

Membership

Joining WARFA allows you to purchase products at bulk purchase price, subject to conditions. We also provide you with an extensive manual containing practical and valuable tips. Full membership is \$50, pensioner discount available of \$30.

Members can join and pay cash or cheque at our monthly meeting.

Or bank transfer to

BSB 066156, Account 10135966. Use your name in the reference field and send an email to our Treasurer to inform them of your payment.

Email: treasurer@warfa.asn.au

Common Questions

Does this mean I get free fuel?

No. Sometimes members are able to obtain cheap supplies of used cooking oil, but there is a time factor to be considered and costs of establishing and maintaining your biodiesel plant or filtering processes. It is not as easy or simple as filling your car at a service station!

Is it legal?

Yes. However Fuel Tax Excise should be paid on all Biodiesel produced, and blending excisable and non-excisable fuels is against tax law. Generally vehicle fuel type modifications are acceptable but extra fuel tanks need to be approved. All information provided is in good faith. We will guide you, but the risk is yours.

What is the WA Renewable Fuels Association Inc?

WARFA is a non profit community group formed in 2001 with the aim of supporting and promoting the renewable fuels industry in Western Australia.

Renewable fuels include biodiesel, ethanol, vegetable oils, animal fats, methane and biomass. Other innovative fuel sources such as hydrogen are also of interest to members.

Members meet regularly to view projects of other members, attend education sessions, to promote the production of a quality product, safely and effectively.

Meetings are held second Sunday each month apart from January and May when we meet on the third Sunday. Check the website or contact the Chairman or Secretary for up to date details as we regularly meet at members homes to view and learn from their experiences.

The Committee has discussions with Industry groups, the EPA, and Government, to promote renewable fuels, and to liaise with them on behalf of members.

The Association does not support the clearing on rainforests to plant palm oil trees.

For more information about the Association and meeting venues, please contact

WARFA Chairman

Email: chairman@warfa.asn.au Phone: 0428 920881

WARFA Secretary

Email: secretary@warfa.asn.au Phone: 0412 747757

WESTERN AUSTRALIAN RENEWABLE FUELS ASSOCIATION INC

Supporting the development of a sustainable,
renewable fuels industry in Western Australia



Fuel from vegetable oil.

***Biodiesel and
SVO - Straight Vegetable Oil***

www.warfa.asn.au

What is Biodiesel

Biodiesel is a renewable fuel made from vegetable oil (new or used) or animal fat. It is an environmentally friendly replacement for, or additive to, diesel fuel.

Biodiesel can be easily mixed with diesel to create a biodiesel blend. No major engine modifications are needed to use biodiesel and it does not require special storage or fuel dispensing facilities.

Advantages of Biodiesel

Biodiesel performs very much like diesel as it has similar power, torque and fuel economy. The big advantage in using biodiesel is that harmful exhaust emissions are substantially reduced compared to conventional diesels.

Emissions such as unburned hydrocarbons, carbon monoxide, sulphur, aromatics and particulates are reduced when using biodiesel.

Another advantage of biodiesel is that it provides better engine lubrication than low-sulphur diesel fuel.

Biodiesel is also safer to handle due to its excellent biodegradability characteristics, low toxicity and high flashpoint.

Biodiesel has also been shown to greatly reduce net CO₂ greenhouse gas emissions. This is because CO₂, which is released when the fuel is burnt, is captured by growing plants which are then processed into another batch of biodiesel.

One of the key advantages of biodiesel is that it is renewable. Fossil fuels (like petrol & diesel) are non-renewable, meaning that once we use it all up - that's it, it's gone forever.

Renewable fuels like biodiesel are a much more sustainable source of fuel because as long as they are produced in an ecologically sustainable way, they will not run out.

Using biodiesel also has the potential to greatly reduce our reliance on expensive imported oil, leading to the creation of local jobs and the improvement of our balance of payments situation.

The great thing about biodiesel is that it can be made from waste vegetable oil.

This means that not only do vehicles running on biodiesel produce less harmful air pollution, they are also benefiting the environment by reusing oil that would normally go into landfill or be used for feedstock.

Sample of
biodiesel made
from used
cottonseed oil



Biodiesel Production

Biodiesel is currently in commercial production in many countries in the world including the USA, Germany, Italy, France and the Czech Republic.

Australia has a fledgling biodiesel industry which is set for massive expansion, with AR Fuels constructing biodiesel plants in South Australia and Western Australia and Gull selling a B20 blend in Perth service stations.

What is SVO?

SVO (Straight Vegetable Oil) is used unmodified as a direct replacement for diesel in suitably modified engines. While this use of renewable energy requires some vehicle modifications, it is the most environmentally friendly fuel available especially when waste cooking oil is used. WVO (Waste Vegetable Oil) can be sourced from restaurants and fish and chip shops and only requires filtration to turn it from a waste product to a valuable fuel.

In Diesel engines fitted with a mechanical Injection Pump (as opposed to Common Rail or Unit Injector diesel engines), the addition of an extra fuel tank, filters, valves and a heating system can allow reliable operation on SVO without impacting on engine longevity.

Engine coolant is used to provide the heat to reduce SVO viscosity (~80°C). This allows the SVO to flow through the filters and for the injector pump to pump it as easily as diesel fuel. In operation, the engine is started on diesel/biodiesel and once the engine reaches normal operating temperature, a switch is operated changing the fuel source to SVO. Just before the end of the journey, the switch is returned to the diesel supply position to use up the vegetable oil, replacing it with diesel to facilitate easy cold starting. This purging is important to minimise the risk of poor starting and other complications.

Users report minimal change in engine performance or economy and often a reduction in diesel clatter occurs making the engine quieter. When either biodiesel or SVO is used as a fuel, generally the unattractive black smoke associated with diesels disappears - yet another positive.