

ei awards 2005

prize-winning profiles

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A special supplement to

energy
world

and

Petroleum
review



www.eiawards.com



I am delighted to introduce the first supplement produced by the Energy Institute (EI) to celebrate the winners of the annual EI Awards. Held since 2000, the EI Awards recognise and reward innovation, initiative and the excellence that people working in the energy industry demonstrate on a daily basis.

As most of you will know, the EI is the professional body for all energy professionals. It draws its individual and company members from all areas of the energy industry, in the UK and abroad. The EI works tirelessly to promote professionalism in the industry, and the safe and efficient use of energy in all its forms and applications – enabling its members to share and develop their knowledge through conferences, training courses, publications, information services and networking opportunities. In these particularly challenging times, the EI is a vital partner to anyone involved in the energy world.

The EI publishes industry codes and guidance. It accredits good practice and individual competence. It is therefore a natural extension of its work to run a competition that recognises organisations and individuals whose achievements stretch the boundaries of best practice and commitment to their work.

Innovation, technology, safety, environment, communication – these are the key themes of the EI Awards. However, looking at the criteria behind each of the eight award categories, we can see that their underlying message is a commitment to education, sustainability, and the development of solutions for the benefit of society and the world in which we live.

As we all know, energy is a fundamental resource without which world societies cannot survive and develop. A heated debate is taking place – not only in the UK, but globally – to assess the rate of depletion of traditional energy sources against the growth rate of new technologies. The critical question is: 'How do we maintain security of energy supply within the constraints of climate change requirements, in a format that is economically viable, especially in developing countries?' In other, more simplistic, words: 'How do we keep the lights on and make poverty history without causing catastrophic damage to the planet?'

Opinions are diverse, but one thing is certain, nobody doubts the vital contribution made by the energy industry and its people to provide the long-term solutions to this issue.

A vibrant and innovative energy sector is absolutely necessary, globally, to help make full use of existing resources and provide technological access to new, clean and sustainable sources of energy. We all have a key role to play in ensuring that the industry develops and retains this dynamism.

Promoting and celebrating the achievements and actions of EI Award competitors is an important part of this effort. Their example and leadership will not only help society better understand the importance of energy in its survival, but it will also help attract a new generation of energy professionals prepared to rise to the challenges of the future.

So, warm congratulations to the all the winners of the 2005 EI Awards. This special supplement is produced in tribute to their achievements and I am sure you will enjoy reading their accounts of how they developed their winning projects. They are an inspiration to us all.

Once again, the EI Awards have attracted a wide variety of entries, encompassing all aspects of the energy industry. These entries were of the highest standard and I must commend and thank our independent panel of judges for their discipline and integrity in reaching their decisions.

I must also commend and congratulate all the short-listed nominees. The competition is very tight, and not everybody can win, but they can all be very proud of their achievements. I would urge them to continue their excellent work for the benefit of industry and society as a whole.

Special thanks also go to our partner Deloitte and to our sponsors – ABB, Amec, BG Group, ExxonMobil, KPMG, Norman Broadbent, Shell, TNK BP and Total – whose generosity and support have enabled us to develop and run these awards.

Finally, I would like to encourage all energy organisations and professionals to consider entering in the 2006 EI Awards competition to perpetuate and stimulate the search for innovation and excellence that the awards represent.

I very much look forward to celebrating our industry's achievements again this coming November.

Sir John Collins
President, Energy Institute



All EI Awards 2005 photos, except where credited, by Jim Four



And the nominations were...

The following paragraphs summarise the projects that were nominated for the 2005 EI Awards.

communication award

BP – ‘Customer Golden Rules’ communication campaign

The ‘Customer Golden Rules’ campaign was designed to give BP’s employees the skills and, crucially, the motivation to achieve its ambition of becoming the ‘partner of choice’. It created six rules to embody the attitude that the company want each individual staff member to live by and a ‘universal’ customer to voice real customer concerns. This fictional ‘Bob’, Commercial Director of a global car dealership, presents the customer perspective on BP’s business to BP employees in an energising, fun, three-minute piece of live theatre.

The campaign has targeted 20% of BP’s 8,000 employees so far. The feedback and ideas that it has collated along the

way show not only a real enthusiasm for the means of communication, but also a real depth of understanding and a commitment to go out and ‘wow’ customers.

GAIL – Three publications: *Hriday*, *Two decades of Gas and Beyond*, and *Moments of Joy*

Hriday – which means ‘heart’ in English – showcases the range of community initiatives that have been undertaken by GAIL. With the powerful byline ‘Helping people help themselves’ it helps create a positive image in the minds of the stakeholders, positioning GAIL as a corporate that cares... a corporate ‘with a heart’.

The *Two Decades of Gas and Beyond* publication was produced to maintain the faith of shareholders in the company, giving them the larger picture of the vision, mission and future plans of GAIL. It details a wealth of information, summarising the financial development of the company during the ‘two glorious decades’ since GAIL’s inception in 1984.

The quarterly publication *Moments of Joy* highlights the experiences of GAIL employees at their workplace in a bid to enhance staff morale, promote

transparency and encourage best practices. Ensuring that there are no ‘unsung heroes’ in GAIL, this publication serves as a way to celebrate the spirit of employees’ contributions.

Macaulay Enterprises – Using interactive 3D visualisations in consultations over wind farm developments

There is an increasing requirement for the participation of members of different stakeholder groups in the planning process over proposed wind farm developments. In order to help stakeholders understand what project developers are proposing, the ‘Macaulay Virtual Landscape Theatre’ was developed – the first mobile 3D visualisation theatre of its kind in the UK. The 3D visualisation technology enables the participants to feel as if they are actually in the scene, allowing them to gain a greater sense of the real impacts that a development proposal may have. The technology has the capability to invite responses from the participants via radio-linked voting keypads. It can also be used by planners to assess both the cumulative and sequential visual impact

where more than one project or proposals are in close proximity. In the past year, the technology has been used at two wind farm public consultation events and has received very favourable responses from both the developers and the public involved.

El Awards partner

'The El Awards highlight the biggest and best achievements within the global energy industry today and we are hugely supportive of them. We welcomed the opportunity to work with the Energy Institute through our partnership and to championing innovation and excellence in the sector.'

Carl Hughes, Head of Energy, Infrastructure and Utilities, Deloitte UK

community initiative award

BG Group – Working to improve literacy in India

BG India's 'Working to improve literacy in India' project has been invaluable in enhancing opportunities for underprivileged children in India. Delivered through a partnership with Pratham – a prominent non-governmental organisation (NGO) – a new learning methodology called 'Learn to Read and Read to Learn' has been developed that aims to increase basic literacy and elementary maths skills of children aged between three and 12 in targetted areas. The project started in Mumbai and is now being rolled out across 12 states in India. Over 500 teachers have been trained to date and 25,000 children have participated and benefitted from the project.

ExxonMobil – ExxonMobil Link School programme

ExxonMobil's Link School programme supports the teaching of science, maths

and environmental education. The company provides science equipment grants, assistance in improving the school environment and curriculum resources to some 47 schools based around its main areas of employment in Aberdeen, Fife, Leatherhead and Fawley. The programme is partly delivered in partnership with national charities Learning Through Landscapes (LTL) and the Centre for Research, Education and Training in Energy (CREATE). Support includes workshops for teachers and further curriculum resources via the www.energychest.net website.

ExxonMobil hopes to secure the next generation of brilliant minds by awakening an interest in young scientists, upon whose ingenuity the future of ExxonMobil and the entire energy sector will rely. In addition, although not everyone who comes into contact with this programme is going to end up a scientist working in the energy sector, future teachers, journalists, financiers, opinion formers and homeowners will have a better, more balanced, understanding of the value and importance of the energy industry, the challenges it faces and the life-preserving and life-changing nature of its work.

environment award

BG Group – Reducing the environmental impact of drilling in the North Sea

To meet new EU and UK rules limiting the hydrocarbon content of disposed drill cuttings to the marine environment to 1%, BG Group trialled the RotoMill offshore processing system developed by Aberdeen-based Total Waste Management Alliance. The system, which is small enough to fit on a semi-submersible rig, is designed to flash evaporate fluids (separating the oil and water) from drill cuttings and other hydrocarbon contaminated waste – importantly, with no emissions to the atmosphere. The trial of RotoMill was an operational and financial success, with the hydrocarbon content of the discharged solids averaging 0.019% – or

only 2% of the UK government's maximum limit. It has eliminated secondary onshore waste generation and trial costs have proved to be comparable to standard containment and onshore processing systems. BG is now looking to expand the use of RotoMill to larger rigs as it looks to find new ways of reducing levels of waste.

ConocoPhillips, Venezuela – Putting Gulf of Paria biodiversity on the map

ConocoPhillips Venezuela and its partners discovered offshore oil resources in the Gulf of Paria, north-eastern Venezuela, in 1999, when little was known about biodiversity in this unique region set between the Orinoco River Delta and the Caribbean Sea. In 2004, with the participation of national and international organisations, ConocoPhillips completed several studies specific to the Gulf of Paria biodiversity – leading to the discovery of nine aquatic species new to science and the development of a biodiversity action plan. The results of the biodiversity studies have been published at www.ConocoPhillipsParia.com. The site is regularly visited by more than 900 users from 50 countries each month. The initiative puts into practice the guidelines set out by the Energy and Biodiversity Initiative (EBI) and is serving as a case study for the current guidelines being developed by the IPIECA Biodiversity Working Group.

innovation award

EnCana – EnCana's drilling waste management system

EnCana has developed an industry leading drilling waste management system (DWMS) that is able to recycle and reuse 90% of the drilling waste generated during its SAGD (steam assisted gravity drainage) oil sands production operations, while reducing costs and protecting both the environment and workers. The system uses new drilling mud chemistry that physically encapsulates oil particles entrained within the waste stream into the water phase of the drilling fluid. It is only when the



Welcome reception

'ABB Engineering Services see the El Awards as a very prestigious and key industry event, with strong focus on technology, innovation, safety and the environment. As such, we were very keen to sponsor the awards – to show our support in these areas and also to raise the profile of ABB, an international technical consultancy working globally with customers in the oil and gas industry, providing support in many of the areas covered by the awards. ABB also used the event as an opportunity to host a table of key customers from the oil and gas industry, and we are looking forward to supporting future El Awards.'

Peter Hunt, Vice President Oil and Gas, ABB Engineering Services

fluid is processed at EnCana's drilling waste processing facility (DWPF), that the entrained oil is recovered from the waste and separated into three streams for recycling. The clear reusable fluids are recycled back into the drilling operation as replacement water in drilling fluids, while the benign concentrated drilled cuttings are used as an alternative construction material. The hydrocarbon bearing sand is incorporated into paving material for local roadways and drilling pad construction.

Total E&P France – Decommissioning and abandonment of LPG underground storage in salt caverns

Total E&P France decided to decommission its Carresse LPG storage facilities in south-west France in 2002. As part of the abandonment process, all the propane trapped inside irregularities in the cavern walls had to be recovered. Total performed a comprehensive programme of geomechanical and hydrogeological investigation to determine the safest way in which to close the wells and the best way to assess the long-term behaviour of the salt caverns after abandonment.

An innovative methodology was developed to recover the propane. Nitrogen was injected into the well to withdraw the brine from the cavern, lowering the brine level far below the roof of the cavern, to the trap levels. The nitrogen was then depressurised until the pressure in the traps decreased below the propane vapour-pressure value. The liquid propane vapourised and was expelled out of the traps as a gas, which was collected on the surface. After the recovery was complete, the cavern and the well were filled up with brine and the nitrogen drawn out.

The safety of the operation was assured by geomechanical simulations investigating the stability of the cavern under reduced internal pressures and by constant micro-seismic monitoring of the site.

safety award

BHP Billiton – Behavioural safety initiative

Jim Hynds is a crane driver on the Douglas platform of BHP Billiton's Liverpool Bay Asset and has been a Safety Representative on the platform for a number of years. Following an incident that involved him working outside of the original, permitted scope, Jim Hynds has developed a presentation and coaching programme to encourage the proper and correct planning of activities as part of BHP Billiton's Behavioural Change Programme. The initiative's aim is to stimulate individual thought and



The EI Awards 2005 Guest Speaker was explorer Sir Ranulph Fiennes Bt OBE

encourage staff to recognise how their behaviour could adversely affect the business, with a view to 'adjusting' that behaviour before the downside is realised. Presentations were initially made to the Asset Leadership Team, and then to each individual shift.

The Behavioural Change Programme involves training the workforce so they are able to better understand how their actions and behaviours can improve safety and enhance all aspects of the business. Jim Hynds' presentation has played an important role in spreading the message to all Asset staff.

Halliburton – EMPOWER behavioural-based safety (BSS) process

In 2003, Halliburton embarked upon a programme to complete the cycle of its total safety culture. It developed a BBS (behavioural-based safety) process for identifying 'at risk' behaviour, which involves training employees to observe behaviour, provide feedback to those observed and remove barriers to safe behaviour. The scheme uses principles such as employee involvement, ownership, safety leadership and continuous improvement. A Steering Group – made up from all Product Services Lines and locations – was appointed, with a senior management sponsor and a full-time facilitator from middle management. Roles and responsibilities within the group have evolved to encompass engagement of the workforce, training for volunteer observers, quality checking and data entry of observations, analysis and action planning, sustainability and performance review, ongoing coaching, communications, newsletters and presentations. Performance enhancement through EMPOWER is extremely encouraging – with an improvement of 58% in the company's 2004 versus 2003 total recordable incident rate – and the process has the potential for wider application.

technology award

AFS Aviation Fuel Services – Aviation fuel quality programme

AFS Aviation Fuel Services has developed a safe system for the automated monitoring, collection and checking of quality data for receiving, storing and dispensing jet fuel, which acts as a second independent system to filter monitors for aircraft refuelling. All communication – voice and data, electronic or radio – are incorporated into the one system.

All data is captured electronically upon receipt of the product (so long as this is permitted by regulations) and stored in a database. Even the pressure, differential pressure, volume flow, moisture and flight data are transferred online via radio (UMTS) while dispensing into an aircraft. In the event of unsafe conditions being identified, refuelling/dispensing is stopped automatically.

This high level of automation improves safety and ensures fuel quality. All activities are traceable and less manpower is required.

Foster Findlay and Associates – SVI Pro

SVI Pro is a powerful image processing application that extracts comprehensive geological information from 3D seismic data sets, objectively and reliably, and with greater processing power and flexibility than its forerunner, SEA 3D. It has world-class 3D noise cancellation, structural imaging and stratigraphic analysis workflows to reduce risk and accelerate E&P success. SVI Pro processes large seismic data sets and rapidly generates multiple interpretation scenarios on industry standard Windows hardware. It turns a laptop into an interactive 3D data room and enables subsurface presentations of unprecedented quality in any business environment. It runs independently of third-party visualisation constraints and on low cost hardware. ●

Whittling down the winners

The Energy Institute (EI) received a large number of entries for the eight award categories of the EI Awards 2005. Judging for each category was based on the achievements deemed to have had the most impact or potential impact on the oil, gas and energy industry. The EI would like to take this opportunity to thank the independent panel of judges, all of whom took time out of their busy schedules to whittle down the entries to the final nominations and winners. Here, the core judges comment on why they feel the EI Awards are of continuing importance to the industry.



communication award
Chris Skrebowski, Editor, Petroleum Review



community initiative award
Chris Morris, General Secretary, IPIECA



environment award
Alain Heilbrunn, Secretary General, Concawe



innovation award
Peter Hunt, Vice President Oil and Gas, ABB Engineering Services



international platinum award
Laurie Power, Senior Lecturer, School of Engineering, Robert Gordon University



outstanding individual achievement award
Chris Moorhouse, Trustee, Institute of Business Ethics



safety award
Dan Mitchell, HM Chief Inspector of Mines and Head of Specialised Industries, Hazardous Installations Directorate



technology award
Dr Erwin Gorczynski, Solutions Manager, SAIC

communication award

Chris Skrebowski, Editor, Petroleum Review

'The Communication Award always attracts a large number of entries and this year was no exception. In seeking to determine the entries that warrant an award, one is looking for entries which go beyond what might reasonably be expected in the day-to-day operation of the companies involved.

Communication in all its contemporary forms is getting ever slicker and more sophisticated. It is therefore important to recognise that "going a little further" has to be seen in the context of both company size (and sophistication) and the location they are operating in.

In essence, the Communication Award is straightforward. It is there to recognise effective communication that advances the interests of all the stakeholders – the company involved, the country or countries it operates in, the reputation of the industry and the welfare of all those involved. The fact we receive so many entries confirms the view that an EI Award is an honour worth the large commitment of time and effort in competing for one.'

community initiative award

Chris Morris, General Secretary, IPIECA

'The EI Awards are important as they allow company initiatives to be submitted for review and judging by their peers, and ultimately be recognised and rewarded for their endeavours. So much valuable work is carried out and so little of the time, effort and commitment of individuals as well as company support are ever recognised. It is so important to show the world that the EI, through its members, are contributing to continuous improvement and a better life for all. Be it safety, technology or community projects, each strive to improve the environment where we work and the reputation of the energy sector.

IPIECA, since 1974, has been addressing key environmental and social issues pertaining to the oil and gas industry by promoting good practice. It is therefore a great honour for IPIECA and me to have been asked to judge the Community Initiative Award entries for the past four years and we hope that this opportunity continues.'

Judges' profiles continued on p22

Sponsored by Amec, the EI Communication Award is presented for the best contribution to awareness of industry issues and its people. The 2005 Award was presented by Neil Bruce, Managing Director, Amec Oil & Gas.

And the winner is...

Shell, Leiden University, The University of Manchester and University of Aberdeen – Hearts and Minds

In 1998 Shell International E&P (SIEP) decided to go beyond HSE management systems to find ways of developing a workforce intrinsically motivated for HSE. The company enlisted the aid of the Universities of Leiden, Manchester and Aberdeen, who worked in close cooperation with staff to develop a set of practical research-based tools that aim to stimulate belief shifts and behavioural change across the many different cultures in which Shell operates.

The result is a programme called 'Hearts and Minds', which enables teams to identify and work on their own issues without the need for external consultants or additional training. The core of the programme is an evolutionary model of HSE culture, supported by a scientifically based approach to the implementation of lasting change within individuals and whole organisations.

Supporting the changes in attitudes necessary to create an advanced culture of safety, the Hearts and Minds tools are written so that complex science is built invisibly into materials that are:

- Designed as colourful brochures, tempting people to pick them up.
- Targetted towards specific groups, using simple language that is appropriate to their level.
- Designed to create learning, from first

'[The Hearts and Minds programme represents] decades of university research, metres of reports, mixed with oil company pragmatism and experience, boiled, sieved, crystallised and reduced down to a 1-cm package of diagnostic and remediation tools to improve our business.'
Gerard van der Graaf, Corporate Head for Safety for Exploration and Production, Shell



Photo supplied by Shell

- line supervisors to CEOs, as they take part in short, enjoyable exercises.
- Intended to create a need in people to know more.

- Set out in a way that allows teams to identify and work on their own issues without the need for external consultants or additional training.
- Designing the material around creating a need in people (ie following a continued on p23...

'Amec employs 44,000 people in more than 40 countries, generating annual revenues of around £5bn. Its oil and gas business is a leading international provider of total life of asset services to customers in the upstream, downstream, petrochemicals and pipelines markets. It is well recognised within Amec that communications are key to running a successful business – which is why we were proud to sponsor the EI Communication Award. Amec believes in safety as our highest priority. That is why we were pleased to announce Shell's Hearts and Minds programme as the winner, for embedding an advanced culture of safety at work.'
Neil Bruce, Managing Director, Amec Oil & Gas

Explaining the evolution of the Programme – 'The Universities' input has been vital in translating over 100 years of psychological research around human behaviour into a set of tools that people want to use. By designing tools that support a need, are easy and enjoyable to use, and which support learning without the need for external consultants and additional training, we've created a demand for the Hearts and Minds Programme that has surpassed our expectations.'
Robin Bryden, Applied Psychologist and Manager of the Hearts and Minds Programme, Shell International Exploration and Production

Sponsored by Total, the EI Community Initiative Award is presented for the best new initiative to benefit the community. It is regarded as one of the toughest awards to judge, due to the tremendous efforts made by oil and gas companies across the globe to work with their local communities. The 2005 Award was presented by Brian Wilkie, HR and Administration Manager, Total.

And the winner is... ConocoPhillips Venezuela – Empowering Guiria fisherman to become entrepreneurs

In 2004, ConocoPhillips Venezuela (COPVen), in collaboration with SEPROC (a local non-governmental organisation), the National Cooperative Educational Institute, and the Venezuelan government, completed a unique educational and skill development programme for members of a small-scale fishermen association in the town of Guiria in the Gulf of Paria. Fishing is an important socio-economic activity in this region, accounting for approximately 12% of employment and providing sustenance to a large part of the population.

The initiative was designed to empower fishermen to transform their association into a successful community-managed enterprise, promoting economic growth and an improved quality of life. In 2001, the ASOPEAVAL association had just three boats, owned no infrastructure and had no revenue. Today, its membership has nearly doubled. It provides 11 full-time jobs and

'Total strongly supports the concept of good citizenship, both individually and corporately. We all have a shared responsibility towards our colleagues and neighbours, and so Total is pleased to sponsor the EI Community Initiative Award, which identifies the best of projects from around the world, where companies and staff go beyond just doing their job and show genuine commitment to others in a caring and sustainable manner. I hope that by showcasing three excellent community projects we have encouraged everyone at the Awards Dinner and the industry at large to see that they can make a difference.'

Brian Wilkie, HR and Administration Manager, Total



owns 15 boats, a new office, a fully equipped fish gathering facility, a delivery truck and a supply store. Over 1,500 hours have been invested in 45 courses, skill development workshops and hands-on training for almost 400 participants, who were given the opportunity to improve their skills in fish processing and preservation methods; mechanical repairs; leadership; and business and marketing. Financially, ASOPEAVAL is generating \$25,000 per month, managing this budget to provide cash bonuses, loans and retirement benefits to its members.

Of the 40 fish gathering facilities established in the 1980s, only 15 (less than 40%) still exist. According to the National Fishing Institute, ASOPEAVAL is the only one of these contributing to the growth in profits and benefitting fishermen. Melvin Gill, a fisherman and President of ASOPEAVAL has noted: 'ConocoPhillips provided us with training, and now we are an example to others.'

Directly benefitting over 130 fishermen families, or about 600 people, the initiative has already empowered fishermen to convert a local activity (fishing) into a mechanism for economic growth and improved quality of life. ConocoPhillips has established a direct line of communication and trust with an important, and potentially antagonistic, stakeholder. As a result, other opportunities have arisen. For example, ConocoPhillips has trained more than 400 fishermen to assist in Tier 1 emergency response.

From an industry perspective, this initiative provides a model for cross-sector collaboration between private, public, not-for-profit organisations and communities that can be replicated across Venezuela

or other parts of the world where fishermen are important stakeholders. Furthermore, by investing in strengthening an activity that is inherent to the region, ConocoPhillips is creating an avenue for sustainable economic growth that will be independent of the hydrocarbons sector. ●

'We are very pleased to have been selected for this prestigious international award, which highlights the commitment and work of our team in Venezuela in the area of sustainable development. This initiative is particularly noteworthy because it offers a model for collaboration among the public and private sectors, not-for-profit organisations and communities that can be replicated worldwide.'

'We see in this programme an example of how to conduct our businesses responsibly and in accordance with our corporate position on sustainable development, and consistent with the spirit of cooperation among various organisations to improve the standard of living of communities that neighbour our operations.'

Fernando D Rodriguez, Manager of HSEQ and Sustainable Development, ConocoPhillips Venezuela

Sponsored by KPMG, the EI Environment Award recognises that the environment and managing environmental issues are increasingly important in today's society. It is presented for the best new initiative to benefit the environment. The 2005 Award was presented by Sarah McNaught, UK Head of Oil and Gas, KPMG.

And the winner is...

TNK-BP – Improving the safety and environment operational standards on the Volga River

The Volga River plays an essential role in Russian oil and product transportation. Between the months of April and November, when it is free of ice, TNK-BP and other oil companies use the river to move their cargoes in relatively small 4,000-tonne volumes – trade driven by the superior economics compared to rail exports. However, it is an extremely complex operation, involving the shipment of over 1.7mn tonnes (425 voyages), with each barge travelling some 2,500 km via narrow and shallow navigation channels. The barges eventually discharge their cargoes into two mother vessels that are anchored for eight months in the Sea of Azov. On average, TNK-BP discharges into 38 export vessels per season from these mother ships. Each barge voyage passes through some 40 locks, all of which require special manoeuvring techniques. The complex and hazardous journey is further complicated by the age and poor condition of the existing equipment. These factors, coupled with a major incident involving the *Mt Victoria*, challenged TNK-BP to raise its HSE standards.

The key elements of the programme

'We are proud that the company's efforts in the HSE area have been recognised by a panel of international experts at the Energy Institute, a leading international industry association that provides a cross-border platform for exchanging cutting edge ideas and knowledge-sharing.'

TNK-BP is the first Russian oil and gas company to receive a prestigious EI Award. We are especially proud that this award was granted for the company's efforts in the HSE area – a prime focus of TNK-BP's strategy.'

Jonathan Kollek, Vice President, Sales, Trading & Logistics, TNK-BP



to raise HSE standards included a commitment from senior management to establish an 'interim standard fleet', which identified vessels that had the potential to meet international standards with improvements over three years. The project focused on three areas for improvement:

- Physical inspection and approval of Volga River tankers – a maximum age limit of 40 years was established and those tankers meeting requirements were inspected, with recommendations and dates set for correction of deficiencies.
- Introduction and education of new, safer operating practices – this involved visits to each ship owner to discuss concerns over procedures. A major seminar, with over 70 attendees, was held in Moscow for all owners and the Russian River Registry to review TNK-BP requirements and share best practices.
- Examination and improvement of TNK-BP group operations – this involved the inspection of the group's own operations to review and recommend improvements in both equipment and processes.

The resulting HSE programme has challenged conventional Volga River thinking and management, and led to the introduction of new and transparent standards within TNK-BP and the industry. By advising owners about the poor conditions of their vessels and gaining the support and understanding of ship owners and managers, the age of the tanker fleet is now much

younger and is moving towards full international standards within the shortest timeframe. Indeed, some tanker owners have already achieved full international standards and are now able to operate in the Baltic during the winter months, when the Volga navigation is closed.

TNK-BP's initiative is also ensuring that improvements are not limited to mitigating spill risks but also on prevention – an approach that is being replicated in other fields of HSE.

continued on p23...

'Minimising the impact of business operations on the environment is key to creating a sustainable future. As an organisation, KPMG strongly promotes the need to understand and manage environmental performance alongside our own financial performance. Our greatest influence on the environment, however, is through the advice we provide and the clients we work with. Managing environmental impacts is a particular challenge for the energy industry and we were therefore delighted to support the EI Environment Award to demonstrate that positive working practices are to be encouraged and pursued.'

Sarah McNaught, UK Head, Oil and Gas, KPMG

Sponsored by ExxonMobil, the EI Innovation Award recognises that innovation is paramount if the energy industry is to responsibly meet today's challenges and demands on a global basis. The 2005 Award was presented by Roberta Luxbacher, ExxonMobil Gas & Power Marketing Director, Europe.

And the winner is...

Doug Marriott and Associates – CHRP combined heat refrigeration and power

The refrigeration sector accounts for 17% of the UK's energy consumption, with the food supermarket sector accounting for 5%. The energy conversion efficiency of current state-of-the-art refrigeration is very low – just 35% – due to the use of grid electrical distributed energy, and does not meet the aim of the UK government White Paper that seeks a 60% carbon reduction between 1990 and 2050. Food retail refrigeration, using condensing boilers for heating, is, at most, 38% thermally efficient. However, it is claimed that combined heat refrigeration and power (CHRP) could make a



'The EI Innovation Award is one of the world's leading accolades in the energy industry. We are proud to be sponsored by ExxonMobil as a world-leading organisation in innovative energy and environmental technology, and are proud to be recognised in that respect.'

The project, in its final stages of development, is proving to be one of the most efficient methods of producing tri-generation energy for the food and allied industry.

There are numerous advantages and commercial reasons why the process will be adopted widely worldwide.

Winning the award will allow us to market the product with authoritative endorsement, at a time when environmental pollution and energy is particularly on the world agenda. It will allow us to be very more effective in our marketing strategy and help ongoing development with the world's leading partners. We would like to thank the support of DEFRA for their sponsorship.'

Doug Marriott, Senior Partner, Doug Marriott Associates

significant contribution towards meeting the government's objective.

CHRP employs modular micro-turbine generators (available in 80 kWe modules) to produce on-site electrical power; the waste heat being fed into a newly researched absorption refrigeration plant. Waste heat from the process is then used as space heating in winter and for process water heating in the summer. The process doubles the thermal efficiency of retail food supermarkets to 78%, eliminates pollution from refrigerant gas loss and uses methane gas with the potential of dual fuel use in the future. The process will be applicable to renewable fuels gasification or biofuel processes. Furthermore, by using dual fuel, interruptible gas supply contracts will be available, leading to lower primary fuel costs.

A team was established under the leadership of DEFRA, using the Advanced Food Manufacturing Programme, with support from Doug Marriott Associates, Doug Marriott Brunel University Mechanical Engineering Department, Bond Retail, Bowman Power, Apex Air Conditioning and Somerfield supermarket. Having gained funding for a feasibility study, a pilot plant was set up at the University to prove the principle. Once the first stage goal was delivered successfully,

DEFRA has continued the funding programme in order to ensure that the concept reaches a full-scale pilot and implementation. Current plans are to have a commercially proven plant by 2006, which will be available to the UK and international markets by 2007.

continued on p23...

'We believe it is very appropriate for us to sponsor an award for the most outstanding innovation as ExxonMobil has consistently led the energy industry in research and technology.'

Technology has helped shape the industry, and exciting opportunities exist for those who have the technological know-how and experience to capitalise on them. This is why ExxonMobil is totally committed to the development of innovative technology.'

Awards events can act as a stimulus for change, and are an important recognition of the hard work put in by individuals and teams across the industry.'

Roberta Luxbacher, ExxonMobil Gas & Power Marketing Director, Europe

Sponsored by TNK-BP, the EI International Platinum Award recognises the overall excellence that a company or project has achieved. It takes into account not only projects put forward in this category, but also all the other projects entered under the other EI Award categories. This makes it unique as an award for the achievement with the greatest impact, regardless of the area of the industry. The 2005 Award was presented by Tony Considine, Executive Vice President–Downstream, TNK-BP.

And the winner is...

ExxonMobil – ExxonMobil Link School programme

ExxonMobil's Link School programme supports the teaching of science, maths and environmental education. The company provides science equipment grants, assistance in improving the school environment and curriculum resources to some 47 schools based around its main areas of employment in Aberdeen, Fife, Leatherhead and Fawley. In addition, ExxonMobil facilitates out-of-school activities, including those in which local communities can participate.

The programme is partly delivered in



'We were delighted when our Link Schools programme won this prestigious award. Our aim is to motivate and excite teachers and pupils about engineering, technology, science and the environment, subjects that are so vital for our industry. Winning this award is tremendous recognition for our programme.'

Learning Through Landscapes and CREATE, the two charities who assist us, were particularly thrilled to have all their hard work and efforts recognised in this way.

We work closely with the teaching staff in our Link Schools to develop a hands-on experience and to capture the interest of young people. The award is a credit to our schools and partners alike.

Our support for schools around our main employment sites forms a major part of the community investment programme we operate in the UK, which amounts to over £2mn a year.'

Denice Fennell, UK Community Affairs Manager, ExxonMobil

partnership with national charities Learning Through Landscapes (LTL) and the Centre for Research, Education and Training in Energy (CREATE).

All of the schools in the programme receive an annual £1,000 grant for science, maths, technology and ICT equipment. ExxonMobil also provides schools with a £500 grant for pupil resources, such as homework books. An 'Energy Chest' has also been developed – kits of science equipment for pupils to investigate energy use in their school and to learn about renewable energy sources. Further curriculum resources are provided via the www.energychest.net website, developed with CREATE. Aimed at 8–14 year olds and their teachers, the site looks at Energy in Buildings, Energy Sources, and Energy and the Environment – it receives nearly 30,000 hits per month. Workshops are also offered for teachers to improve their own knowledge and understanding of energy. Outside the classroom, schools are given help to improve their external environment with landscaped gardens and stimulating play areas. LTL is actively encour

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'TNK-BP appeared on the Russian and Ukrainian landscape in August 2003 as a joint venture between BP and Russian partners. Since its inception the company has represented a measure of innovation in the Russian oil industry by putting together a strong combination of international and Russian professional talent.'

This corporate ideology helps to explain the choice of the award TNK-BP decided to support – International Platinum – which is given for excellence and innovation in the world of energy. The Energy Institute helps to share innovation and best practice across national borders. It has an established reputation in the industry, which makes the International Platinum Award a sign of true international recognition.'

Jonathan Kollek, Vice President for Sales, Trading and Logistics, TNK-BP

Sponsored by Norman Broadbent, the EI Outstanding Individual Achievement Award recognises that the dedication and spirit of one individual can make a tremendous impact on the industry, providing inspiration to us all. The 2005 Award went to **Sanjay Kaul** for his involvement in the development of the Indian School of Petroleum. It was presented by Jon Glesinger, Managing Director, Energy & Natural Resources Practice, Norman Broadbent.

And the winner is...

Sanjay Kaul, Indian School of Petroleum

Sanjay Kaul grew up in Delhi and finished his higher education in Bombay. He has held various positions at several multinational organisations, including Shell, Chevron, Pricewaterhouse Coopers, Oberoi, Amway and Bradma.

In 2001 he was instrumental in establishing India's first dedicated energy management society – the Hydrocarbon Education and Research Society (HERS) – a not-for-profit society comprising concerned energy professionals, which aimed to focus initially on a transition strategy of working for energy security and the continuous supply of affordable energy to all citizens, with the ultimate goal of energy self independence (having an energy basket of energy resources providing total freedom from import related uncertainties). HERS committed itself to this path by focusing on education and research in this area.

'At the EI Awards, we find ourselves in good company on an evening honouring an industry that is rich with so many people who explore and push boundaries – personally, geographically, corporately and, indeed, politically!

At Norman Broadbent, we help companies to attract, retain and develop talented individuals and teams – the very people who will be pushing the boundaries. We believe that in our business and our practices, we are measurably different. Considering our involvement with great people, it is perhaps not surprising that we should be so keen to be closely associated with an award that recognises Outstanding Individual Achievement – individuals who are themselves as measurably different as we feel that we are.'

Jon Glesinger, Managing Director, Energy & Natural Resources Practice, Norman Broadbent



The first focus was oil and gas – the most influential value chain in the energy basket. The Indian School of Petroleum (ISP) was thus established to focus on the training, consultancy and research needs of the 750,000 people already engaged in India's oil and gas sector – generating much more value throughout the hydrocarbon chain (upstream, midstream and downstream). The School also encouraged various industry stakeholders to focus on the issues of pricing and the regulatory and policy regimes governing the hydrocarbon value chain.

ISP is playing a pivotal role in the metamorphosis of the Indian oil and gas sector by providing strategic consultancy, education and training. To date, it has held more than 50 management workshops and trained over 6,000 oil and gas professionals.

While ISP focused on working professionals, there was also a need to establish an academic and research platform covering the broader aspects of energy (oil and gas, power, transportation technologies, alternative energy sources, mining, future fuels etc). Thus, Kaul approached the State of Uttaranchal to establish Asia's first dedicated Energy University – the University of Petroleum and Energy Studies (UPES) – in 2003. In two years, the University has established a 25-acre campus with over 1,000 students. It has 100 faculty members, with 17 labs engaged in over 17 different undergraduate and postgraduate technical and management courses.

Recently UPES passed out its first

batch of students in MBA Oil & Gas Management and M.Tech. Gas Engineering, with the President of India giving the convocation address. All the students were subsequently hired by over 31 energy related companies.

In 2005, the University began courses in Power and Mining.

Energy is an international commodity with global implications. Best practices, affordability, access, supply, policy, regulations and sustainability all require a global mindset and an ability to think and act without borders. HERS recog
continued on p24...

'The energy sector has provided some of the most outstanding career opportunities to professionals like us. It is time to lead the energy sector from a perceived position of "exploiter of natural resources" to provider of a secure, peaceful and affordable lifestyle and an engine of prosperity and sustainable growth. This award, by recognising the individual effort of an energy professional who is engaged in contributing to a process of change and reform in the harnessing of energy in a developing economy at a grass-root level of education, has inspired me to do more, faster and better in this area.'
Sanjay Kaul

Sponsored by Shell, the EI Safety Award is presented for the best example of safe practice and recognises that we should never underestimate the role that safety plays in the oil, gas and energy business, whether it be for employees or the general public. The 2005 Award was presented by Greg Hill, Vice President–Production, Shell Exploration & Production, Europe.

And the winner is...

ExxonMobil Aviation International – ExxonMobil/Aviation Smith System airside defensive driver training

Safety is of paramount importance during airside refuelling operations, where the stakes are high. ExxonMobil Aviation (EMA) and its partners employ 1,200 airport refuelling vehicle drivers – known as ‘wingmen’ – at airports around the globe, who handle a volatile product while working with and around extremely expensive equipment in a complex and unpredictable airside environment. Accidents involving vehicles and aircraft can have devastating results in terms of human injury, cost, equipment safety and airport delays.

With the goal of an accident-free workplace worldwide, EMA decided to focus on airside vehicle safety. In 2003, the company had 1.7mn aircraft refu-



ellings worldwide, with 30 minor motor vehicle accidents (MVAs) and four aircraft refuelling accidents (ARA) reported. The average MVA cost the company \$10,000, while ARA's averaged £150,000 per incident.

EMA had systematically reduced the number of major MVAs over the past few years, but was looking for continuous improvement, with the goal of zero accidents. The company turned to Smith System – a provider of on-road, hands-on driver training for more than 50 years – to jointly develop a programme to improve airside driver safety. The result was a four-day training programme based on Smith System's ‘Five Keys to Space Cushion Driving’ that emphasises the core driving fundamentals of space, visibility and time. New training materials were developed for both the classroom and on-the-road training that is specific to the airport environment.

Training scenarios include public roads, designated airport roads, routes of choice, approaching an aircraft, manoeuvring under aircraft wings, avoiding collisions with other airport vehicles and/or fixed objects. An important part of the training programme was the development of EMA standards for the use of equipment, pre-trip inspections and hand signalling. The curriculum was also developed to deal with driver fatigue and the hazards specifically related to night-time driving.

Smith System trained EMA instructors to teach in both the classroom and behind-the-wheel environments. The four-day curriculum includes descriptions of actual incidents and how to avoid them, a driver self-study course, an airside defensive driver training film and airside checklists. The course includes standard hand signals for use

by spotters, which are critical for safety in the airport environment.

Training has been provided to 58 EMA instructors, who then delivered training to 1,200 EMA airport wingmen in 3Q and 4Q2004. In the five months following training, no significant incidents were reported.

‘ExxonMobil places the utmost importance on operating safely. Our goal is a workplace where “Nobody Gets Hurt” and we put much time, effort and money into recognising and eliminating hazards before they lead to an accident.

The Airside Defensive Driver Safety Training programme is a major initiative. It meant taking a completely fresh look at airport vehicle safety and getting to grips with all the issues involved in driving airside at today's busy airports. To receive the EI Safety Award is great recognition for all the hard work put in by Smith System and our own people.

It is very rewarding to see the training programme prove itself so soon after its implementation. Our hope is that others in the energy and airline industries will recognise its potential and follow suit. A safe airport environment is in all our interests.’

Charlie Downie, Operations Manager, ExxonMobil Aviation

‘Safety is Shell's first priority. Shell invests time and energy as a company and through organisations like UKOOA, PILOT and Step Change in Safety to continually improve safety standards on and offshore. Our long-term aim is zero incidents and making the North Sea the safest place to work in the worldwide oil and gas industry. We are pleased to support safety innovations.

Sponsorship of the EI Safety Award is another way in which Shell can encourage safe working practices.’

Greg Hill, Vice President –Production, Shell Exploration & Production, Europe

The implications for EMA airside refuelling and the airline industry at large are enormous. According to a recent NTSB (National Transportation Safety Board) report, the average US airline pays \$500mn annually in direct and indirect costs due to ramp incidents. The report states that, by reducing accidents on the airport ramp, the aviation industry could save billions of dollars in related costs.

Sponsored by BG Group, the EI Technology Award recognises that the energy industry is built on the foundation of world leading technology and its unique ability to respond to every challenge – be it drilling wells in water depths measured in thousands of feet, or harnessing the power of nature. It is awarded for the best application of new or existing technology. The 2005 Award was presented by John Summers, Vice President & General Manager, Technology & Performance, BG Group.

And the winner is...

Shell E&P –Trident Monotower gas production platform



Image supplied by Shell



Technology from the offshore wind industry and renewable power generation has been used to revolutionise the design of offshore gas production platforms, making them cheaper, safer and more environmentally friendly. These developments are enabling a portfolio of marginal developments, helping secure gas supply in the southern North Sea.

The original Trident concept was conceived in January 1999, and was immediately adopted on several gas

developments in the UK, such as Skiff, and later internationally. Trident was regarded as a major breakthrough in platform delivery at this time, with its zero-based engineering approach providing a simple, minimum facilities marine access platform that delivered lower capital and operating costs, together with better availability and safety performance than its predecessors. In recognition of this, the concept won the 2000 Institute of Petroleum Innovation Award.

In 2004, a single project team was set up to develop two new field projects – Cutter and K17 – in the UK and Dutch sectors of the North Sea, respectively. It was decided to simplify the platform
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'Our aim is to deliver projects that we are proud of – proud of them because they deliver for the business, proud because we don't harm people or the environment in executing them, and proud of them because they break new ground and improve our performance. The EI Awards are an external validation and recognition that we can rightly be proud of what we have achieved here. I would also like to encourage other parts of Shell to consider applying for these awards, getting external recognition for the great work they are involved in.'

Alistair Hope, Head of Offshore Projects for Shell in Europe

'BG Group has been a sponsor of the EI Awards for over three years now. The EI Awards are important as they recognise and celebrate excellence within our industry. BG Group sponsors the Technology Award as we recognise the importance that technology and its effective application play in today's increasingly competitive market place – one where sources of oil and gas are increasingly being found in more remote and challenging locations.'

John Summers, Vice President & General Manager, Technology & Performance, BG Group

environment award*Alain Heilbrunn, Secretary General, Concawe*

'The world is changing very quickly, as are the public's expectations vis-à-vis large and profitable companies – the oil companies being at the top of the list. Changing behaviour all across the company is a very difficult task and, even if top management is highly motivated, it is difficult to ensure that this motivation flows all the way down the line.

Making awards offers part of the solution, because it gives outside recognition of an attitude or a decision that fits with new demands from the public.

There were some very good entries for the 2005 Environment Award, but definitely not enough. I should like to see ten times more next year!'

innovation award*Peter Hunt, Vice President Oil and Gas, ABB Engineering Services*

'The EI Awards are a very key oil and gas industry event. It is an important way for the industry to raise its profile of achievements in all the areas of the awards and celebrate success. As a judge for the Innovation Award, I find this very challenging and exciting to see what new ideas are being developed. I also find the opportunity to network with colleagues in industry invaluable.

The standard of this year's entries under the Innovation category were very high and much improved over 2004. I am always looking for real innovation in this category but, in particular, where it has been implemented and proven with real benefits realised – whether they be in process improvements, cost, operations or the environment.

In the future, I would like to see more applications from oil and gas companies operating on a global basis, using the EI event to promote success and reward innovation.'

international platinum award*Laurie Power, Senior Lecturer, School of Engineering, Robert Gordon University*

'The energy industry is essential to the economic and social well-being of the UK. The EI Awards are a great way to recognise all of the innovation and hard work which individuals, organisations and companies put into developing this sector. I am very glad to be able to help (in a small way) in focusing that recognition.

The 2005 nominations were all of a very high standard – reflecting the nature of the industry. Selecting the winning projects from the wide range submitted was challenging to all of the judges. The winners of each category really deserved their awards.

Given the value of the EI Awards event to the industry, I hope more nominations are made for 2006. This will make the judges' job more difficult, but more rewarding!'

outstanding individual achievement*Chris Moorhouse, Trustee, Institute of Business Ethics*

'I believe the EI Awards are a very important way to publicly recognise the achievements of the energy industry, resulting in increased pride in what we as a sector contribute to the society at large and to human progress. This results in increased motivation to go beyond what would normally be expected of individuals and teams. The EI Awards are also a fantastic opportunity for the transfer of knowledge.

The energy industry is at the forefront of the development and application of sophisticated high technology in extraordinarily demanding physical and political environments, and we need a way to make sure the best of what we achieve is better known and understood.

I'm happy to take time to be a judge – it's an opportunity for me to give something back to this great industry. It's a great learning opportunity through the intense debate between judges and it reinforces my own sense of personal pride in the energy industry.

Although this year's finalists for the Outstanding Individual Achievement Award clearly deserved our acclaim and recognition, I would like to see many more entries coming forward next year. Many of you have your own company recognition schemes for people who go "above and beyond" – I want you to bring forward those truly outstanding members of your team who deserve to be recognised at the global industry level.'

safety award*Dan Mitchell, HM Chief Inspector of Mines and Head of Specialised Industries, Hazardous Installations Directorate*

'The EI Awards provide an opportunity to communicate good practice and innovation, to promote learning and sharing, and for outstanding achievement to be recognised.

Reviewing some of the work taking place in the global energy industries by judging the entries has been a privilege. Writing up what has been achieved doesn't always come easily to those more focused on "making it happen", but entries do have to be judged on the basis of the information provided.

The entries provided many good examples of personal and team initiative improving the control of key hazards and contributing towards eliminating occupational accidents and ill health. Half of the entries focused on behavioural/cultural issues.

Future nominees might consider including "bottom up" as well as "top down" initiatives; "home grown" initiatives and innovations; initiatives directed at securing improvements to occupational health/reducing incidents of ill health; and involvement of employees.'

technology award*Dr Erwin Gorczynski, Solutions Manager, SAIC*

'Access to reliable and reasonably priced energy is a key requirement for our society and is important to every one of us. An important element in making this happen is our ability to find and exploit energy resources effectively, through the use of innovative solutions and technology.

I am privileged to be associated with the EI Awards, which encourage innovation and the development of future energy solutions.

The scope of the Technology Award is very broad – it ranges from small, targeted technology through to very large developments, and spans mechanical, chemical, biological and information technology. Comparing such very diverse entries is always challenging but very interesting.

This year's Technology Award winner not only demonstrated how to extract gas more economically from a difficult location, but also showed how renewable energy solutions could be used to make this more effective.'



All the winners on stage after the ceremony

communication award
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change process) and making the tools fun, has helped to create a 'pull' from individuals and teams who want to use them. For example, in the 'Managing Rule Breaking' material, there are scratchable questionnaires to find out if you are a 'wolf' or a 'sheep' (ie a risk taker or not). The tools also integrate separate initiatives in HSE - 'Seeing Yourself as Others See You' builds on work first published in the Step Change for Safety programme, operationalising the safety upward appraisal tool described there.

The Hearts and Minds toolkit has been made freely available to Shell's contractors, both upstream and downstream, in a number of countries in Europe, as well as Malaysia, Australia, Kazakhstan, Canada and Russia. Translated into a variety of languages, the toolkit is proving popular and a growing number of companies in other industries - such as commercial aviation, pharmaceuticals, electronics, mining and shipping - are now embarking on developing their safety culture with its assistance.



environment award
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TNK-BP states that it is the first Russian company to use international standards and raise HSE standards on the Volga River. It is now operating an aggressive auditing programme of its tanker fleet and its new, innovative and transparent approach to an industry-wide problem is setting a precedent in the industry. The programme has demonstrated a highly effective relationship with the shipping sector, building capacity through face-to-face site visits with tanker owners and organising the first ever major shipping conference in Russia.



Sarah McNaught, UK Head of Oil and Gas, KPMG with 2005 EI Environment Award winner TNK-BP

innovation award
...continued from p12



The refrigeration plant will be designed for a 25-year life, which is typically twice the life of plant at this time. The use of modular components will ensure that CHRP can be applied to meet process needs and allow for load changes at relatively little disruption if plant modifications are required. Parallel generation as a result of multiple micro-generators will provide increased security of supply. Furthermore, plant costs are predicted to be competitive enough to facilitate wider application, including cold stores and chemical processing. In addition, CHRP will qualify under the Good Quality CHP classification and the carbon reductions offered will allow organisations using CHRP to contract under the EU Emissions Trading Scheme (EU ETS).



international platinum award

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ExxonMobil receiving the 2005 EI International Platinum Award for their Link School programme

aging schools to look at the potential that their school grounds have for both learning and enjoyment.

ExxonMobil hopes to secure the next generation of brilliant minds by awakening an interest in young scientists, upon whose ingenuity the future of ExxonMobil and the entire energy sector will rely. The Link School programme opens up the field of science, giving pupils an understanding of the vocational and academic skills that they will need for a career in this arena, while supporting and enriching the education of all children in these schools. In addition, although not everyone who comes into contact with this programme is going to end up a scientist working in the energy sector, future teachers, journalists, financiers, opinion formers and homeowners will have a better, more balanced, understanding of the value and importance of the energy industry, the challenges it faces and the life-preserving and life-changing nature of its work.



outstanding individual achievement award

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Jon Glesinger, Managing Director, Energy & Natural Resources Practice, Norman Broadbent presenting Sanjay Kaul with the 2005 EI Outstanding Individual Achievement Award

nises the need for 'thinking globally and acting locally' in this regard, and is actively encouraging and assisting both ISP and UPES to collaborate with the best in the world in this quest.

While the current focus of ISP and UPES is to strengthen the hydrocarbon value chain, it is determined to arrive in the arena of future fuels and future supply and distribution solutions in order to keep this part of the world fully energised. Kaul has been, and continues to be, instrumental in this process. He is a rare individual of integrity, talent and humility, who is known and admired by people from all segments of society: business, community, academia and government.



In a touching tribute, Sanjay Kaul invited his wife to the stage to acknowledge her invaluable support throughout his career

technology award

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Image supplied by Shell

structure of the original Trident concept in order to reduce fabrication and installation costs, while further reducing HSE risks. Also designed to use renewable power generation, this latest concept reduces environmental impact and costs by eliminating the need for a power cable to be laid on the seabed.

The monotower comprises a 4.2-metre pile driven to around 30 metres, after which the column is placed into the section above the seabed, with the annulus grouted to provide a permanent joint. The topsides, made up of five decks and weighing around 150 tonnes, sits on top of the column. This arrangement allows for up to four gas wells to be drilled through the tower, two at the lower wellhead deck and two at the upper wellhead deck. An export pipeline is connected to the platform via a riser, which is also internal to the monotower's column. The monotower uses two 2.5 kW wind turbines and arrays of solar panels, which together charge batteries to provide both contingency against low power generation periods and high peak loads.

Cutter and K17 are believed to be the first production facilities to provide power exclusively from renewable sources. Each is expected to develop some 5bn cm of gas, with platform costs estimated to have been reduced by 20% compared with the original Trident design (around £2mn per platform). The absence of a power cable is estimated to have saved a further £5mn to £8mn, depending on distance. Furthermore, by carrying out both projects simultaneously, a further 11% cost saving is expected (around £6mn on the facilities).

The Trident Monotower design has now been adopted as standard in Shell's European business, with plans for the installation of up to two monotowers per year, to 2010. Other Shell businesses are also looking to import the design.