Fuel Oil News

JULY 2020

THE ALTERNATIVE FUELS ISSUE

CROWN OIL ADDRESSING RENEWABLE FUELS

NICHOLL FUEL OILS TALKING AUTOMATION

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Being certain in times of uncertainty

I write this as the country emerges from some of the requirements of the lockdown. With shops and leisure facilities beginning to reopen to a government message of 'spend spend spend', there is a sense of a world awaiting a resumption of something vaguely resembling the normal we once took for granted. There is also a sentiment of potential in the energy markets. Oil prices have enjoyed an upward trend since the historic lows of April but haven't yet reached the tipping point, and sporadic lifts flatter to deceive with mid-June having seen the first week-on-week oil price decline after two months of steady recovery.

The rapidly changing lockdown policy is no surprise, given the ONS announcement that Britain's economy suffered the largest contraction on record in April, with GDP shrinking by a massive 20.4% and Covid-19 responsible for the loss of 600,000 UK jobs. It is clear the current and future economic consequences of the virus are fast overshadowing its public health impact, leaving the world stuck between a rock and a hard place. The easing of lockdowns may initiate economic recovery as people return to work and the high street, while simultaneously increasing the risk of a second wave. The right policies to drive the recovery are needed and policy decisions are never easy.

The fuel oil distribution industry continues to await a clear policy framework for the transition to net zero, with the offshore industry calling for a sector deal for its involvement in wider UK efforts to decarbonise. In these pages we review some of the options being considered in the downstream sector to achieve carbon reductions through alternative liquid fuels. We hear from Crown Oil about its forward-thinking investment in HVO and we also hear compelling arguments for the place of non-fossil liquid fuels in the future heating sector.

Occasionally a topic seems to grab an unusual amount of attention in a short time span and currently, hydrogen is one of those cropping up in many articles.This issue is no exception as we consider the role hydrogen may play in future fuelling.

The future remains uncertain, but werever it takes us, we look forward to journeying into it with you.

Fuel Oil News

The independent voice for the fuel distribution, storage and marketing industry in the UK and Ireland.

On the cover

One look at the registration plate of Crown Oil's 8-wheeler DAF tanker is enough to see what it is transporting across the UK. To find out more about Crown Oil's commitment to HVO, see 'In Conversation' on pages 12 & 13

In this issue

With increasing calls for the sector to play its part in decarbonisation, our 'Industry Analysis' considers the opportunities and challenges that alternative liquid fuels present as potential solutions in heating and agricultural use. See pages 8,9 & 11

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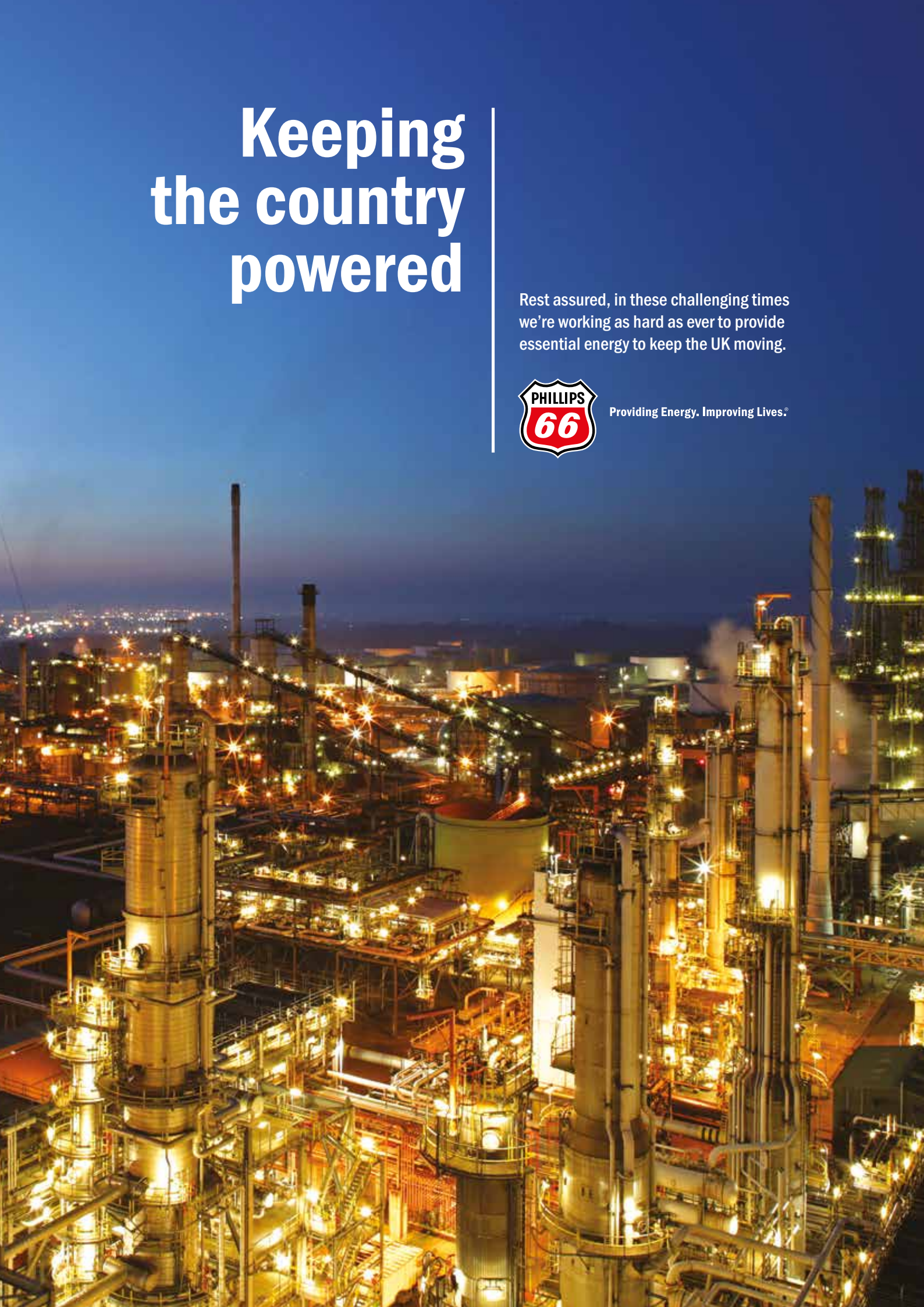

Pay increases and job cuts at BP

In a move that will result in a pay increase for the majority of its workers, BP is to adopt the voluntary Real Living Wage (RLW) as of August 1 2020. Paying all its directly employed UK retail staff accordingly, this will affect around 5,000 staff working in around 300 BP-operated retail sites and stores across the UK.

Chief executive Bernard Looney, said; "It's important recognition of the numerous challenges faced by our front-line staff, which have been highlighted during the current crisis," and explained that BP had been looking at adopting the voluntary higher standard for some time, as the right thing to do both for the business and people.

The company claims to be the first retailer in the forecourt sector, and of such a scale, to seek accreditation by the Living Wage Foundation and has a plan to ensure that this also applies to all its contractor staff. As part of seeking accreditation it will commit to increase its pay rates in line with reviews of the RLW.

The announcement was made at the company's AGM in May. Chair of the meeting, senior independent director Sir Ian Davis said; "I believe this recognises the importance BP places on our frontline employees, who serve millions of customers and bring the purpose and values of BP to life day in, day out."

However, in June, in a move expected to significantly impact senior ranks, BP announced plans to cut 10,000 jobs worldwide. Having previously paused redundancies during the peak of the pandemic, Bernard Looney laid the blame for the losses, which represent around 15% of the workforce and are likely to impact around 2,000 UK jobs, squarely at the door of the drop in oil prices and demand due to the coronavirus pandemic.

The London-headquartered firm employs around 15,000 people in the UK. The redundancies will not affect any of its retail staff, but the number of group leaders will be cut by a third, with the company saying it will make the senior structure flatter. The CEO emphasised that BP must reinvent itself and emerge from the crisis a "leaner, faster-moving and lower carbon company".

Fleet upgrade continues at Watson Fuels

Bringing in 106 new vehicles by the end of 2020, Wiltshire-headquartered Watson Fuels will have updated nearly a third of its 350-strong fleet as part of a five-year investment.

The new DAF trucks are Euro 6 compliant, with improved efficiency and reduced emissions. and include the latest technology. With a 30% larger carrying capacity than standard four wheelers and an improved turning circle, the new trucks will help reach customers even more quickly.

More eco-friendly, with lower fuel consumption and a significant decrease in NOx and particulate emissions, the trucks come with a host of features to improve driver safety as well as pumping equipment that uses anti-crossover and contamination software.

Committed to development

Scott Roberts, operations and logistics director at Watson Fuels, commented; "By investing heavily in our fleet of trucks, Watson Fuels is able to provide a service optimised for reliability and sustainability. We have reduced supply-chain costs and ultimately, improved the price point for our customers in the long term.

"There are several advantages for our drivers too, with significantly better ergonomics and safety features. Renewing our fleet is just of one of the many ways Watson Fuels has committed to developing operations by investing in the latest technology."

Supplying home heating oil, farm fuels and road diesel as well as a wide range of industrial lubricants, the eye-catching red tankers of Watson Fuels can be spotted on UK roads all year round.

Annual industry event cancelled for 2020

UKIFDA has taken the decision to cancel the 2020 EXPO which was due to take place on 18 & 19 August at the Exhibition Centre Liverpool.

Guy Pulham CEO of UKIFDA says; "Following the publication of the government's Plan To Rebuild Strategy, UKIFDA has been working with Exhibition Centre Liverpool (ECL) on ways in which the 2020 EXPO could be safely organised and hosted. As you know, we have worked hard to try and keep the 2020 event in the calendar as a positive marker of lives returning to some sort of normality.


Guy Pulham

"In the end, and with great reluctance, we have concluded that it is just not possible to safely run the event that our members, exhibitors and delegates would want – namely a large-scale, high quality event where business gets done. The lack of clarity in the government plan from July onwards (unavoidable given that future stages depends on how the early stages progress) means that we do not know if mass gatherings will be allowed to take place in August or if local hotels or restaurants will be open for business."

"We know that this will come as an enormous disappointment to all of those involved, including our sponsors, exhibitors, suppliers, delegates and speakers. Indeed we, and the whole liquid fuels distribution industry, will miss the 2020 event but the cancellation is necessary for reasons which we are sure you will appreciate, and which are, unfortunately, beyond our control.

"Working with Exhibition Centre Liverpool and The Scottish Event Campus (SEC) Glasgow (both of whom have been very supportive) we have taken the decision to keep the event in Liverpool one more year and hold UKIFDA EXPO 2021 at Exhibition Centre Liverpool on 19 & 20 May 2021. UKIFDA EXPO 2022 will move to The Scottish Event Campus (SEC) Glasgow on 18 & 19 May 2022 and UKIFDA Expo 2023 will also be at SEC on 17 & 18 May 2023.

"We hope to see you at UKIFDA EXPO 2021 which we will work to make even better than before.

Fuel supplier completes MBO during lockdown

In planning prior to the coronavirus lockdown, North Yorkshire-based independent fuel oil supplier Kettlewell Fuels, has now completed a management buyout (MBO) by its senior leadership team.

Managed by Janet and Trevor Kettlewell since 1996, the MBO means the husband and wife team takes ownership of the business outright from the Kettlewell family, which also owns other family businesses.

Continuing as a Phillips 66 authorised JET distributor, it is business as usual for customers of the company which delivers domestic heating oil, agricultural gas oil and commercial DERV to homes, farms and businesses across North Yorkshire. Janet Kettlewell retains responsibility for the operational and customer service side of the business and the same experienced and friendly, local customer service team will continue to help customers make the right fuel choices for their needs.

Trevor Kettlewell will carry on managing the fleet and delivery logistics supported by the highly trained Kettlewell Fuels drivers who ensure customers receive a swift, reliable delivery service in a safe and timely manner.

Expanding the team and premises

Strengthening the company's management team, Janet and Trevor are delighted to be joined on the board of directors by John Skinner. John was previously finance director and company secretary for 15 years at one of Yorkshire's leading estate agents, having experience also in the healthcare, packaging and banking sectors.

The MBO also provides the opportunity for the business to move to larger premises which will still be within the Melmerby area. Commenting on the MBO, Janet Kettlewell said; "It's another step forward in Kettlewell Fuels' 33-year history.

"Kettlewell Fuels is more than just a business to us. Taking sole control means we will be in a position to focus our energies on offering our customers a service that suits their changing needs, whilst ensuring they continue to receive the outstanding level of service that has enabled us to grow the business. Our relationship with the other Kettlewell companies, Kettlewell Commercials and M Kettlewell (Melmerby), will continue and we're really looking forward to exciting times ahead."

Advisory assistance was provided by law firm Schofield Sweeney and accountants Saffery Champness.

Martin Holden, of Saffery Champness, said; "Janet and Trevor have some exciting plans for the future direction of the business and this MBO provides a strong foundation for growth. We are delighted to have been able to offer the support they needed to achieve their ambition and look forward to watching the business flourish under their continued leadership."

David Strachan, who led the Schofield Sweeney team, added; "My colleague Lucy Holroyd and I were also delighted to advise on this significant development for Kettlewell Fuels, and we wish the company every success in future".

CODAS Fleet will help reduce transport costs

CODAS has launched CODAS Fleet, its flagship mapping and routing solution, bringing automated, optimised, entire fleet scheduling to CODAS, dramatically simplifying the route planning process, saving time and reducing costs.

The highly sophisticated, cloud-based scheduling algorithm, fully embedded in CODAS, enables users to rapidly create a robust transport plan that balances customer service with operational efficiency, adhering to customer, vehicle, driver, road, depot and product constraints, without the need to rekey data or exchange any files.

Time and cost efficiency

Statistics show that automated scheduling tools often save businesses up to 20% on fuel costs alone compared to routing manually.

Intelligent, multi-vehicle scheduling at the push of a button, provides CODAS Fleet users with a powerful facility for managing costs and maximising fleet performance, whilst meeting or exceeding customer expectations.

For more details, please visit the CODAS website: www.codas.com

A revolutionary launch from Magnus Monitors

Galway-headquartered Magnus has introduced its first product to the oil and lubricants industry – a truly wireless, battery-driven, radar technology-based oil level monitor that can be installed on tanks without holes or alterations.

The monitor is unaffected by environmental factors such as temperature, dust or humidity, which means that even in varying weather conditions, the readings can be relied on and are highly accurate: +/- 5mm to a range of 4 metres. Being battery-driven, it has the ability to run for up to five years with a high frequency of measurement and is suitable for domestic users as well as large scale industry including depot tanks, waste oil storage and agricultural usage.

Managing director, Shankar Ganesh Jayagopi, commented; "Before launching Magnus Monitors, the team thoroughly assessed the existing offerings for customers in the oil distribution marketplace. The same problems came up time and again – access to the tank for an accurate reading meant that a hole needed to be drilled in it, readings were often unreliable due to weather conditions and in general, options for tank monitoring were expensive and usually mains connected. We are excited to have developed a smarter radar-based monitoring solution that we are confident surpasses the capability of existing devices in the marketplace but is also cost-effective."

The monitors are supported by an app which allows the consumer to monitor oil usage as they would their gas or electricity supply. It also provides a platform for oil distributors to communicate directly with their customer base. Distributors can also use the fully managed Magnus platform with its predictive analytics, allowing operators to plan routes to avoid multiple trips to the same area. This reduces both the wear and tear on tankers and the carbon footprint. It also provides visibility into customers' tanks enabling a proactive rather than reactive approach.

For more information: sales@magnusmonitors.com

Harvest energy invests in sustainable alternative to diesel

While it was already a steadily growing trend, there has been a noticeable increase in awareness and concern about harmful levels of CO2, NOx and particulate matter (PM) emissions and their subsequent effect upon the environment in the past couple of months – particularly in major urban areas.

With measures enforced as a result of the UK lockdown resulting in noticeably fewer fuel emissions (a recent study by scientists from the University of Reading and the UK Centre for Ecology & Hydrology found that CO2 emissions in London alone were down by 59%), more and more businesses are considering their green agenda and alternative fuels. HVO (hydrotreated vegetable oil), a renewable and sustainable energy source made from organic matter, is one such alternative that can play a valuable role in instantly reducing emissions in some of the UK's most polluting sectors.

Harvest Energy, a member of the Prax Group – a leading independent trading, storage, distribution and retail conglomerate – is well placed to support consumers in tackling the fundamental requirement to reduce harmful emissions. The company has invested in a stock of low emission HVO in a bid to shift demand in a wide range of different sectors in the UK including transport, construction and industrial power systems, from diesel and gas oil to this environmentally friendly alternative.

Second-generation biofuel

Most biofuels are conventional ones produced from agricultural crops, but new technologies and processes that produce fuels from waste, inedible crops or forestry products are also being developed. Known as advanced, or second-generation, these are likely to become the primary form of biofuels in the future.

HVO is a second-generation premium biofuel that reduces greenhouse gas emissions by up to 90% when compared to regular diesel and can be used as a drop-in replacement for regular diesel and gas oil with the approval of several major Original Equipment Manufacturers (OEMs). It can be used immediately in multiple market sectors with no need to change or update existing infrastructure. This opportunity to keep exiting assets functioning on a lower emissions platform, without having to invest money into new equipment, is clearly very appealing to a lot of distributors, given the current climate. As well as this, HVO is clean-burning with excellent cold weather performance, and has a much longer shelf life than regular diesel due to the stability of the product and the lack of fuel degradation.

As a consequence of the increased awareness in green alternatives, due in part to the UK-wide lockdown, an upturn in demand for greener fuels is anticipated. Harvest Energy wants to be able to cater to that demand, as well as encouraging businesses to switch to low emission products such as HVO as a drop-in alternative to diesel and gas oil, and having always prided itself on being responsive to market developments and new opportunities as they arise, is ready to deliver bulk supplies of this cleaner, greener and innovative product to any site across the UK within 48 hours.

https://harvestenergy.com/contact-harvest-energy/hvo-biofuel-enquiry/

PEOPLE MOVES sponsored by eleven recruitment

Andy Allen was appointed UK sales manager for **BP** in May, replacing Howard Nunn who left the UK business in January to develop BP's dealer business in China.

Allen said; "I am delighted to be joining the team. While these are unprecedented times, I look forward to working with the team to deliver the solutions and services that our customers and partners need to sustain and grow their businesses."

Ged Kennedy became UK sales manager at **Navigator Terminals Seal Sands** in April of this year.

Patrick Gilmartin will be taking up the position of area sales manager **Rock Oil**, responsible for existing and new potential customers in and around South Yorkshire, Lincolnshire, Nottinghamshire, Northamptonshire & East Anglia.

Layth Shaw, UK sales manager said; "Patrick joins us with a wealth of knowledge and experience gained working in the lubricants industry for some of the majors."

Following a successful MBO by Janet and Trevor Kettlewell, **John Skinner** joined the board of directors of **Kettlewell Fuels Ltd** as finance and operations director, in June 2020

After a decade at the helm of **Global Risk Management**, Hans Erik Christensen will be handing over the responsibility as managing director having played a key role in growing the company to the force it is today in the risk management industry.

The new managing director, **Peder D. Møller**, has been hand-picked from Bunker Holding's management team, where he has spearheaded the company's very successful Strategy & New Business activities.

Martin Gilbert has been appointed as the new chairman of the **Oil & Gas Technology Centre (OGTC)**.

The former Standard Life Aberdeen vice chair will take over from Archie Kennedy.

Gilbert said; "Aberdeen has been a major part of my life – both professionally and personally – and I am passionate about investing in the future prosperity of the North East of Scotland.

"Despite the significant economic challenges facing country as a result of the coronavirus pandemic, governments and industry remain committed to delivering net zero. The OGTC therefore has a crucial role in developing technologies to enable the oil and gas sector to be a valued part of the transition."

Matthew Turner started a new position as sales director at **Prince Petroleum** in June, having been with the family owned business for over four years.

The role of liquid fuel in a post-fossil fuel era

COLIN SUTHERLAND, A CHARTERED ENGINEER, HAS HAD A LONG CAREER IN THE ENERGY SECTOR WITH A PARTICULAR FOCUS ON THE TECHNICAL ASPECTS OF INDUSTRIAL AND DOMESTIC OIL AND SOLID FUEL UTILISATION, AND NOW RUNS THE ENERGY CONSULTANCY.

Here, Colin argues that a new generation of clean liquid fuels could at least replace the oil currently burned in many rural homes and some businesses, and maybe even do more.

It is still unclear how the decarbonisation of the UK heat sector is to be achieved, but with UK government policy making the use of fossil fuels increasingly difficult for heating purposes, the direction of travel is clear; fossil fuels are on the way out in the heating sector.

Heating trends

The future of home heating appears to focus on clean electric power mainly generated by heat pumps. While many concerns have already been highlighted regarding the problems of the cost and performance of heat pumps in older buildings, there still seems to be a lack of appetite for most liquid fuel installations.

Approximately 1.5 million homes and 600,000 businesses use liquid fuel for space and water heating, and other purposes, with the vast majority of heating systems being low pressure hot water type (LPHW) which rely on the heat generator producing water at temperatures of up to 75°C to enable the heat emitters to produce their design output.

Most heat pumps, when operating

Colin Sutherland

at high efficiency, produce water at lower temperatures at which the emitters in a typical LPHW system are unable to meet the heating demands of the building, particularly in the coldest weather. This problem is not helped by the poor state of insulation of many homes in rural areas where liquid fuel is the main provider of heat. The owners of such dwellings rely on the low cost of liquid fuel heating to keep warm at a reasonable cost and the adaptation of these systems to operate at heat pump water flow temperatures involves considerable and costly conversion work.

Alternative liquid fuel possibilities

A clean, non-fossil, liquid fuel, used in existing liquid fuel installations, could play a significant role in helping the UK to reach its zero carbon targets. With a clean liquid fuel, the heat generator would continue to operate exactly as with the fossil fuel, producing hot water at the same design temperature, with a significantly lower capital cost of conversion than switching to electric heat pump based alternatives.

Clean liquid fuels, such as hydrotreated vegetable oil (HVO) which is produced from vegetable matter, are already available. They are known as 'drop in' fuels because they can be used in existing liquid fuel fired installations without requiring conversion or adaption work, being compatible with normal storage and combustion equipment.

The vegetable feedstocks for these fuels can come from a wide variety of sources such as recycled cooking oil, tallow (animal fats), plant oils and other vegetable matters. Forestry and woodworking residues are also important feedstocks but plant oils such as palm oil require careful monitoring to ensure that only product from fully sustainable sources is used.

In Spain, Exxon Mobil is pursuing the production of liquid fuel from algae which has the potential to become the future feedstock for large quantities of non-fossil liquid fuel.

HVO is currently produced by Neste in Finland, Rotterdam and Singapore with more plants being constructed elsewhere. Green

Lizard Technologies and Partners have a 50 000 lpd biomass plant in Knoxville, USA producing jet, diesel and heating fuels and construction of a similar plant in Teeside is planned for later this year. There are other plants in the pipeline for this growing sector.

The supporting structures for fuel delivery, equipment manufacture, installation and maintenance for clean liquid fuel are already in place – they are those currently being used within the existing heating oil market.

Liquid fuels in the heating market

In the UK and the Republic of Ireland the main domestic heating oil used is class C2 kerosene to BS 2869 which is the same as jet fuel in the aviation industry. Since clean liquid fuels have already been used in kerosene burning jet airliner engines with Green Lizard and Exxon Mobil currently constructing major plants to supply them, a non-fossil kerosene replacement fuel which could be used for space and water heating does exist. With significant quantities of such a fuel required for the greening of the long-distance aviation sector, a fuel will then be available for the UK and Ireland domestic heating markets.

The Class D fuel used in commercial heating is similar to the diesel fuel used in road transport. A non-fossil vegetable alternative – 'green diesel' – is already in use in the UK and has also been fired into heating boilers. The European equivalent of Class D fuel is used for almost all of their considerable liquid fuel heating market and HVO is being used successfully there as a non-fossil drop-in replacement with no work required to modify the oil heating equipment.

There are thus replacement non-fossil fuels in development or in present day use for both of the liquid fuels used in the UK heating market which could be available in quantity before 2025.

Approvals for clean liquid fuels

Despite already being in successful use there is a lack of knowledge in the UK regarding the potential of clean liquid fuels for the space heating market. It is already established that these fuels are perfectly satisfactory for use in pressure jet burners, in heating boilers and in diesel engine road vehicles, even enabling them to operate more cleanly than they would using mineral based oil.

However, to increase awareness of the suitability of clean liquid fuel for space heating documented evidence is needed.

Recorded running tests with these burners should be undertaken by a body such as the Building Services Research and Information Association (BSRIA) so that the results can be written up and published independently of the fuel industry.

An early domestic heating demonstration would put down a marker to government that liquid fuel has the means to move to a non-fossil future. It would also provide the impetus for equipment manufacturers and fuel distributors involved in this sector to continue to develop their liquid fuel businesses.

The Standard Assessment Procedure (SAP) gives the official view of the environmental performance of domestic heating fuels. A 100% non-fossil liquid fuel is included, and it outperforms nearly all of the other fuels on the list. If all the domestic and commercial heating oil installations in the UK went over to the use of clean liquid fuels, there could be up to two million newly non-polluting installations achieved without capital cost or loss of performance.

Price and availability

The price of clean liquid fuels will be a significant factor. If approval was gained for the use of these fuels within the new Building Regulations this would encourage further demand leading to increases in production and lower costs. The government should consider reducing taxation on these fuels, preferably to zero, to increase their availability and provide a boost to the achievement of national climate change ambitions.

The major oil companies need a green future for both environmental and financial reasons and the production of clean fuel is one way in which they are working towards this.

The message

The message to government is that alternative liquid fuels are ready to assist in the elimination of fossil fuels from the heating market. There is no technical reason why liquid fuel should not have a completely non-fossil future as replacement clean fuels exist now and will be available in increasing quantities as present production plans mature.

Such fuels can bring considerable and unique benefits to achieving the government's environmental aims, particularly for a large number of 'hard to heat' rural premises. They make the maximum use of existing infrastructure without requiring costly and problematic conversion work. They should be at least the preferred method of dealing with existing oil-fired installations but should also be included in the approved methods for heating new buildings.


David Johnson

Alternative fuels in agriculture

It is not only the heating sector that is considering a future beyond fossil fuels, alternative liquid fuels are also under review in agriculture.

Off-road machinery used in agriculture such as tractors and harvesters, traditionally use red diesel, but with pressure on the industry to offset carbon emissions, especially on dairy farms, and the government's ambition for the UK to become net zero by 2050, many farmers are looking at the benefits offered by alternative fuels.

Environmentally conscious owner of Greenhills Farm in Cheshire, David Johnson, has been considering using HVO as a drop-in solution for the machinery on his farm. When asked why HVO is being considered over other non-fossil fuel solutions such as electric machinery, David explained; "The development of electric tractors is still in its infancy so there is little choice, they are expensive to buy and depreciate rapidly. Farmers also tend to run their machines in remote locations for long periods at a time, so battery life makes the electric option less practical. I understand that electric motors are more efficient but, until comparable electric infrastructure is in place, running existing machinery but using different fuel is a much more practical solution."

Continued on page 11

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Continued from page 9

How much is too much?

As Colin Sutherland explained on page 9, the low current demand for alternative liquid fuels results in a premium price. With the current subsidy in place for red diesel making it significantly cheaper than regular road diesel, the thought of moving to an expensive alternative is far from attractive however desirable the environmental benefits.

Commenting on the current premium of HVO, David said; "In a nutshell there isn't enough margin in primary agriculture production to pay any premium, particularly with the impending threat from cheap imports. However, as a member of the Arla milk cooperative, I am closer to the consumer than conventional primary producers. Reaching carbon net zero is a strategic priority for Arla and as the supply chain recognises the cost of responsible food production, there becomes a greater incentive to move faster and use more tools on the farm such as HVO. Putting personal aspirations and goodwill to one side, any premium paid would have to be reflected by an increase in sale price."

Clean fuel vs carbon-reducing activities

Use of HVO is not currently widespread, largely due to the price differential, and there are other ways in which farmers can reduce their environmental impact, such as reducing the use of inorganic fertilisers, replacing the ploughing of fields with minimum cultivation techniques or reducing purchased livestock feed by increasing the amount of grazed grass in the system – some of which David is already doing at Greenhills Farm.

"Using HVO on my farm is certainly not a priority but it is very much part of where I see my business heading because it is easy to implement, and instantly recognisable as environmentally responsible. When considering the wider business, our cooperative is very focused on reducing the overall carbon impact of all its members. As a result, we are currently offered training, consultancy visits, peer to peer knowledge transfer and carbon audits. As this process matures and the green market evolves, I have no doubt that using HVO will be a key part of our wider environmental toolbox."

Discussions around moving to alternative 'drop in' clean liquid fuels often come full circle, with the knowledge that it is the 'right thing to do' thwarted by the financial penalty of doing so. In a world that is moving away from fossil fuels rather more quickly than was, perhaps, originally anticipated, it is clear that government support through legislation and financial incentive, is essential to remove the existing barriers to adoption.

DIVERSIFICATION CORNER

Ford Fuel Oils adds own brand lubricant range to website

With its 50th anniversary fast approaching, Ford Fuel Oils is also celebrating the 10-year anniversary of its own brand lubricant range, Lubricants Direct, by featuring the range on its website for the first time.

The company has recently been awarded Platinum Distributorship status with Total UK after being a reseller for the major OEM for 40 years. While it is important to work alongside a global brand, the business understands the importance of giving customers a choice with an alternative brand.

David Ford, sales manager at Ford Fuel Oils, said; "We've been very fortunate to work alongside some experienced and knowledgeable people over the past decade and without their help and technical expertise I don't think Lubricants Direct would be as successful as it is today. I was lucky enough to spend 6 months away from the business working for Adelaide Oils Australia. This experience gave me an insight and enabled me to bring back new ideas to the family business. My thanks go out to the employees past and present, who have been involved in our journey. Without their hard work we wouldn't be where we are today."

"DIVERSIFICATION IS HIGH ON THE AGENDA"

With the business now in its 4th generation, it falls to them, John, Ryan, Teelah and David, to bring new ideas and carry on the entrepreneurial trait that has seen the business progress to where it is today. Diversification is high on the agenda and the recent project to reposition the Lubricants Direct range along with investment in improvements to the website have become an instant success story with customers.

David continued; "A lot of time and investment has gone into repositioning our own brand and the opportunity to showcase Lubricants Direct online to existing and potential customers means we can communicate frequently with the latest trends in the industry. Customers' requirements for different oils are becoming more common and translating these queries in a simple way for end users is vital to becoming one of the market leaders in lubricants."

Crown Oil – addressing the need for renewable fuels

WITH INCREASING FOCUS ON LOW CARBON FUELS, STEPHANIE SAMUEL TALKS TO MARK ANDREWS, CROWN OIL DIRECTOR, ABOUT THE COMPANY'S COMMITMENT TO HELPING CUSTOMERS TO FIND THE RIGHT SOLUTIONS AND ITS INVESTMENT IN HVO AS AN ALTERNATIVE LIQUID FUEL.

The UK's ambition to reach net zero by 2050 affects many industries, but few as much as the oil industry, whose activities have contributed to global CO2 emissions for centuries.

The need for low carbon fuel solutions to aid the energy transition is a hot topic on the agenda, not just at an industry level, but on personal and domestic levels too. Many forward-thinking companies are already offering alternative liquid fuels to climate conscious customers.

One such company, Crown Oil, was among the earliest to address this challenge and we speak with director Mark Andrews to understand the steps that the company has taken to help tackle the climate crisis, through its own increased product portfolio.

Demand for renewables

With more customers needing to reduce their carbon emissions in line with current and future government legislation, Crown Oil has seen renewable biofuels as an immediate solution to meet sustainability goals.

"We've noticed a significant increase in demand for renewable fuels in the last several years, with a particular focus on renewable diesel.

"As part of our commitment to meet the needs of our customers with top quality fuels and services, we keep an eye on the wider biofuel market to monitor upcoming trends.

"For heavy diesel users and those with large onsite storage, HVO is particularly attractive; it also requires less maintenance and has a vastly extended shelf life. Therefore, its green credentials become a welcome bonus to the money saved in maintenance costs associated with cheaper fuels."

Why HVO?

Traditional FAME biodiesels have several well-publicised drawbacks that have impacted on their adoption as a diesel alternative; vulnerability to microbial contamination, comparatively short storage life and low-temperature waxing, to name just a few.

Mark Andrews Crown Oil director

"HVO represents an opportunity to fulfil the demand for renewable diesel, without the drawbacks seen in FAME biodiesel." Mark explains. "It has been successful in Finland, Sweden and other European countries for a considerable amount of time, in part due to its drop-in functionality and also because the governments of these countries have driven higher adoption rates through excise duty relief. In these countries it's actually available at the forecourt pump, and accounts for around 20 percent of transport diesel sales.

"These developments make us optimistic that such a fuel would be attractive in the UK, and despite the fact that the UK's HVO market is still very much in its infancy, the appetite for sustainable fuels is there.

"It's a premium fuel with many selling points over fossil diesel, especially in regard to overall emission control, engine performance, low temperature operation and filterability."

How is Crown Oil countering suspicions around biofuels?

Mark explained that doubts or suspicions surrounding biofuels are rooted in users' experiences of earlier iterations of biofuels; products that were susceptible to microbial attack, for example.

"All of these issues have been addressed with HVO, as a so-called 2nd generation biofuel. Much of our work with HVO has been centred around the re-education of our customers when it comes to biofuels and the environmental, practical and operational benefits offered.

"With a drive for net zero we believe that biofuels are a viable alternative to petroleum and that the internal combustion engine (ICE) doesn't need to be dispensed with. There is considerable research into the lifecycle of biofuels to support this."

Crown Oil undertook its own independent tests into HVO performance versus diesel. The findings show that HVO produces significantly lower NOx, CO2, CO and particulate emissions compared to standard diesel. The full findings can be found on Crown Oil's website.

Mark continued; "There is enough research to show that when you consider the lifecycle of renewable fuels versus electric vehicles (EV), 100 percent biofuel-powered vehicles have a much smaller carbon footprint than electric vehicles.

"This is down to the carbon cost of charging batteries with energy generated at fossil fuelled power stations and the environmental cost of manufacturing the batteries used in EVs, despite their zero-emissions when in operation.

"In an ICE vehicle powered by 100 percent biofuel, the carbon released on combustion isn't "new" as it's already present in the atmosphere and is returned to the fuel's feedstocks, so the carbon footprint is dramatically lowered."

Are supplies sustainable and robust?

Asked about reliability of supply Mark confirmed that Crown Oil's supply of HVO is as robust as any of its products.

"From the outset, we explored the opportunity to work with Neste as one of the market leaders in worldwide HVO production. We subsequently purchased a bulk supply within the UK, expanding our product offering for sustainable fuels to our customer and fuel distributor network.

"When you take a wider, more international view, worldwide HVO production is growing and continues to grow with the market[1]. As HVO can be manufactured from a wide range of raw materials, it also reduces the risk posed by single source production on the supply dynamic.

"In terms of competition, we are one of the only UK suppliers that can deliver HVO in bulk quantities with the same lead times as our other products, thanks to our continued investment in our storage and supply hub network."

A price comparison

With the pricing drivers for HVO and petroleum-based fuels being very different, Mark commented; "The price of HVO does not track in the same way as traditional diesel fuel, however HVO pricing can be regarded as being more stable as it does not suffer from supply and demand swings in the same way as mineral diesel. Furthermore, HVO currently carries the same excise duty rates as mineral diesel fuel and it should be pointed out that there is an opportunity for the UK government to help market uptake by differentiating the duty rate and helping to underpin the newly announced Green Transport Revolution."

The demand

Speaking with several HVO suppliers in the industry, the demand for HVO is not quite there yet, but in comparison to alternative biofuels, Mark highlighted that; "HVO is currently seeing the most demand as an alternative to red diesel for use in NRMM applications. Nonetheless, enquiries for this renewable fuel have come from all industries, including haulage.

"For haulage customers that have made the switch, HVO brings better performance, longer storage life, up to 90 percent net reduction in CO2 and lower PM, THC, CO and NOX emissions as well as resilience to cold temperatures and it is a drop-in alternative. So HVO therefore offers a rounded environmental benefit through reductions in both GHG and noxious tailpipe emissions unlike paraffinic fuels."

How do HVO sales compare to diesel?

Although Crown Oil is actively encouraging diesel users to make the switch to HVO, the majority of fuel orders continue to be for mineral diesel. However, Mark describes how climate conscious government institutions such as councils, contractors and end users are starting to take steps toward aiding the net zero climate ambition with HVO becoming the 'go-to' product due to its operational ease of use and drop-in functionality.

Mark continues; "We've also seen a dramatic increase in demand for greener fuels: we recently analysed our enquiries over the course of a year and noticed that in December 2019, 29 percent of diesel by volume enquired about is for greener, CO2-reducing alternatives – including HVO, FAME biodiesel and carbon-offset red diesel. Compare that to December 2018, when just one percent of our diesel enquiries were for CO2-reducing alternatives.

"These figures highlight the tremendous growth in the biofuel market and how the UK's attitude towards the environment has changed for the better, hence why we're committed to continue promoting HVO to UK businesses."

With decreasing demand for oil, how will Crown Oil look to best secure its future?

"Diesel imports have already reduced according to the most recent government figures, suggesting the UK's appetite for diesel is falling and will continue to fall. With our experienced R&D team, coupled with our access to new innovative technologies and raw material streams around the world, we're confident that we'll continue to meet the ever-changing needs of our customers.

During our conversation Mark explains that HVO is only the latest in a long line of environmentally friendly additions to Crown Oil's portfolio of fuels and oils. Previous additions include industrial heating oil, FAME biodiesel, bio heating oil, biofuel oil, bio gasoil and bio kerosene.

"Taking these alternative fuels into account, we've seen that year-on-year, enquiries have increased by 18 percent as UK businesses choose cleaner, greener fuels.

"For us, the key to future survival in a post-fossil fuel world is to continue promoting greener fuels. We are confident that as they become more readily available, and more competitive in price, then the switch away from fossil fuels will only accelerate".

[1] *https://www.eafo.eu/alternative-fuels/advanced-biofuels/hvo*

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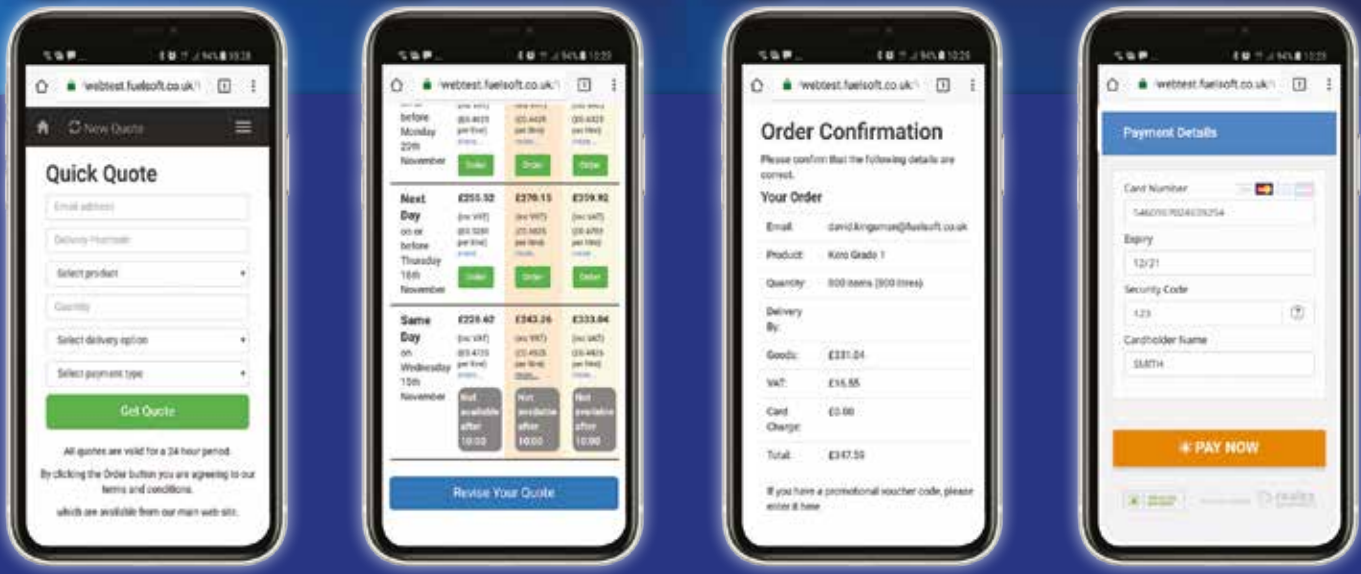

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Nicholl Fuel Oils – keeping Northern Ireland moving with automated filling stations

THANKS TO ITS CHAIN OF AUTOMATED FUEL SITES NICHOLL FUEL OILS HAS BECOME A 'GO-TO' BRAND DURING THE PANDEMIC. STEPHANIE SAMUEL, CONTENT EDITOR, TALKS WITH THEM ABOUT THE APPEAL OF THESE AND MORE

With the majority of Northern Ireland at a standstill since March due to the lockdown, Nicholl Fuel Oils has continued to supply customers with essential products such as home heating oil and agricultural fuels. It has also kept its Nicholl branded Auto 365 filling stations and Star branded filling stations constantly supplied with products to keep the key workers and businesses of Northern Ireland moving throughout this difficult time.

One factor that Nicholls believes has made its filling stations the 'go-to' brand during the pandemic is its chain of automated fuel sites. Perfect for social distancing and very user-friendly, their automated pumps accept both cash and cards as methods of payment along with their own Local Account cards, Fleet Diesel fuel card and all major fuel cards.

The most recent automated site opened in May 2020 beside the company's head office in Greysteel, outside Derry/Londonderry where the new Nicholl Auto 365 branded automated forecourt has replaced the company's Star Branded traditional filling station on the site. A new 6000 sq supermarket shop will open adjacent to the forecourt in the next few months. Diesel, petrol, red diesel, kerosene and Ad Blue are available across all the automated sites and a new range of premium petrol and diesel will be launched over the summer months.

Marketing manager for the Nicholl Group, Connie Burns, welcomed the opening of the new site; "It's great to have the forecourt open and we believe it has come at just the right time. The new forecourt is located not too far from the Altnagelvin Hospital in Derry/Londonderry with a lot of key workers passing by daily. They now have access to fuel 24 hours a day whilst maintaining good social distancing. Keeping our customers and staff safe throughout the duration of this pandemic has remained our top priority."

The forecourt in Greysteel joins the growing list of Nicholl automated sites already operating across Northern Ireland and the company has plans to extend even further to include Downpatrick, Ballymoney and Enniskillen in the very near future.

A project manager for Nicholls commented on how the company are looking forward to getting the new sites underway; "We have a number of sites in the planning stages at the minute and while we are eager to get the construction work underway, we know that other companies haven't been able to remain open and operational during the lockdown, so we understand that there could be a delay on the new sites opening. We work with very reliable companies and we know they will be just as keen to get our projects moving forward upon their safe return to work."

Nicholl Fuel Oils has been a major supplier and operator of automated truck stops in the UK and Ireland for over 20 years and as technology evolved, saw an opening for it to also be used in retail petrol sites. Opening the first automated HGV site in Belfast harbour in 1995, the company rolled out around 50 sites on the HGV model over the following 5 years. The first automated retail petrol site opened in Antrim in 2016.

Connie explained; "Customers today are leading busy lives and we envisaged that an automated retail site would provide greater choice and flexibility when refuelling, allowing them to access fuels 24 hours a day, 365 days a year. The benefits for the site are increased trading hours for fuel outside of the normal for filling stations as well as less congestion on site at peak times, as customers who only require fuel can pay at pump without needing to enter the shop."

Additional expansion and an unrivalled service

"We have continued to expand our automated retail petrol station side of the business by increasing the number of sites across the province and have plans in place to open a number of additional locations through 2020. Over the last 3 years we have also continued to grow our fuel distribution business with the acquisition of Topaz and EMO Oil in Northern Ireland.

"We deliver all types of fuels and lubricants to homes, businesses, farms, hospitals, haulage contractors, quarries, retail forecourts and councils across Northern Ireland and have experienced an extremely busy winter and spring season. We continue to invest in our depot infrastructure, trucks and staff so we can offer all our customers an unrivalled service.

"We are constantly reviewing our business model and looking at opportunities to expand into new business areas."

The Nicholl Group is very active on social media platforms and will keep customers and followers updated with the progress of new projects and openings. But for now, they ask that everyone continues to follow the guidelines set out by the WHO, the government and the health agencies, to keep us all safe.

PORTLAND MARKET REPORT

JUNE IN VIEW

PERHAPS IT'S THE CALM BEFORE ANOTHER STORM, BUT JUNE'S OIL MARKET WAS ANYTHING BUT VOLATILE AND EVEN (MAY WE SAY IT) A LITTLE BORING!

Prices stayed within the $30-$40 per barrel range, which as we know, is an unsustainable price level for most oil companies in their current form. What next then for the oil industry and more intriguingly, how will the renewables sector fare in these straitened economic times?

An entirely logical conclusion is that the oil industry will be bouncing back strongly sometime in the near future, because that is what it has done in the past. What better way is there to rebuild a post-pandemic, depression-hit economy than to push cheap oil and gas? Construction projects, new infrastructure, retail therapy and a return to global travel are all tried and tested ways of rebounding economies and all benefit from cheap oil. This is absolutely what happened in the period after the financial crisis of 2008-09, where low-priced oil was greedily devoured by countries coming out of recession. The inevitable result was that prices didn't stay low for very long – demand surged and by the end of 2010, oil was knocking at the door of $100 per barrel!

However, the circumstances around Covid-19 look quite different to the financial crash. The latter was a speculative bubble that brought the house down, only for builders to arrive in short order, with the tools and materials to rebuild quickly. This time around, it doesn't look like it will be quite as easy to put things right, with any economic recovery likely to be a slow, prolonged and stuttering affair – as intermittent "second-wave" lockdowns hamper progress and dampen investor confidence. In that light, it seems unlikely that sky-rocketing demand for oil will be a factor to force prices back up.

When it comes to supply however, we know that this latest oil price crash has created an unparalleled cut in oil investment – spending is down 30% globally and in the shale fields, it has halved. As crazy as it sounds today – when we have a 20m barrel per day oil surplus – we could easily be looking at supply shortages by the end of the year! This could lead to surging prices as oil production dries up and don't forget that once oil wells are "shut-in", they are extremely difficult to reactivate quickly. For those legislators around the world, tasked with the unenviable job of plotting an exit from recession, neither the crazy volatility of the oil markets, nor the possibility of a turbo-charged price bounce-back are helpful. Oil in fact, could end-up weighing very heavily on any economic recovery.

Is it possible then, that renewable fuels and green energy can provide the reliability that looks currently out of reach for oil? Has Portland perhaps been in lockdown for too long to even suggest such a thing?! Well…yes and no. Of course it would be preposterous to suggest that oil will not make some form of comeback post pandemic. On the other hand, legislators and investors alike, are increasingly making anti-oil noises. Governments around the world have been at pains to say that their green targets will not be blown off course by the coronavirus pandemic and in the case of the EU, the €2trn (!) recovery plan stipulates that a minimum of 25% of the money made available, must be spent on climate friendly expenditure.

NEITHER THE CRAZY VOLATILITY OF THE OIL MARKETS, NOR THE POSSIBILITY OF A TURBO-CHARGED PRICE BOUNCE-BACK ARE HELPFUL.

Furthermore, new green legislation must be viewed through the prism of the bizarre economic circumstances in which the world now finds itself. Hitherto, the biggest impediment to green energy was the (mostly accurate) accusation that it "just didn't make economic sense" and that fossil fuels "were cheaper" and therefore provided "better value for money". But in a world where the government has paid the salaries of 80% of the nation's workforce, has effectively nationalised our public transport system and has underwritten virtually all credit risk for commercial companies, does anything now make conventional economic sense? Furthermore, the fact that green infrastructure projects are likely to take many years before they come to fruition, will paradoxically, now make them more, not less, attractive to democratic governments. Any environmental "New Deal" will generate extra jobs, precisely because it will be more inefficient than equivalent fossil fuel programmes, and it is jobs rather than efficiency that will keep governments in power at the ballot box going forward. Finally, if Portland is right and a lack of investment in oil exploration does push oil prices rocketing upwards, then the economic comparisons become more favourable for green projects anyway.

Those of us who work in the oil industry have to accept that alongside arms and tobacco, we operate in what is now one of the most disliked industries on the planet. We can rail at the fact that the general public expects a shift to clean energy without having the slightest notion of how that can be achieved, or indeed, we can point out that green solutions simply do not exist at scale to sustain everything from concrete to contact lenses. But it won't change the fact that going green is now a vote winner, whilst investments in fossil fuels look increasingly risky. The money men and women will look at the diminishing and volatile returns offered by the oil industry, they will consider its deep societal unpopularity versus the generous government subsidies available to climate friendly enterprises, and the money will inevitably start to flow away from oil. Few will want to admit it publicly (and understandably so!), but Covid-19 could turn out to be an environmentalist's dream!

For more pricing information, see page 22

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Is hydrogen the future fuel for trucks?

A NEW REPORT FROM THE CENTRE FOR POLICY STUDIES ARGUES THAT THE APPROACH TO TRANSPORT DECARBONISATION MUST NOT LEAVE CERTAIN VEHICLES BEHIND. WITH THE TRANSPORT NETWORK NOW THE LARGEST SOURCE OF GREENHOUSE GAS EMISSIONS, COMPLEMENTING THE FOCUS ON ELECTRIC CARS WITH ACTION ON HEAVIER VEHICLE TYPES WHERE HYDROGEN POWER IS MUCH MORE SUITABLE THAN ELECTRIC BATTERIES, IS ESSENTIAL FOR THE UK TO MEET ITS NET ZERO 2050 TARGET.

The Rt Hon. Grant Shapps, secretary of state for transport, said; "As we begin the road to recovery from Covid-19 and rebuild our economy and infrastructure I am clear we can't just go back to how we were before. We have the opportunity to create a more prosperous, stronger and greener country and transport will be at the heart of that.

"Therefore, I welcome the work done by the CPS and others to come up with new and innovative ways to deliver on this government's ambitious decarbonisation agenda."

Eamonn Ives, CPS business researcher and author of the report, said; "One of the few benefits of the Coronavirus lockdown has been the dramatic improvement in air quality. To continue enjoying this unexpected bonus, we need to speed up the transition to zero-emission vehicles – like electric cars or hydrogen-powered buses.

"Our report outlines how the government could level the playing field between polluting and cleaner vehicles to achieve this and get us on track to hit net zero."

Are FCVs the solution for heavy commercial?

In a fuel cell vehicle (FCV), pressurised hydrogen is stored as fuel in the tank and interacts with oxygen in fuel cells to generate electricity through a chemical reaction. This process is up to three times more efficient than ICEs and emissions-free, with the only by-product being water.

FCVs also have a few advantages over electric or hybrid alternatives – mainly, range and refuelling time. Hydrogen is well suited for the long-haul trucking sector, giving a similar range (500-750 miles) and refuelling time (15 mins) to diesel trucks, but without the production of harmful and polluting emissions. The refuelling process for hydrogen fuel cell vehicles is identical to ICE vehicles.

The CPS report 'Driving Change', calls for hydrogen to be given a much bigger role in transport decarbonisation using the UK bus fleet as a testbed for the technology.

Jo Bamford, founder and CEO of Ryse Hydrogen, said; "This report is further evidence that hydrogen's time is now. If we fail to act, we will become importers rather than exporters of another green technology required to get us to net zero. Only last week the EU announced a multi-billion Euro package to support green hydrogen infrastructure.

With plans to make 3,000 hydrogen buses already having been unveiled by Ryse Hydrogen and Wrightbus, two of Jo Bamford's companies, there is potential to broaden the technology to other large vehicles very quickly.

Bamford commented; "UK-made hydrogen buses are ready to hit the streets today. We already have hydrogen buses in London, and 20 of Wrightbus' world-leading double deckers will be added to this later this year."

Cost and availability barriers to overcome

Hydrogen's potential as a source of fuel was first identified more than 200 years ago and the first fuel-cell car was invented in 1966. But its widespread use outside of industrial processes has been held back by concerns partly about safety, not least after the Hindenburg disaster in 1937, and cost. There isn't the necessary infrastructure to produce, distribute and store hydrogen; nor has there ever been a solid commercial case to build it, leaving hydrogen facing similar issues to battery EVs – the need for infrastructure and volume manufacture of vehicles to reduce costs as well as a network of refuelling stations.

Jim Gregory, European business development manager for alternative fuel, at Luxfer Gas Cylinders emphasises the imperative

to pursue the hydrogen solution; "Ultimately, hydrogen fuel cells will be more economically viable than battery electric vehicles because of the power required to pull heavy loads, the space available in the truck cab and the constant use that heavy duty applications require just to make them economical."

The production of "Green Hydrogen", produced through electrolysis powered by renewable energy, is costly, around three times more expensive than "Grey Hydrogen", or hydrogen produced from natural gas. Although some estimate that increasing electrolysis capacity could reduce the cost of green hydrogen by 70% over the next 10 years, production capacity remains limited.

An estimation of cost of production of green hydrogen puts it at close to $6/kg. Comparing the energy content of a kilo of hydrogen to the equivalent energy amount of hydrocarbon gives a staggering price equivalent of a $270 barrel of oil! Renewable prices tumble at quite startling speed as technologies scale up and equipment costs reduce, but even in a

'best case' scenario of hydrogen at $1/kg, the equivalent is a $45 barrel of oil. Distribution costs are also significant with the challenge to find ways of increasing its energy density which could mean moving it around as a liquid or a high-pressure gas, safely and cheaply.

Currently only a tiny number of fuelling stations exist (as of 2019 there are just 10 in the UK), which alongside costs, has been a key factor slowing the deployment of hydrogen vehicles. This is a 'chicken and egg' problem – there needs to be plenty of fuelling stations to encourage people to buy hydrogen vehicles, but companies will only build fuelling stations if there are hydrogen cars on the road to use them. Government policy could help solve the problem, by incentivising a national network of refuelling stations.

The impetus for hydrogen to gain serious traction as a potential sector solution would be one, or more, of the larger players in the energy sector embracing the opportunity. Shell now has three hydrogen dispensing sites in the UK, with plans for more. In the motor sector, Toyota is an enthusiastic supporter of fuel cells over batteries in EVs which may help to provide momentum in the transport sector.

Well suited to trucks

Both battery electric and hydrogen cars are set to become more popular in the years ahead as some countries begin to phase out new diesel and petrol passenger cars. However, batteries are currently not well-suited for heavier vehicles, as they are heavy and bulky, cost more, and take longer to charge than refuelling either current diesel or hydrogen trucks. Hydrogen-powered forklifts and buses are already operating in several European cities, small numbers of trucks and trains are starting to be deployed, and technologies are being developed for planes and ships. Freight companies are also starting to embrace hydrogen – 10,000 new hydrogen trucks were put onto the road in China in 2019 alone.

The use of hydrogen as a fuel for trucks is being trialled in the Netherlands in a project intended to deliver proof of readiness of hydrogen technology for heavy-duty applications in real-life conditions and provide a basis for the development of zero-emission heavy-duty vehicle industry.

There is growing recognition that to have any chance of meeting climate targets, hydrogen is likely to form part of the solution. The decarbonisation of electricity networks is already well in hand, but to reach net zero, the challenge will be to decarbonise activities including heavy industry, transport and heating. Electricity from the grid cannot provide the solution, given the intermittency of renewable supplies, lack of capacity in the transmission network and limited storage capacity.

In theory, hydrogen can solve all these problems. It can be produced in green ways, is easy to transport, including via existing gas pipelines, and can be easily stored but there is a significant cost issue to overcome.

Only time will tell. Currently, there simply isn't the refuelling network for hydrogen vehicles to be a mainstream alternative to fossil fuels. However, the technology is moving forward quickly. With the world's biggest manufacturers investing billions in hydrogen vehicles, and new methods in efficient electrolysis and hydrogen extraction being developed all the time, it would be foolish to write off hydrogen.

If the significant issues of cost and distribution can be overcome, we may yet see an increasing proportion of trucks powered by hydrogen fuel cells.

UK Biofuels – an update on the status of the sector

Background

Almost five years ago Fuel Oil News published an 'Inside Out' feature entitled 'Evolution of the UK biofuels sector' which looked at its introduction and development following enactment of the Renewable Transport Fuel Obligation (RTFO) Order in 2007. This was the mechanism under which mandated targets for the biofuel content of transport fuels were established, applicable to all those supplying over 450,000 litres per year of these fuels. Inability to meet the physical requirements could be covered by purchase of Renewable Transport Fuel Certificates (RTFCs) or by paying in to a buy-out fund, at 30ppl, for any shortfalls. Certain feedstock sources, such as those derived from waste and residues are double counted and issued with twice the number of RTFCs per litre.

One of the issues identified in that feature was the need for a forward trajectory around the obligation which at the time, did not extend beyond 2014 at a level of 4.75%. Critically, this did not appear to be consistent with the government being able to meet the over-arching EU target of sourcing 10% of ground transport fuel requirement from renewables by 2020. The government sought to address this apparent inconsistency through the introduction of new and materially more demanding, biofuels requirements effective from 15th April 2018, which we will cover in more detail after a quick look at physical volumes supplied and current production facilities.

Biofuels supplied

To review the sector in context it is worth starting with a look at how much physical material, both of biodiesel and bioethanol, has been supplied in to the market. Beginning from the start of the mandate, in 2008, and taking selected years since, these volumes are shown in table 1 (below):

Last year, used cooking oil comprised the principal feedstock source for biodiesel at 80%, while corn was the main feedstock for bioethanol at 41%. UK origin feedstocks accounted for 12% of the total, principally used cooking oil for biodiesel and sugar beet for bioethanol. The main overseas source of used cooking oil was China and for corn, was the Ukraine.

Use of renewable fuels was assessed to have resulted in aggregated GHG savings vs. fossil fuels of 77% after allowance for ILUC factors.

Indigenous sources accounted for around 25% of finished biofuels requirements; other EU countries accounted for almost 40% of requirements and the USA around 10%.

Indigenous production facilities

There are currently four biodiesel and three bioethanol production facilities in the UK with a total capacity of just under 1.5 billion litres per year – the third largest in Europe after Germany and France. These are shown in table 2 (opposite).

Owing to continued 'official' prevarication regarding future bioethanol blend limits (currently 5%), which has only been addressed as recently as this year, the Crop Energie bioethanol plant at Wilton was mothballed from October 2018 to March 2019 and the Vivergo plant was mothballed in September 2018 and remains closed with a re-start not expected until sometime later this year.

New regulations

Substantially more demanding biofuels targets were announced by the government in April 2018, with the over-arching aim of doubling the use of renewable fuels used in transport

TABLE 1

(Figures shown are volumes in million litres)

YEAR	2008	2012	2015	2016	2017	2018	2019 (1)
Biodiesel	898	667	669	720	709	1,159	1,579
Bioethanol	208	779	800	764	758	766	744
Total Biofuels	1,106	1,446	1,469	1,484	1,467	1,925	2,323
Biofuels' share of ground transport fuels	2.5%	3.3%	3.3%	3.3%	3.2%	4.3%	5.2%

Source: HMR&C

Note: Biofuels volumes' out-turns, reported in tonnes, are converted to litres using average product density factors.

Note (1)2019 out-turns are provisional

TABLE 2

Product / Company	Location	Start Up Year	Capacity (Million litres per year)
Biodiesel Argent Energy	Motherwell	2005	60
Greenergy	Teesside Immingham	2006 2007	284 220
Convert2Green	Middlewich	2007	20
Oileco	Bootle	2012	16
Total biodiesel			**600**
Bioethanol British Sugar / BP/ Dupont	Wissington	2007	70
CropEnergies AG	Wilton	2010	400
Vivergo	Saltend (nr. Hull)	2013	420
Total bioethanol			**890**

over 15 years. The four key changes to the RTFO were:-

- increasing the biofuels volume target from the existing 4.75% to 7.25% in 2019, 9.75% in 2020, and 12.4% in 2032
- setting an additional target for advanced waste-based renewable fuels, starting at 0.1% in 2019 and rising to 2.8% in 2032
- setting a sustainable level for crop biofuels with an initial maximum cap of 4% of fuel in 2018, reducing annually from 2021 to reach 3% in 2026 and 2% in 2032
- bringing renewable aviation fuels and renewable fuels of non-biological origin into the scheme

A clear roadmap

Apart from giving clear 'notice of intent' of government commitment to the biofuels sector as a whole, these changes will have given a valuable fillip to the domestic biofuels production sector in particular by providing a clear roadmap.

One of the key challenges to meeting the new targets which is still to be addressed, is the so-called 'blend wall', which currently limits the amount of ethanol that can be blended in to petrol at 5% and that for biodiesel in to diesel at 7%.

In the case of ethanol in petrol, after several years of indecision, the government concluded a consultation process in May this year which will result in the introduction of a maximum 10% blend for the 95 RON premium grade of petrol next year. A 5% blend will continue to be supplied in the 'super' (97/98 RON) grades.

There are no immediate plans to increase

the permitted diesel blend ratio of 7%, but consideration of Scandinavia is instructive with Preem's (Sweden) 'Evolution' diesel containing between 25 and 50% of 'renewable' content and Neste (Finland) being the world's largest producer (3 million mt per year) of renewable diesel based on HVO from waste and residues. HVO is also being produced at the Total, La Mede biorefinery in Provence (which has a capacity of 500,000 mt per year) and at the two ENI biorefineries in Italy (which have a total capacity of just over 1 million mt per year).

There do not appear to be any obvious reasons (such as engine compatibility, production, storage, logistical, etc.) for not raising the diesel blend limit to the same as that for petrol i.e. 10%, or even higher which certainly suggests a development to await!

AN URGENT ENDEAVOUR

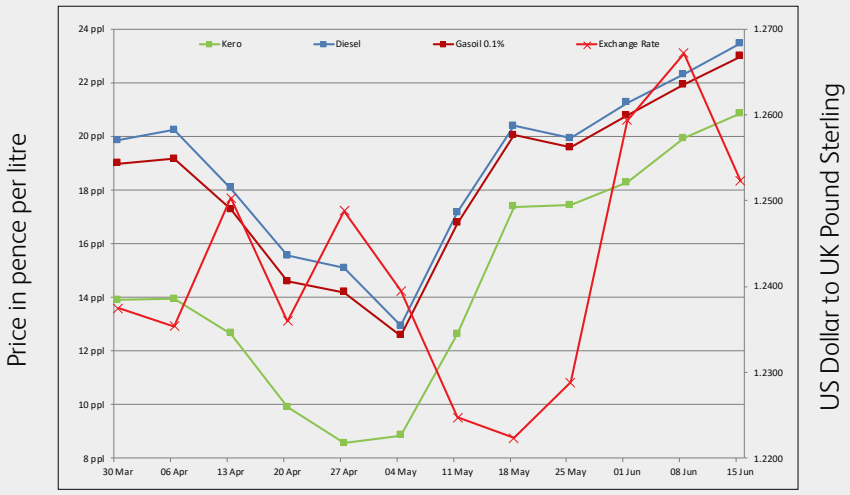
Biofuels constitute part of a broad suite of efforts / solutions needed to help address the imperative to reduce GHG emissions as has always been the case. The more demanding targets set out in 2018 reflect the greater urgency with which this endeavour is now regarded.

THE PRICING PAGE

Wholesale Price Movements: 19th May 2020 – 18th June 2020

	Kerosene	Diesel	Gasoil 0.1%
Average price	18.75	21.45	21.04
Average daily change	0.54	0.58	0.56
Current duty	0.00	57.95	11.14
Total	18.75	79.40	32.18

All prices in pence per litre

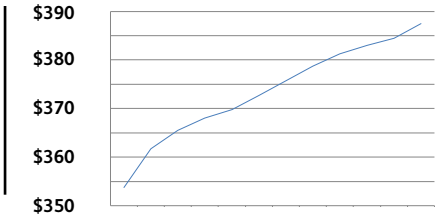


Kerosene	
Highest price **21.71 ppl** Thu 18 Jun 20	Biggest up day **+2.07 ppl** Fri 05 Jun 20
Lowest price **17.01 ppl** Tue 19 May 20	Biggest down day **-0.91 ppl** Thu 11 Jun 20

Diesel	
Highest price **24.24 ppl** Thu 18 Jun 20	Biggest up day **+1.85 ppl** Fri 05 Jun 20
Lowest price **19.52 ppl** Thu 28 May 20	Biggest down day **-1.20 ppl** Thu 11 Jun 20

Gasoil 0.1%	
Highest price **23.79ppl** Thu 18 Jun 20	Biggest up day **+1.77 ppl** Fri 05 Jun 20
Lowest price **19.14 ppl** Thu 28 May 20	Biggest down day **-1.06 ppl** Thu 11 Jun 20

Gasoil forward price in US$ per tonne



July 2020 – June 2021

The Fuel Oil News Price Totem

	Trade average buying prices			Average selling prices		
	Kerosene	Gasoil	ULSD	Kerosene	Gasoil	ULSD
Scotland	22.60	36.52	84.19	25.76	39.02	87.49
North East	21.55	35.15	83.27	25.83	37.45	85.69
North West	23.12	37.75	85.66	26.20	39.95	87.83
Midlands	21.62	35.68	83.73	24.52	37.95	86.36
South East	21.72	35.64	83.71	27.72	39.60	85.99
South West	22.07	35.48	83.55	25.98	37.74	85.63
Northern Ireland	22.18	36.85	n/a	25.07	39.67	n/a
Republic of Ireland	35.94	42.28	85.13	39.29	44.78	87.83
Portland	19.93	33.20	80.42			

The price totem figures are indicative figures compiled from the Portland base rate using calculated regional variances.
Buying prices are ex-rack. Selling prices are for 1000 litres of kero, 2500 litres of gas oil and 5000 litres of ULSD (Derv in ROI). Prices in ROI are in €.

Wholesale prices are supplied by Portland Analytics Ltd, dedicated providers of fuel price information from refinery to pump.
For more information and access to prices, visit https://portland-fuel.co.uk/pricing.

WELCOME TO OUR NEW Q&A STYLE FEATURE. WITH THE DEFINITION OF 'IN PROFILE' BEING 'TO SEE FROM THE SIDE' WE HOPE YOU ENJOY THIS OPPORTUNITY TO MEET AN INDUSTRY FIGURE AND DISCOVER ANOTHER SIDE TO THEM BEYOND THE WELL-KNOWN FACTS.

IN OUR INAUGURAL FEATURE, WE SPEAK WITH CHIEF EXECUTIVE OF THE BAYFORD GROUP, **JONATHAN TURNER**, WHOSE EXPERIENCE, SENSE OF HUMOUR AND PERSONALITY COME THROUGH IN EVERY ANSWER.

Jonathan told content editor Stephanie that he has always wanted a parrot

"I HAVE EATEN AND DRUNK TOO MUCH BUT HAD A GREAT LIFE SO FAR"

JONATHAN TURNER

Give your career history in 25 words or less
A very lucky 30 years working with some wonderful and inspirational people

Describe yourself in 3 words
I'm very impatient

What were your early ambitions?
To do what I am doing now

What would be your dream job (if you weren't doing this?)
Chauffeur for Cameron Diaz

What tips do you have for business success?
Perseverance, sense of humour, positive mental attitude

What is the best business advice you've ever received?
Don't do business in a country where they don't speak English

What is your most recent business achievement of note?
Selling a business with a joint venture partner for over £100m

What is your pet hate?
The expression 'we have always done it that way'

Which is your favourite sports team?
Leeds United

Which is most important – ambition or talent?
Ambition. You can buy talent

What is your greatest personal achievement?
Still being married. I am not easy to live with

What is the best thing about your job?
The ability to choose to do what I want and who I want to do it with

Which quality do you most admire?
Sense of humour

What are you most likely to say?
I can do that

What are you least likely to say?
I can't do that

What would be your perfect day?
Today

What is the biggest challenge of our time?
The energy industry moving away from fossil fuels

What is your greatest fear?
Liz Slater. We have worked together for over 30 years. She knows me better than I do

If you were elected to government what would be the first law you'd press for?
A raising of speed limits on motorways

If your 20-year-old self saw you now, what would they think?
That I have eaten and drunk too much but had a great life so far

What would be at the top of your bucket list?
A drive through Bhutan

What 3 things would you take to a desert island?
A boat, a satellite phone and a fishing rod

Tell us something about you that people would be very surprised by
I'm not very good at knitting

Who would you most like to ask these questions of?
Jesus

Jonathan smiling in his 1907 Italia in Mongolia, about to cross the border into Russia having travelled there through China. En route to Paris, Jonathan had to change the engine and gearbox for one from a 1972 Russian Volga. The wooden wheels also fell off in Poland before being fixed back on with roofing nails!

Products & Services Directory