

Wren Oil

Oil Recycling and Re-
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Professor Peter Newman
Director, Sustainability Policy Unit
Department of Premier and Cabinet
197 St George's Terrace
PERTH WA 6000

Dear Professor Newman

Re: The WA State Sustainability Strategy

A West Australian newspaper editorial¹ stated that WA will have problems complying with the level of reductions needed to comply with greenhouse gas emissions because it has a strongly growing economy that relies heavily on energy. Generation of used oil will increase correspondingly, but where will it go if the oil recycling industry can't sustainably dispose of it?

Even as we accept reuse for the original purpose as the highest and best use of recycled lubricants, or recycling in its best form, we must recognise it is difficult to achieve due to the content and nature of residual contaminants and additives in lubricants and market barriers of distribution and competition from large oil companies. The recent closure of the Kwinana BP Refinery lube oil production facility also ended the brief interest they expressed in re-refining².

The seriousness of the problem in Western Australia is reflected in rapidly declining energy markets and the ongoing accumulating surpluses of used oil because of increased burning of natural gas in its place. The external affects of such changes ignore the use of recycled oil while collecting it safely is always supported. Other than frequent Regulatory issues concerning collection, transport, treatment and storage, the last contact that Wren Oil has had from a WA government agency about used oil was in February 2001³ to promote used oil collection. I support such efforts, as it means more used oil will be taken out of the environment, but at the same time the WA Government should use their best efforts and influence to ensure it gets reused in those areas where it is competitive with and can replace new burner fuel oils.

Western Power is the largest WA user of re-refined oil, using about 6-7ML per annum of recycled oil for electricity generation at the Esperance, Broome & Derby Power Stations and according to recent decisions, the remote stations will soon change to gas or other fuels. Where will all the recycled oil go then?

¹ West Australian 7 August 1999

² BP Refinery - Wren Oil discussions July-August 2000

³ Jannelle Booth, a Department of Environmental Protection Waste Minimisation Education and Promotion Officer, Community Support Branch, in their quest for an Environment Australia Waste Oil Levy Grant

Firstly, a way forward is for the WA Government to persuade Western Power to use re-refined oil, not untreated or lesser treated used oil, as a replacement for the new fuel oils used to light up the coal at the Collie and Muja Power Stations on economical and environmental grounds.

And, as more encouragement for its reuse, to include and promote re-refined oil as a renewable energy source in the "WA State Sustainability Strategy" in line with a recent submission⁴ to the Federal Office of the Renewable Energy Regulator concerning re-refined oil and the Mandatory Renewable Energy Target (MRET) in Australia. The MRET issue and re-refined oil will be raised when the Renewable Energy Regulations are reviewed in Canberra January 2003. Such changes will provide an incentive for the power stations to use recycled oil and create a use for a recycled product.

Following is a synopsis of the MRET submission which argues the case for such a change. If wanted, I will supply the complete submission provided to Australian Greenhouse Office, the Federal Minister for the Environment & Heritage, his Shadow counterpart and other members of Federal Parliament that were visited.

SYNOPSIS - SUBMISSION TO THE OFFICE OF THE RENEWABLE ENERGY REGULATOR MANDATORY RENEWABLE ENERGY TARGET

- § Re-refined oil (used motor oil that undergoes an extensive re-refining process removing contaminants) should be classified as a renewable energy source and be listed in the *Renewable Energy (Electricity) Act 2000*. This oil can be:
 - re-refined indefinitely (it does not wear out)
 - blended to produce diesel fuel extenders and lubricants such as motor oil, transmission fluid, and grease.
- Re-refined used oil should be classified as a renewable resource under the *Renewable Energy (Electricity) Act 2000* which would further facilitate the meeting of the Government's MRET and attract credits for power stations using this product as start up.
- During the process of development of the Act and associated regulations the used oil industry was not consulted at all or invited to comment.
- § The statistic regarding energy efficiency and re-refined oil is derived from the fact that re-refined oil does not need to be:
 - "explored" for
 - drilled for
 - pumped out of the ground
 - shipped/transported hundreds and/or thousands of miles
 - does not require as many steps in the refining process as crude oil.
- § Re-refining is an energy-efficient and environmentally beneficial method of managing used oil because:
 - less energy is required to produce a litre of re-refined base stock than base stock from crude oil;
 - for every litre of re-refined oil used for energy a litre of crude oil is saved, which in turn impacts upon balance of payments issues;
 - re-refined oil prices are competitive to equivalent virgin oil products;
 - car manufacturers are increasingly installing re-refined oil in new cars;

⁴ Produced in August 2002 by Global Environmental Consultants for Wren Oil and Australian Waste Oil Refineries of NSW.

- lubricating oil does not wear out, it simply becomes contaminated;
 - there is no compromise in the quality of re-refined oil.
 - oil - and its fossil fuel derivatives - is a non-renewable resource thus recycling is very important;
 - the actual recycling process is economical, efficient and environmentally friendly.
 - the recycling loop is closed;
 - market dynamics – of the 800 million litres lubricating oil produced by Australian refineries, approximately 500 million litres is sold into the domestic market. With 300 million litres excess available, the Government is encouraging the increased collections of used oil which adds to the the potential recycled oil supply of approximately 250 million litres. Therefore there is a compounding problem of approx 550 million litres, less current markets, that needs to find a home. With no viable markets, who will use the expanding glut of used oil?
- Environment Australia reports that 110 million litres were unaccounted for in Australia in 1999. Just one litre of used oil has the potential to contaminate up to one million litres of drinking water.
 - This oil can potentially be re-refined into lubricants, processed into fuel oils, and used as raw materials for the refining and petrochemical industries.
- § Coal fired power stations rely on heavy fuel oil and light fuel and diesel for start-up fuel. As long as coal and oil continue to be used, replacing new oil with re-refined oil is a sustainable alternative energy source; since it conserves a valuable, non-renewable resource (crude oil).
- § MRETs need to encourage the energy generators to use re-refined used oil in power stations in order to gain renewable energy credits. Due to the recent influx of gas, wind power, bagasse and other renewables into the power generation industry the use of recycled oil is further being compromised.
- The Bills Digest no.18 to the *Renewable Energy (Electricity) Bill 2000*, define renewable energy as: “...any source of energy that can be used without depleting its reserves”, consequently re-refined used oil clearly meets this guideline
 - This list in the Act does not include the traditional “fossil” fuels: coal, gases associated with coal seams, oil and natural gas. This is because fossil fuels are not renewable on a time scale relevant to electricity generation. However this should not apply to re-refined base oils that can be used as a start up fuel for generating electricity and has a relatively short re-refining time.
 - Bagasse co-generation, black liquor, wood waste, crop waste, municipal solid waste combustion create the *same greenhouse emissions as re-refined oils*.
 - Re-refined oil is akin to landfill gas methane (listed as a renewable energy source) – both are created from a used product. Methane is made from the decomposition of organic waste while re-refined oil is sourced from lubricating oil.
 - the benefit of using recycled oil as burner oil is relatively immediate whereas methane takes longer to generate from solid waste landfills.
 - Re-refined oil as an alternative fuel will replace diesel and heavy fuel oils derived from a non-renewable resource for which there is no ready substitute.

- In conclusion, re-refined used oil is clearly a sustainable and renewable resource. As such it should be classified as a renewable resource under the *Renewable Energy (Electricity) Act 2000* and encourage its use by Power Stations in order for generators to be able to gain MRETs and increase the market potential for 100 million litres of used oil.
- Encouraging the power stations to get carbon credits from using re-refined oil as start up would potentially utilize over 50 million litres of re-refined used oil. (End synopsis)

I look forward to your comments and support.

Yours faithfully

Fred Wren
Managing director
WREN OIL