



*Renewable Fuel for  
Renewable Power*



## Rocfuel Ltd: Sustainability Policy

### Sustainability assessment of potential fuel for UK power generation use

Issue	Comment
<b>OFGEM Policy</b>	
	<ul style="list-style-type: none"> <li>All fuels purchased and used have to satisfy OFGEM's sustainability policy.</li> </ul>
<b>Counterparty</b>	
Corporate Responsibility Policy of Supplier or Counterparty	<ul style="list-style-type: none"> <li>Specific products are therefore purchased that fully satisfy the above sustainability criteria.</li> <li>Because of the circumstances a policy to cover the purchase of the co-products that are used to create any blend of bio-fuels that is supplied to the power plant is not appropriate,</li> <li>All individual bio-fuels used at the Rocpower plants will have to be separately accredited with OFGEM. In addition there is a requirement to satisfy OFGEM that each consignment of bio-fuel is fully traceable.</li> </ul>
Counterparty a member of sustainability organisation (e.g. RSPO)	<ul style="list-style-type: none"> <li>Due to the nature of the business it is not relevant for the Company to be a member of the RSPO or other similar organisations that have been specifically created to deal with primary production issues.</li> </ul>
<b>Source Material</b>	
Source material(s)	<ul style="list-style-type: none"> <li>The source products are generally co-products from the food, oleo-chemical and wood pulp industries.</li> <li>Each of the individual products that are used, are the elements of the primary oils that can't be used or are unsuitable for the production of the particular product that is being manufactured.</li> <li>These co-products often can not in any way be related to any specific source oil. In the majority of cases they are the long chain length molecules, which prove unsuitable for use or do not suit the tastes and preferences of the consumers in the EU and other markets that are supplied from these particular production plants.</li> <li>The wood pulp products are the by-products from the paper production industries in North America &amp; Scandinavia.</li> </ul>
Location	<ul style="list-style-type: none"> <li>The source material for the co-product could originate from any geographic location where vegetable oils are grown for the food and oleo-chemical industries and wood pulp from managed forests.</li> </ul>



	<ul style="list-style-type: none"> <li>The majority of the co-products that Rocfuel sources are supplied from large multinational food, oleo-chemical industries and paper producers.</li> </ul>
GM content	<ul style="list-style-type: none"> <li>Due to the nature of the fuel often being a blend of co-products from a number of sources it is not possible to confirm or otherwise the position in relation to the GM content.</li> </ul>
Source material industry structure	<ul style="list-style-type: none"> <li>The products are currently extensively used in the Scandinavian &amp; US heating industry where blended products have been specifically developed for use in a rotary cup design of boiler. The products are however ideally suited for use as a HFO replacement fuel in large power plants and smaller distributed generation plants.</li> <li>The source products are obtained from production facilities that are located in North Western Europe and the USA.</li> </ul>
<b>Supply Chain</b>	
Sustainability of supply chain – assurances, etc.	<ul style="list-style-type: none"> <li>It is not possible for Rocfuel to influence the purchasing or production policy of the major food, oleo-chemical and paper process businesses that are the primary purchasers and producers of the source virgin oils for the various production processes.</li> </ul>
<b>Policy</b>	
Current EU / UK Government policy implications	<ul style="list-style-type: none"> <li>The individual oils that will be used are all classified as products and Rocfuel will supply all the relevant information that will enable this to be confirmed with the relevant UK regulatory authorities.</li> <li>Rocfuel have a Company Policy that ensures full traceability and can guarantee that the source and provenance of each consignment will be fully known.</li> </ul>
NGO policy implications	<ul style="list-style-type: none"> <li>NGO's generally have policies that encourage the use of products such as these in the energy market as it will displace fossil fuel and primary vegetable oil demand.</li> <li>The products used are by-products from processing and refining of various biological oils, or products that can't satisfy the strict requirements of the EU food and oleo-chemical industries. The products used are mainly a blend of various fractions of co-products from these processes. These co-products have a low demand and price level in the market compared to the primary products, which is why they are considered co-products.</li> <li>The bio-fuels used are significantly cheaper than the raw materials that are used in the food and oleo-chemical industries, eg rape, palm, coconut oil, etc. Also the various finished products from these industries are also significantly more expensive. It is therefore the demand for these finished products or secondary raw materials that drive the demand for the crude oils, not for energy use.</li> <li>The NGO's therefore categorise this type of fuel as a "Second Generation Bio-fuel" and support its use in the energy market.</li> </ul>
<b>Market</b>	
Current use of product	<ul style="list-style-type: none"> <li>Fuel – Scandinavian &amp; North American heating market and EU Large Power Sector.</li> </ul>
If by-product, use of primary	<ul style="list-style-type: none"> <li>Primary product used in the food, oleo-chemical and in the wood pulp chemical products industries.</li> </ul>



product	
Effect of our procurement on increased demand for virgin oil	<ul style="list-style-type: none"> <li>No effect. The amount of bio-fuel that is available in the European and North American markets is related to the demand for the food, oleo-chemical products and paper products that lead to the production of the co-products.</li> </ul>
Effect of our procurement on displacement of other products	<ul style="list-style-type: none"> <li>None. The purchase of these products would just remove the opportunity for a similar organisation to gain the environmental benefits associated with the use of this fuel.</li> </ul>
Alternative uses of by-product	<ul style="list-style-type: none"> <li>The product has a high CV and other qualities that make it very suitable for use as heating oil and for power generation.</li> <li>The demand for heating oil and power generation in the EU is so significant that it is inconceivable that this product could or would be used for any other purpose.</li> <li>As the product is a co-product from the food, oleo-chemical and wood pulp industries. It clearly can't be reused in any of these industries.</li> </ul>
<b>Life Cycle</b>	
GHG benefits	<ul style="list-style-type: none"> <li>As the fuel produced has a very high CV. An analysis of the GHG balance for this fuel will be very favourable when compared to other biomass fuels and fossil fuels that are presently being used by UK utilities.</li> <li>Electricity production is therefore considered to be a beneficial use for these types of products.</li> </ul>
<b>Stakeholder Issues</b>	
Current NGO campaigns	<ul style="list-style-type: none"> <li>Not relevant</li> </ul>
Potential impact on rainforest destruction	<ul style="list-style-type: none"> <li>No impact. The use of the bio-fuel will have no impact on the market. The amount of bio-fuel that is available is determined by the primary demand of the EU market for food, oleo-chemical and wood pulp products that are produced from the primary oils.</li> </ul>
Impact on food supply	<ul style="list-style-type: none"> <li>No Impact. The use of the fuel will have no direct or indirect effect on the food market.</li> <li>The amount of bio-fuel that is available is proportional to the overall size of the food and oleo-chemical markets. So the amount available can only increase if the demand for food and oil based consumer products increases.</li> </ul>