RENEWABLE TRANSPORT FUEL OBLIGATION

ANNUAL REPORT YEAR 3

VALERO AND BIOFUELS IN THE UK

On 1 August 2011 Valero acquired Chevron Ltd, the entity which holds Pembroke Refinery, as well as fuel marketing and aviation business in the United Kingdom and Ireland. The business was subsequently renamed Valero Energy Ltd. As part of the acquisition, Valero secured a long-term licence agreement to continue to market fuels in the UK and Ireland under the Texaco brand.

We have successfully complied with its obligations as a supplier of fossil fuels, as set out in the UK government's Renewable Transport Fuel Obligation (RTFO). This requires fuel providers to ensure that a minimum 3.5% of their total UK road fuel sales will contain renewable fuels. We achieved this by blending both biodiesel and bioethanol into road fuel.

Valero believes that the use of biofuels in the oil industry can help to meet the world's growing demand for transportation fuels and is committed to diversifying its sources of energy in an environmentally sound way. Valero is using its influence through membership of trade bodies, to promote sustainable practices in the biofuel industry. In addition, all Valero fuels comply fully with relevant fuel standards, national and international regulations and engine manufacturer specifications.

As certification systems relating to sustainability become more widely reported and commercially available, Valero will progress towards sourcing, supplying and trading only sustainable biofuels and blend stocks where doing so is consistent with local law, competitive standards and the need to ensure supply reliability, operational efficiency and product quality.

Continuing progress in the UK

So far Valero has successfully introduced an increasing amount of biofuel into the UK market through the use of bioethanol and biodiesel. During this period Valero blended more ethanol into its gasoline and the predominant source of that ethanol was UK production.

RTFO REPORTED DATA

Company: **Valero Ltd** **Table 9 Verified data**

Summary of feedstock mix; percentage of verifiable data reported; percentage of feedstock which meets the Qualifying Standards and/or RTFO full Biofuel Sustainability Meta-Standard; average carbon intensity and corresponding GHG savings.

Fuel Type & 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_2e / MJ	Average % GHG saving
Biodiesel ME						
Oilseed rape	11.8	74	0	0	52	38
Palm oil	10.5	70	6	6	68	19
Soy oil	52.3	72	8	8	58	31
Tallow	0.1	100	100	100	17	80
Used cooking oil	0.7	100	100	100	14	83
Unknown	24.6	0	0	0	93	-8
Bioethanol						
Sugar beet	73.6	100	100	0	40	52
Wheat	26.4	70	0	0	65	23
Weighted average (all fuels)		**64**	**23**	**4**	**61**	**27**
Target (2010/11)	**-**	**90**	**80**	**80**	**-**	**50**

Valero Ltd **Table 10 Verified data**

C&S characteristics by feedstock.

General information			Sustainability information				Carbon information	
% of total feed stock type	Feedstock Type	Feedstock origin	Standard	Env level	Social level	Land use on 1 Jan 2008	Carbon intensity (g CO2e / MJ)	GHG saving (%)
10.8	Oilseed rape	France	Unknown			Cropland - protection status unknown	52	38
26.6		Germany	Unknown			Cropland - protection status unknown	52	38
19.5		Netherlands	Unknown			Cropland - protection status unknown	52	38
13.3		Poland	Unknown			Cropland - protection status unknown	52	38
23.6		Ukraine	Unknown			Cropland - protection status unknown	52	38
6.2		Unknown	Unknown			Cropland - protection status unknown	52	38
15.0	Palm	India	Unknown			Cropland - protection status unknown	68	19
26.5		Indonesia	Unknown			Cropland - protection status unknown	68	19
13.7		Indonesia	Unknown			Unknown	68	19
5.7		Malaysia	RSPO	QS	QS	Cropland - protection status unknown	68	19
27.7		Malaysia	Unknown			Cropland - protection status unknown	68	19
11.4		Malaysia	Unknown			Unknown	68	19

100.0	Sugar beet	Great Britain	ACCS	QS		Cropland - protection status unknown	40	52
7.6	Soya beans	Argentina	RTRS	QS	QS	Cropland - protection status unknown	58	31
72.1		Argentina	Unknown			Cropland - protection status unknown	58	31
19.1		Argentina	Unknown			Unknown	58	31
1.2		United States	Unknown			Cropland - protection status unknown	58	31
59.0	Tallow	Germany	By-Product	QS	QS	By-Product	17	80
5.0		Great Britain	By-Product	QS	QS	By-Product	17	80
10.0		Ireland	By-Product	QS	QS	By-Product	17	80
26.0		Netherlands	By-Product	QS	QS	By-Product	17	80
100.0	Unknown	Unknown	Unknown			Unknown	93	-8
30.0	Used Cooking Oil	Belgium	By-Product	QS	QS	By-Product	14	83
10.0		France	By-Product	QS	QS	By-Product	14	83
10.0		Germany	By-Product	QS	QS	By-Product	14	83
50.0		Netherlands	By-Product	QS	QS	By-Product	14	83
16.8	Wheat	France	Unknown			Cropland - protection status unknown	70	16
62.2		Great Britain	Unknown			Cropland - protection status unknown	70	16
21.0		Great Britain	Unknown			Unknown	44	47

Valero is taking an active role, through working with bodies such as UKPIA and EUROPIA, to develop acceptable ways to track and greatly improve the chain of custody and better enable certification of the sustainability of crops used for biofuels.

Valero purchases finished biodiesel from reputable suppliers that meets EN 14214. In addition, we ask suppliers to track the origins of the biodiesel that is made from a variety of feedstock where possible. It is necessary to use a variety of feedstocks to ensure that we can provide our customers with a secure supply of consistently high quality fuels at competitive prices and to meet government mandated requirements on volumes of biofuels. Furthermore, as Valero is now blending bioethanol, we are receiving data from our suppliers to validate the origin of the feedstocks used in its production.

VALERO'S GLOBAL ACTIVITIES

Valero Renewables

Valero Renewables is a division of Valero and is one of their primary renewable energy focus areas. We believe that biofuels that complement conventional transportation fuels will play an increasing role in meeting the world's growing energy needs. Our interest lies in fuels made from feedstocks that do not materially affect food or feed supplies.

The biofuels business shares many of the characteristics with Valero's traditional petroleum business in that it involves using advanced engineering and manufacturing to convert raw materials into high-quality transportation fuels. Because of this, Valero is well positioned to make significant contributions to this evolving industry.

Valero owns ten ethanol production facilities in the United States, four in Iowa and one each in South Dakota, Minnesota, Nebraska, Indiana, Ohio and Wisconsin. These were purchased in 2009 to 2010 and built between 2003 and 2008. Corn is the primary feedstock for all of these refineries. They all use a dry-grind or dry-grind fraction production methods and incorporate state of the art technology to maintain industry-leading standards in production, safety, product quality and environmental stewardship. Together these plants produce around 4.5 billion litres of de-natured ethanol annually and 4 million tonnes of co-products such as distillers grains. The bio-refineries employ around 650 full time individuals.

In order to meet increasing global demand, Valero is investing across the energy spectrum to expand the capabilities of today's alternative and renewable technologies. As part of the effort to expand the capabilities of today's alternative and renewable technologies, Valero are working with its partners across the ethanol supply chain to develop low- carbon transportation fuels derived from secure, sustainable biomass. For example this might involve encouraging improved agricultural practices whereby farmers can grown cellulosic feed in second season (after their corn crop) or on less favoured land.

Valero's Biofuels Research Collaborations

Exploring the potential benefits associated with any emerging energy source can be encouraging. But the path to commercialising new energy sources presents many challenges. The best way to solve these is through collaboration. Valero's strategy for the development of biofuels is to collaborate with the best talent in other companies, universities and national laboratories – to combine their knowledge of biomass and emerging technologies with Valero's expertise in making high-quality transportation fuels.

Valero has formed strategic research alliances with leading organizations and have made investments in the several areas to further these alliances. Valero has made selected investments with emerging companies that are developing biofuels technologies, such as Solix and Algenol, which are developing fuels from algae; Qteros, ZeaChem and Mascoma, which are working on cellulosic ethanol; and Terrabon, which produces gasoline from landfill waste. Valero has partnered with Darling International on the Diamond Green Diesel project, which will produce nearly 10,000 barrels per day of renewable diesel fuel made from animal fat at waste grease from restaurants.

In developing advanced biofuels, successful feedstocks need to be scalable, sustainable and economically viable. They should have optimal physical and chemical properties and be able to thrive on marginal land that would not otherwise be used for food. Biofuels will play an increasingly important role in our transportation future but it is still unclear how rapidly or to what extent they will penetrate the market. It will take collaboration to achieve the four factors necessary for the success of any fuel: Sustainability of supply, infrastructure, the longevity of the business value and reliability.