

biofuels ^{update}

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bulk liquid & gas network

News from Simon Storage

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:: european project engineering capabilities

Holland

Simon has provided engineering support services for the preconstruction stage of a biodiesel production facility being built within the Port of Rotterdam, Holland.

Ireland

Project management of modifications to an existing road tanker loading facility to allow bioethanol to be blended into unleaded petrol.

Portugal

The front end engineering package was reviewed by the Simon Project Management team as part of the development of a third party project to construct a 100,000 tonnes per year biodiesel production facility complete with infrastructure and utilities at a port location in Portugal.

biofuel

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We have ISO accredited expertise in engineering projects in our chosen specialist niche area of bulk liquids warehousing and supply chain logistics. We manage every aspect of an engineering project and offer total service flexibility from full turn-key solutions to specific part-project contributions.

Simon Storage has substantial experience in project engineering, product handling, blending and distribution of green fuels, including biodiesel and bioethanol. Working from initial concept and design through to commissioning and production with Greenergy, Biofuels Corporation and other major biofuels producers, Simon has gained expertise in project engineering for biodiesel production plants in the UK, Holland, Ireland and Portugal. Simon has specialist knowledge of the unique handling requirements of denatured bioethanol; biodiesel feedstocks including tallow, rapeseed, coconut, soya, palm and used cooking oils; and the various grades of methyl ester produced from these feedstocks. Simon is able to provide

bespoke solutions at any of its nine storage terminals or third party sites to meet the individual requirements of the customer.

Biofuels blending

Simon's significant expertise with in-line biofuel blending at the gantry/point of vehicle loading is of major benefit to customers who already produce or trade mineral fuels but wish to add a biofuel blend to their product portfolio.

Bioethanol

At its Seal Sands Terminal Simon's project engineering team has commissioned facilities to inject denatured bioethanol into unleaded petrol as it is being loaded to road tanker. Firstly, shipments of imported bioethanol are denatured in-line as the product is being pumped into the terminal's stock tank. When a road tanker arrives to collect product, total load

quantities – entered by customers through Simon's web based order entry portal – are downloaded to the gantry control system and accessed by the driver using a secure card swipe. The gantry operation is managed and monitored by Simon's in-house bespoke automation package (TASCS), which instructs loading presets and micro blenders to deliver individual blends of either duty paid or duty suspended product of between 0% and 16% bioethanol content into the waiting road tanker. Denatured bioethanol is fed to the loading gantry where it is injected into unleaded petrol at the desired ratio set by TASCS. On completion, TASCS calculates the duty liability per component and provides an updated stock calculation, both of which are available to customers

in real-time via Simon's web based access system.

Biodiesel

Simon's engineering team has modified existing pipelines at its Seal Sands Terminal to deliver methyl ester to a brand new 7000m³ tank, constructed within a reinforced concrete bund. This enables the in-tank mixing of methyl ester and mineral diesel feedstock to produce biodiesel blends prior to loading on the gantries. Simon's automation package, TASCS, allows the customer to view stock and duty information in real-time, and is able to account for bulk transfers of either methyl ester or mineral diesel made into a tank of pre-mixed product.

fuel 4 through



Biodiesel is seen as an environmentally friendly alternative to mineral diesel, with a similar energy and power content. It is regarded as non-toxic and biodegradable and achieves a significant reduction in greenhouse gas emissions. As a blended addition to ULSD (Ultra Low Sulphur Diesel), biodiesel reduces pollution, particulates and hydrocarbons and restores lubricity lost due to the reduction of sulphur compounds in ULSD, thereby reducing engine wear.

Biofuels Corporation shows the way at Teesside

Simon Storage is now into its third year of a 30 year contract with Biofuels Corporation for the complete storage and handling of vegetable oils and biodiesel

at Simon's Seal Sands Terminal on Teesside. A deep water port and well established infrastructure make Seal Sands an ideal site for the biofuels operation. Each year the terminal is capable of receiving up to 250,000 tonnes of vegetable oils by sea, which are then delivered to the biodiesel production plant through newly constructed pipelines. The product is pumped back to Simon's terminal for storage before onward delivery by road or sea.

Project management for all the works to create the new storage and handling facilities for the process plant, officially opened by the Rt Hon Tony Blair in June 2006, was provided by Simon. It managed over 60 contractors from specialist disciplines and a budget of £6 million. Over 30,000m³ of tank capacity has been allocated for storing the raw vegetable oil and finished biodiesel. Simon has undertaken major engineering works including inspecting existing tanks, installing

:: tees fact file

Simon owns and operates two terminals on Teesside:

Seal Sands Terminal
total 213,000m³
in 110 tanks
2 deep water jetties -
35,000 + 5,000 DWT,
rail terminal
road loading areas

Riverside Terminal
total 65,000m³
in 22 tanks
4,500 DWT jetty
road loading areas

heating coils and resin linings, and creating new electrically heated pipelines.

Simon managed major infrastructure improvements, including new road access, utilities and drainage supply, and small capacity 'day' storage tanks for the process plant.

:: Biofuels Corporation

Biofuels Corporation is a London-Aim listed merchant processor of biodiesel. The Teesside One facility is one of the largest continuous stream biodiesel plants in the world, producing 250,000 tonnes of biodiesel per year and some 25,000 tonnes of pharmaceutical quality glycerine. The flexibility of the process technology allows for a wide range of vegetable oils to be used, including rape, soya and palm. A strong working relationship with Simon Storage adds to this flexibility for Biofuels Corporation, its customers and suppliers.

Plans have recently been announced for an additional 400,000 tonnes of biodiesel production capacity on the site.



The plant will initially process 100,000 tonnes/ 114 million litres of biodiesel per year. As part of the development plan Simon has secured a 20-year storage contract with Greenergy



Greenergy gets greener

Commissioning of the first biodiesel production plant for Greenergy Biofuels Limited, part of the UK's largest independent fuels business, has now begun at Simon Storage's Immingham West Terminal on Humberside. The plant will initially process 100,000 tonnes/114 million litres of biodiesel per year. Simon is working alongside Greenergy in this multi-million pound programme, providing storage capacity plus engineering support. Simon's project engineering team acted as Construction Manager for specialist contractor Desmet Ballestra S.p.A. appointed by Greenergy to design, construct, install and commission the plant. As part of the development plan Simon has secured a

20-year storage contract with Greenergy, providing an 18,000m³ facility for vegetable oils and methyl ester by modifying nine existing bulk tanks. In addition, Simon was the prime contractor for the provision of eight storage tanks with a total capacity of 1,580m³ and new ancillary services for the Greenergy plant, including the provision of steam, power, air and nitrogen. Additional pipeline links installed by Simon at Immingham West enable efficient movement of product into storage tanks and to nearby petroleum oil refineries, monitored by a SCADA control system. In addition, all tanks are equipped with servo displacer automatic tank gauges, which directly interface with TASCs, Simon Storage's bespoke

terminal stock control system. Further data will be fed into TASCs by mass flow meters, to enable automatic quantification of product transfer and receipt, ensuring a mass balance of inputs and outputs to the production process site. The transfer of product into and from the biodiesel process plant is also fully automated, with control given to the process plant production team. Situated in one of the UK's major oil refining centres, Greenergy will enjoy ready access to the fuel supply chain with excellent road and rail links, while its location on the Humber estuary enables effective international trading.

:: breaking news

Greenergy to double plant capacity at Simon's Immingham Terminal

With the first phase nearing completion, Greenergy is now looking ahead to the second phase of the project, which will allow the doubling of its biodiesel production capacity at Immingham to 200,000 tonnes/228 million litres per year. Preliminary planning and design work have already been completed.





bulk liquid & gas network

:: immingham fact file

Simon owns and operates two terminals on the strategic Humber estuary:

Immingham East Terminal

total 249,000m³ in 97 tanks
deep water jetties - 50,000 DWT, 2 berths
rail terminal and road loading areas

Immingham West Terminal

total 323,000m³ in 144 tanks
deep water jetties - 50,000 DWT, 4 berths
rail terminal and road loading areas

flight

Simon Storage your partner in biofuels

Biofuels Projects

For an initial discussion on how Simon Projects can help with your biofuels project, please contact:

Gary Lacy - Engineering Director:
gary.lacy@simonstorage.com

Tel: +44 (0) 1642 546775

Chris Tanner - Sales Manager:
chris.tanner@simonstorage.com

Tel: +44 (0) 1642 546775

Helmut Gölz - Geschäftsführer & Leiter Technik:
helmut.goelz@simonstorage.com

Tel: +49 (0) 6 21/10704-170

Biofuels storage and handling

UK

Immingham East Terminal – Humber

Tel: +44 (0) 1469 571241
jim.stringfellow@simonstorage.com

Immingham West Terminal – Humber

Tel: +44 (0) 1469 572615
jim.stringfellow@simonstorage.com

Seal Sands Terminal – Tees

Tel: +44 (0) 1642 546775
rex.bradshaw@simonstorage.com

Riverside Terminal – Tees

Tel: +44 (0) 1642 546775
rex.bradshaw@simonstorage.com

Tyne Terminal

Tel: +44 (0) 191 296 0999
rex.bradshaw@simonstorage.com

Cumbrian Terminal

Tel: +44 (0) 1900 605151
rex.bradshaw@simonstorage.com

Germany

Mannheim Terminals – Rhine

Tel: +49 (0) 6 21/10704-110
frank.schulze@simonstorage.com

Ireland

Shannon Terminal

Tel: + 353 (0)69 65506 / 65479
gordon.cowpar@simonstorage.com

www.SimonStorage.com

Simon Storage Limited is a wholly owned subsidiary of Inter Pipeline Fund, a major petroleum transportation, bulk liquid storage and natural gas liquids extraction business based in Calgary, Alberta, Canada. www.interpipelinefund.com

investing in change

From developing and managing deep water terminals for liquids and gases to project engineering and automation skills and from distribution to specialised training, Simon is investing in people, facilities and partnerships. Above all Simon is investing in innovative ways of doing business.

Simon Storage Limited +44 (0)1737 778108



Storage & Distribution
Engineering & Automation
Management & Training

bulk liquid & gas network