

## In this issue...



▶ Climate Change Bill



▶ Emergency Response



▶ Grangemouth Refinery Visit

[www.ukpia.com](http://www.ukpia.com)

# Oil industry profitability

UK **pia**  
Refining Britain's fuels

**The price of crude oil and the resultant impact on fuel prices is a subject that attracts a lot of debate, particularly against the background of high crude prices that have persisted for much of the last four years. Recent months have seen market volatility, with North Sea Brent blend crude oil reaching an intra-day high of \$147 per barrel in early July 2008 but since declining to a level of around \$50 per barrel in November. This has also coincided with a rapid deterioration in the value of the pound against the dollar, the main currency in which oil products are traded.**

With integrated oil companies reporting increased earnings as a result of these higher prices, there have been calls in some quarters for a 'windfall tax' levy or for some of these profits to be used to 'subsidise' petrol price reductions.

The perception of a link to increased earnings with the brand of a company on a filling station is understandable from the consumers' perspective. However, the reality is that only a small proportion of the earnings of integrated oil companies, with a wide range of activities globally, is linked to UK fuel retailing or refining.

Fuel retailing in the UK is a highly competitive business, consistently delivering amongst the lowest pre-tax pump prices within the major EU countries. This is reflected in the fact that UKPIA member companies make an average return on capital below that of other sectors.

## Industry background

The oil industry is a complex and diverse global business, comprised of a varied mix of national oil companies - often state owned or controlled - integrated international oil companies with upstream and downstream activities; refining companies; oil storage and distribution companies; fuel marketing companies and a range of traders, shippers, suppliers and specialist service providers involved with most stages of the business.

Upstream oil exploration and production in particular is a high risk and complex activity, requiring huge investment in finding and bringing on stream new sources of oil without any guarantee of success. International oil companies' earnings should be viewed in this context, which is

# WINTER

underlined by the International Energy Agency's estimate that \$3 trillion of investment will be required in the next 25 years to meet projected future oil and gas demand, most of this focused on finding new sources of oil and gas.

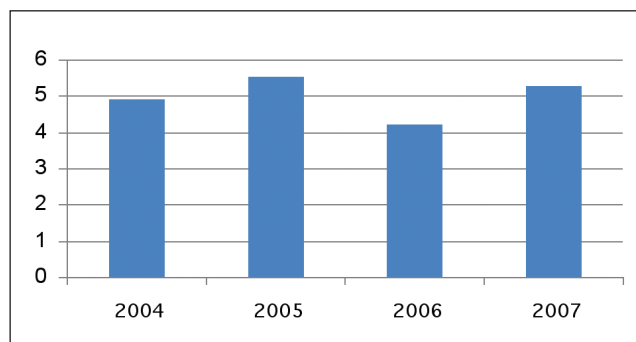
UKPIA's member companies in the UK reflect in part this diversity, some being subsidiaries of large integrated international oil companies with international exploration, refining and marketing interests, others being specialised refining companies with no fuel marketing interests, or some with marketing interests only. Within integrated companies UK tax law requires arms-length transfer prices for crude oil and for refined products.

## Downstream profitability in the UK

Refining/marketing companies that are UKPIA members have below average return on capital employed. Their aggregated average return for the last five years to the end of 2006 was 8%, well below the average return for the manufacturing and service sectors. *[Source UKPIA Statistical Review 2008]*.

Oil refining remains a capital intensive business. Although gross returns for NW Europe refineries have improved in the last four years to an average of \$5 per barrel, higher prices for crude oil and other feedstocks have increased volatility.

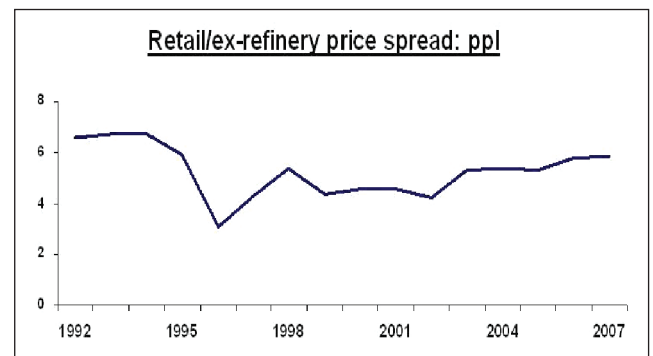
**Chart 1. Average NW Europe Gross Refining Margins**



Source: BP Statistical Review 2008

For those companies with UK fuel marketing activities, particularly retail forecourts, over the last fifteen years this has become increasingly a high volume low margin business, characterized by strong competition. This is evidenced by the fairly flat trend in the difference between the ex refinery wholesale price of petrol and diesel, and the pre-tax forecourt pump price (see Chart 2 below) which has ranged between 5-6pence per litre over the last four years.

**Chart 2. Retail/Ex-refinery price spread 1992-2007**



Source: Wood Mackenzie OPAL

The UK road fuels market has grown very little in volume terms and the low profitability is reflected in the rate of closure of filling stations - an average 600 per year until recently. This background has also prompted some companies to exit the UK market and in addition to filling station closures, two refineries have closed in the last eleven years.

Prices will vary from service station to service station depending on total throughput, proximity to supply terminals, location and commercial objectives of the owner. Frequently, filling stations associated to supermarket outlets are able to sell large volumes of fuel - typically 3 to 4 times the volume of an average main road filling station - particularly to people doing their weekly shopping, often cross-promoting a fuel discount to the amount spent in the store. Smaller filling stations have less volume against which to recover their overhead, therefore prices will vary.

For much of this year, the main driver for higher pump prices in the UK and globally has been the higher price of crude oil and the impact this has had on the price of refined products such as petrol, diesel and jet fuel. In sterling terms, this has been exacerbated by the weakness of the pound against the dollar.

**Supplying companies are not profiting at the expense of consumers. A combination of good supply infrastructure, open markets and strong competition in the UK has kept pre-tax retail prices of petrol and diesel amongst the lowest in the EU over the last decade.**

**UK refineries will need to attract substantial investment in the coming years to meet the challenges of re-balancing output, meeting ever tighter environmental objectives and continuing to be an important part of the UK's energy security. Globally, there are competing demands for this investment.**

**Talk of 'windfall' taxes at a time when we need a stable fiscal and policy environment, to help underpin these long-term investment decisions, is deeply unhelpful.**

In the Summer 2007 'UKPIA News' we outlined the proposals behind the draft Climate Change Bill that was published in early 2007. The draft Bill is an attempt to put the UK's domestic CO<sub>2</sub> reduction targets into law, to create a clear framework to enable the UK to meet its reduction targets and provide greater clarity and certainty for industry, public and household sectors to plan for a lower carbon economy.

### Summary provisions of the original draft Bill Targets

Reduction targets vs 1990 base year

- 26-32% CO<sub>2</sub> reduction by 2020
- 60% by 2050
- statutory binding targets based on 5 year 'budgeting' periods starting 2008/12
- transferable carbon reductions between periods
- emissions reductions achieved within the UK or by 'carbon credits' from overseas

### Climate Change Committee

- the establishment of an independent statutory body
- will advise on the level of carbon budgets and proportion to be achieved within each period within the UK vs overseas credits

### Reporting

- Committee to report annually to Parliament and requirement on Government to respond on progress outlined in the report

### Adaptation

- Government duty to put forward proposals on climate change adaptation policies within three years after enactment of the Bill and thereafter at no more than five yearly intervals

The Bill was eventually introduced in Parliament in November 2007, completed its passage

through the House of Lords in March 2008 and by November 2008 had completed the main part of its passage through the House of Commons. At Report stage, the Government proposed a number of amendments and supported two tabled by others, all of which were accepted by the House.

The most significant amendments were made to reflect advice from the shadow Committee on Climate Change that the long-term target should be a reduction of "at least 80%" in all greenhouse gases, not just CO<sub>2</sub>, by 2050 versus the original 60% target.

### Key amendments agreed at Report stage

#### Long-term target

- Increasing the target for 2050 from "at least 60%" to "at least 80%"
- Including all Kyoto greenhouse gases in the target

#### International aviation and shipping

- Bringing forward to "31 December 2012" (from "within 5 years of Royal Assent") the date for the Government to include international aviation and shipping emissions in the Bill or explain why not
- Placing a new duty on the Committee on Climate Change to advise the Government on the consequences of including emissions from international aviation and shipping in the Bill's targets and budgets
- New requirement that projected emissions from international aviation and shipping must be taken into account in making decisions on carbon budgets

#### Community Energy Savings Programme

- New powers to support the creation of a Community Energy Savings Programme, as announced by the Prime Minister in September (and to be established



following the model of the existing Carbon Emissions Reduction Target scheme)

### Corporate reporting on greenhouse gas emissions

- Bringing forward the deadline for a Government review of reporting to 1st December 2010
- New requirement that the Government must, by 6th April 2012, use powers under the Companies Act to mandate reporting by companies in annual reports, or explain to Parliament why it has not done so

The amendments to the Bill are being considered by the House of Lords during November and it is expected to receive Royal Assent during the current Session. The Climate Change Committee is also expected to announce its draft proposal for the first 5 year carbon budget shortly thereafter.

**UKPIA remains of the view that the introduction of statutory targets is a bold move and the adoption of the 80% GHG reduction by 2050 is going to require early action along the path to significant reductions. But the major challenge will remain that of delivering consistent, cost-effective, sustainable GHG reduction policies across all sectors (energy, industry, transport, government, commercial and residential) without disadvantaging the UK economy in the international arena.**

## Carbon Reduction Commitment

The Government will shortly be issuing a consultation on the draft regulations for CRC - the mandatory cap and trade scheme which targets carbon emissions from large business and public sector organisations from April 2010. CRC applies to all downstream activities outside of Climate Change Agreements and the EU Emissions Trading Scheme (EU ETS) and, although publicised as targeting non-energy intensive sectors, it has been extended to include imported electricity at refineries. However, refineries already have their carbon dioxide emissions regulated in the EU ETS and are subject to the Integrated Pollution Prevention and Control regulations.

UKPIA is concerned that CRC liability for independently owned and operated petrol forecourts is correctly allocated to the site owner and not to the oil company whose brand appears on the pole sign.

# Process Safety Leadership: Taking the Next Step

Building on the UKPIA international safety conference *Effective Leadership on Process Safety in the Downstream Oil Industry* in February 2008 and the HSE *Leading from the Top* held in April 2008, the Process Safety Leadership Group (PSLG) hosted a Practitioners Workshop on 21st October attended by representatives from all high hazard sectors. Designed to provide a platform for promotion of good practice and performance improvement, the event succeeded in identifying and delivering wider process safety measures and practical guidance.

The PSLG also sponsored a UK event for top senior executives of onshore major hazard companies on 11th November 2008. The event sought to build on the ongoing dialogue and collaboration between industry, professional bodies, trade associations and regulator on sharing of best practice and leadership on process safety management.

**Chris Hunt, UKPIA'S Director General** commented: "Safety is our number one

**priority and we are taking significant steps to further raise the profile of leadership in process safety, along with bringing forward practical proposals that will further enhance safety within the industry's operations".**

Reinforcing this message, in September 2008 it was announced that, following the work of the industry through the Process Safety Leadership Group, members of UKPIA and the Tank Storage Association have committed to the standards of Safety Integrity Level 1 and the installation of automatic shutdown systems at storage terminals to prevent overfill of tanks storing gasoline received via pipeline transfer.

The PSLG continues to provide a wider forum for process safety in the downstream oil industry with a series of workshops, events and cross-industry seminars. In addition,



**From R to L: Peter Baker (HSE Director, Hazardous Installations Directorate), Tony Traynor (Operations Director, Ineos Refining) Calum Maclean (CEO Ineos Refining) Chris Hunt (UKPIA Director General), Ian Travers (HSE Buncefield Response Programme Manager)**

UKPIA has now appointed a Process Safety Programme Manager (see People back page) to move forward and turn into action UKPIA's 'Process Safety Leadership Commitment Statement' signed by all nine member companies and launched at the *Leading from the Top* conference in April 2008.

## Automatic shutdown systems to prevent overfill at fuel storage terminals

**UKPIA and the Tank Storage Association announced back in October that their member companies have committed to the standards of Safety Integrity Level 1 and the installation of automatic shutdown systems at storage terminals to prevent overfill of tanks storing petrol received via pipeline transfer.**

This decision follows on from the continuing work by the industry through the Process Safety Leadership Group, and its predecessor the Buncefield Standards Task Group, to develop and implement recommendations to improve safety at major fuel storage terminals. Automatic shutdown was also a recommendation made by the Buncefield Major Incident Investigation Board.

Chris Hunt commented "This is a significant step forward for the industry and the result of close collaboration with regulators to come up with workable proposals that will further enhance safety. Petroleum products play a vital role in the day-to-day life of everybody and confidence in the safety of the industry's operations is paramount."

The industry acknowledges that there remains further work to be done and in particular will continue to work with regulators on practicable solutions for refinery and ship-loading transfers of petrol.

Peter Baker of the Health and Safety Executive welcomed this announcement and commented that ".... This commitment makes it clear that industry will move to a higher standard of control than was commonly in place prior to Buncefield and also to fully

automated shutdown systems, where applicable. This is an encouraging example of strong leadership by industry to improve the management of process safety risks."

**UKPIA members signed up to the Commitment Statement on Process Safety in April. A UKPIA Process Safety Leadership Network, chaired by Alan Green of ConocoPhillips, has been established to support this work and to optimise the resources of UKPIA members, as well as supporting Council in delivering on Process Safety Commitments. This area will be further strengthened by the recruitment of a Process Safety Programme Manager to join the Secretariat in January 2009 [See People].**





# Emergency Response

Over the past 3 years UKPIA has been working closely with the BERR Energy Markets Unit (EMU), now part of the Department for Energy and Climate Change (DECC), and other key stakeholders in developing a National Emergency Plan for Fuel (NEP-F), first published in September 2007. The NEP-F is aimed at ensuring that sound coordination and standardised emergency response measures are in place in case of disruption to oil supplies and takes much from the oil industry sponsored Downstream Oil Emergency Response Plan (DOERP). As with the DOERP, the Plan contains a number of criteria, known as "response tools", directed at dealing with distinct disruption challenges. Amongst these measures are the Demand Calming Measures, the Priority Use Scheme, the Forecourt Supply Management and the Bulk Distribution Scheme.

**Demand Calming Measures** - a series of sensible measures that the public could use to reduce the consumption of petroleum products at any time.

**Priority Use Scheme** - priority schemes for the emergency services and other defined responders in an emergency, particularly utility companies, to make the best use

of reducing quantities of fuel to minimise the impact on emergency and other essential services. These schemes would be implemented in conjunction with the Designated Filling Stations (DFS) scheme.

**Forecourt Supply Management** - process to restrict the amount of fuel that retail customers may purchase at any one time under 'the Maximum Purchase Scheme'.

**Bulk Distribution Scheme** - allocation and prioritisation scheme for bulk consumers of petroleum fuels.

All "emergency response tools" and further details on the National Emergency Plan-Fuel can be found at [www.og.berr.gov.uk/downstream/emergencies/down\\_emerge.htm](http://www.og.berr.gov.uk/downstream/emergencies/down_emerge.htm)

**The Energy Markets Unit, UKPIA and other stakeholders continue to work on the NEP-F, building upon experience from events which can affect fuel supplies, including operational issues, industrial disputes or protest action. A revised version of the plan is expected by the end of 2008.**

**How can the consumer help?**

- Don't use your car if you really don't need to
- Consider car sharing
- Plan your journey



- Start driving soon after starting your engine and turn off the engine when stationary
- Keep your car well serviced. By properly maintaining your car you can maximise fuel efficiency
- Drive at reasonable speed and above all, drive smoothly. Every time you accelerate or brake suddenly, your engine uses more fuel
- Try to anticipate traffic flow in order to avoid unnecessary stopping and starting
- Close your windows, especially at higher speeds, and remove empty roof racks. This will reduce wind resistance and lower fuel consumption

**For more information on tips to drive more efficiently, visit [www.savemorethanfuel.eu](http://www.savemorethanfuel.eu)**

## EU Emissions Trading Scheme - the critical next phase for the refining industry

**Oil refining has been included in the EU ETS since the start of the scheme in 2005. In January 2008, the EU Commission published a draft directive to improve the EU Emissions Trading Scheme for the next phase after 2012, with the aim of placing a tighter cap on overall emissions of greenhouse gases.**

In the Summer edition of 'UKPIA News' we looked at how the Directive might affect the refining sector. The key concern remains the proposal for increased auctioning of EU ETS allowances for some sectors, rather than free allowances. This could have a significant impact on refining, and central to the industry's argument is the fact that refining

is fully exposed to competition from non-EU suppliers of refined oil products.

Imported products come from a range of countries including Russia and the Middle East, and these pressures could increase in the future. So far as refining is concerned, it would discourage investment in EU refineries and merely displace these emissions to the Middle East and Russia, for example, whilst increasing EU imports of diesel and jet fuel, reducing EU exports of petrol, and reducing energy supply security.

**Over the last few months there have been detailed discussions on the proposed Directive between representatives of**

**Member States, the EU Commission and the EU Parliament, with particular emphasis on criteria for assessment of carbon leakage and the industry will continue to push for free allocation of allowances. It is expected that the political agreement on the Directive will be reached by the end of 2008.**



# Interview - Nigel Elliott

## Nigel Elliott explains the importance of fuel standards

Nunzia Florio interviews Nigel Elliott, ExxonMobil's Product Quality Advisor for Europe, Africa and the Middle East. Nigel is responsible for all areas of refinery product quality: from ensuring fuel standards are met, to implementing fuel specification changes. He has extensive experience in testing and developing fuels and lubes, and is the Convener of CEN (European Committee for Standardisation) Technical Committee 19 Working Group 24 which develops the European standards for automotive diesel and biodiesel. He has been working with CEN since 2000, during which time he has overseen significant changes to the European diesel specifications (lower sulphur and addition of biofuels). He is also chair of UKPIA's Fuels Committee. His hobbies include participating in motor racing (hill climbing and sprinting) and DIY.

### Why are fuel standards so important?

Fuel standards set minimum or maximum levels for operating parameters such as the octane number of petrol. The levels are chosen by technical experts based on experience and are key for the correct and safe operation of vehicles in regard to engine performance and exhaust emissions. A uniform European standard for fuels enables vehicle manufacturers to design cars that will operate across Europe and fuel suppliers to provide suitable fuels. This benefits the consumer by enabling vehicles to be driven anywhere in Europe (holidays, goods, deliveries and so on) and vehicle manufacturers to gain economy of scale.

Fuel standards are also fundamental in ensuring security of supply as fuels can be moved easily from country to country in the event of a shortage, such as during a refinery shutdown.

### Why don't we legislate for them?

Fuel quality is continuously changing to allow for new vehicle technology and to reduce emissions from the use of fuels. The changes required need to be quickly reflected in fuels standards. Making the changes via European legislation would make the updating of fuel standards a lengthy and difficult process, and prevent a prompt response to technical problems, should they arise.

Biofuels are a good example. As we go along, we learn more and more about possible operating problems that might arise with biofuels for example their impact on vehicles' operation in very cold weather. CEN has the ability to act promptly to ensure that fuel standards are modified to the benefit of consumers and manufacturers alike.

### Who sets them? What is CEN and what does it do?

Performance standards are set by national and international standards bodies. The UK's national body is the BSI (British

Standards Institute). In Europe it is CEN, the European Committee for Standardisation, which is a non-profit making technical organisation set up under Belgian law, founded in 1961 by the national standards bodies in the European Economic Community and EFTA countries. Worldwide standards are set by the International Standards Organisation (ISO).

Responsibilities are shared between national and international standards bodies with international standards being agreed by a majority of participating national standards bodies.

### How are standards set?

Standards are agreed by a voluntary system of formal processes based on consensus and a common technical understanding. Participants represent all interests concerned, such as fuels suppliers, vehicle manufacturers, authorities and consumer groups.

CEN has a number of Technical Committees and associate Working Groups responsible for different products. Draft standards are made available for public consultation before the final, formal vote to accept them. This vote is binding on all member countries.

The European Standards (ENs) must be transposed into national standards, with annexes covering local conditions such as climatic parameters. For instance, the volatility of petrol is higher in winter in the UK than in Greece, to allow cars to start up easily in our cooler winters.

Standards can also include environmental parameters set at a national or international level e.g. by European Directives.

### How are they enforced?

In the UK fuels standards are enforced by trading standards legislation. It is an offence to market a product as meeting a standard when it does not.

### How does the consumer benefit?

The consumer benefits from having fuels that are widely available across Europe that are of consistent good quality, fit for purpose and deliver good performance in all vehicles sold in Europe. Security of supply is also improved by enabling petrol and diesel to be shipped between counties to cover temporary fuel shortages.

Also, the service station can advertise the standard number on the pump, which makes it easily recognisable by consumers across Europe.



# EVENTS

## Grangemouth Refinery visit

Representatives from the Aberdeen office of the Department for Energy and Climate Change, dealing with many aspects of UK offshore oil, visited the INEOS Grangemouth refinery on 6th November.

Plant Manager, Gordon Grant, David East, Communications Manager and Andrew Gardner, Commercial Manager, gave a presentation on INEOS's operations, following which there was a very informative visit to the Exhibition Centre to see the interactive display showing how the refinery works. This greatly helped to make sense of the guided walking tour of some of the main operating units and control room. The day concluded with a brief outline of industry issues from UKPIA.

Our thanks to the team at Grangemouth for their effort in making this visit a great success.



*Members of DECC Aberdeen office with Andrew Gardner INEOS, David East INEOS and Nick Vandervell UKPIA.*

## Fawley Refinery Visit

On 23rd October, UKPIA was joined by representatives from the Department for Energy and Climate Change, the Department for Transport and the HM Treasury for a visit to ExxonMobil's Fawley refinery.

The day provided a forum for discussion on the main issues affecting refineries in the UK, along with giving all participants an overview of the scale and complexity of the refining process.

Refining crude oil is a complex, energy and capital intensive business. UK oil refining has a key role in energy security, along with providing consumers with high quality products and feedstock for other industries.

UK refineries will require substantial investment in the future to meet ever more stringent environmental standards and future consumers' needs, along with the need for a stable fiscal and investment climate.

Some of the issues outlined, can be found on UKPIA's 2006 report 'Meeting our Energy Needs: the Future of UK Oil Refining'. A copy of the report can be downloaded from UKPIA's website ([www.ukpia.com/publications](http://www.ukpia.com/publications)).

UKPIA welcomes **Didier Harel** as new Council representative for Total, succeeding **Malcolm Jones**. Malcolm has been a Council member and Vice President for over five years. We thank him for the contribution he has made to Council and for his valuable support of UKPIA's work and wish him well in the future.



*Didier Harel*

We also welcome **Hugh Tucker**, who joined the Secretariat from Total at the start of October as Technical Coordinator. Hugh is a chemical engineer by training and has worked in the oil industry for over 30 years, in refining, trading, logistics and marketing. **Abigail Hayhoe** has joined the UKPIA team as Business Analyst, having graduated from Nottingham University. She takes over from **Stephen Geldart**.

**Peter Davidson** will join UKPIA in January 2009 as Process Safety Programme Manager. Peter joins us from ABB and has extensive experience of safety management and certification in the pharmaceutical, chemical, nuclear and petrochemical industries.



*Peter Davidson*

Another change in one of UKPIA's committees is that **Angela Graham** of Petroplus has taken over as Chair of the Legal Affairs Committee.

In addition, **Yvonne Reardon** of ConocoPhillips is appointed Chair of the Compulsory Stockholding Obligation Working Group. We wish Angela and Yvonne every success in steering these vital committees.

**UKPIA wishes you a Merry Christmas and a Happy New Year**