

## **Argent Energy Carbon and Sustainability Annual Report**

**2010/2011**

### Chapter 1

#### Introduction

Argent Energy converts used cooking oils and waste animal fats (tallow) into Fatty Acid Methyl Esters for sale as bio-diesel. These products are also known as Used Cooking Oil Methyl Ester (UCOME) and Tallow Methyl Ester (TME). This operation is currently carried out at a single operational facility at Motherwell, Scotland.

Crucial to the product quality is the technology used by Argent Energy which includes distillation. The use of distillation on all production is the only way of ensuring conversion of waste cooking oils and tallow (variable and 'dirty' feedstocks) into a high grade of biodiesel that consistently complies with all aspects of the European standard EN14214. Furthermore, the levels achieved through distillation on some of the critical elements of EN14214 such as water content, total contamination, phosphorous and monoglycerides come out as a fraction of the laid down limits. This enables Argent Energy to pursue its core ambitions of producing high grade fuel from wastes and residues only. The Argent Energy plant is unique in the UK in this regard and is the only operation that has invested in the bespoke waste to biodiesel technology.

Argent Energy has not manufactured or sold anything other than biodiesel made from wastes and residues in order to avoid using cropped raw materials and those with poorer sustainability characteristics. UCOME and TME are sold to customers according to a range of different agreements. Some of these agreements require Argent to deliver specific Carbon and Sustainability (C&S) performance. This is generally defined according to the type of feed-stock used to produce the bio-diesel supplied. For example, some customers prefer to receive TME. Some customers receive fuel for direct use in fleet transport.

The operational data required to calculate well-to-wheels lifecycle green house gas performance is recorded at the operating unit. This data set includes process plant inputs and process efficiency together with plant energy and power use. All plant equipment used to measure this data is maintained according to a schedule of C&S equipment.

This report is drawn up in accordance with the Carbon and Sustainability Reporting Technical Guidance v2, Chapter 4. It incorporates the quantitative data summarising the monthly reports and the qualitative information regarding Argent Energy's aims for improving further on providing environmental benefits in the production of biodiesel.

## Chapter 2

### Aggregate Summary of Quantitative Data

Aggregated data from the monthly returns is summarised in Tables 5 and 6.

**Table 5 : Summary of C&S Data by Feedstock**

Feedstock	General		Environmental	Social	Carbon	
	% Fuel Supplied by Feedstock Type (by Volume)	% Data reported on Biofuel characteristics	% Meeting Qualifying and/or RTFO Standard	% Meeting Qualifying and/or RTFO Standard	Average Carbon Intensity g CO <sub>2</sub> e / MJ	Average % GHG saving
<b>BioDiesel ME</b>						
UCO	69%	100%	100%	100%	11.7%	86.1%
Tallow	31%	100%	100%	100%	12.0%	85.6%
Weighted Average (all fuels)		100%	100%	100%	11.7%	86.0%
<b>Target 2010/11</b>						

**Table 6 : C&S Characteristics of Each Feedstock**

General Information		Sustainability Information				Average Carbon Information	
% of Total Feedstock Type	Feedstock Origin	Standard	Env Level	Social Level	Land Use on 30 Nov 2005	Carbon Intensity incl LUC (g CO <sub>2</sub> e / MJ)	GHG saving %
<b>Used Cooking Oil</b>							
97.7%	UK	By-product	QS	QS	By-product	11.6 %	86.2 %
2.3%	Ireland	By-product	QS	QS	By-product	14.0 %	83.0 %
<b>Tallow</b>							
98.6%	UK	By-product	QS	QS	By-product	12.1 %	85.6 %
1.4%	Ireland	By-product	QS	QS	By-product	10.3 %	87.7 %

## Chapter 3

### Qualitative information

- Activities to improve the proportion of sustainably sourced feedstock and reduce average carbon intensity.

Argent's vehicles continue to run on biodiesel with a new storage and delivery tank installed on site in 2010. We currently use default emissions for the mileage but intend to devise actual emission figures before 2011/12 period.

Using a Weekly Performance Report, the management team has reacts quickly to ensure the most effective use of chemicals and raw materials.

- Activities to improve the type of carbon data which is being used.

Argent continues to systematically improve the electronic capture, filing and management of all documentation containing, or relevant to, C&S data.

Argent also continues to update and implement its C&S management procedures covering areas such as Internal Audit, Mass Balancing, and Key Personnel Responsibilities for the implementation of C&S requirements at all critical control points.

- Environmental management system certificates.

Argent Energy is investigating ISO 14001 certification in order to demonstrate conformance to our environmental policy and in support of our IPPC permit.

Dickon Posnett  
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Argent Energy