derived electricity from the Power Grid.

GFO is a zero-carbon-footprint technology that supports electric vehicles. If the development of this technology is of interest to the State of California, I would welcome an exploratory communication to define goals.

Steve Smith