

RasGas

MAGAZINE

Issue 16 December 2006

PORT EXPANSION

Ras Laffan port: extending the gateway to energy

ATLANTIC LNG

As demand grows, Atlantic Basin LNG importers develop new terminals and pipelines

THE POWER OF EDUCATION

Two organisations launch initiatives to combat one of the world's leading causes of death

WORLD-CLASS HEALTHCARE

Dr Sheikha Ghalia Al Thani on Qatar's plans to create a healthcare system founded on excellence

SAFETY

INTERNSHIPS

SHIPPING

LNG SUMMIT



Front cover: Cross section of medical phials at Hamad Medical Corporation, Doha, Qatar. Photography: Anthony Terrot

Editor-in-Chief

Abdulla Hashim

Editor

Carol Pascoe

Editorial Assistant

Alisar Al Sheikh

Contributing Editors

Sinéad Mangan-Mc Hale
Mike Corkhill

Photography

Anthony Terrot
Qatar Studio
Texas A&M University, Qatar

Edited and produced by:
RasGas Company Limited
Public Relations Department
PO Box 24200
Doha
State of Qatar
Tel: +974 4923210
Fax: +974 4923490
www.rasgas.com

Designed by East Publishing
www.eastpublishing.com

© RasGas Company Limited 2006

All statements and expressions contained herein are the sole opinions of the writers and editors and do not necessarily represent the opinions of RasGas Company Limited.

RasGas: the energy to heal

We, the RasGas family, are going through challenging and yet exciting times. It is challenging because we have a mission to accomplish: to see the State of Qatar emerging as the world's largest and most reliable producer of LNG by the end of the decade. It is exciting because we have all the resources, natural and human, and the determination and support to meet the challenge. I am privileged to have joined the RasGas family at a time when the foundations of success have been laid.

RasGas can not afford to rely on past successes; we must be innovative to accomplish the leadership position we aspire to and must invest in our resources to maintain that position. In the process, we must not lose our focus on the larger role of RasGas, which is to fulfil its social responsibilities. An important element that supports us in meeting these objectives is active communication.

The purpose of RasGas Magazine is to provide a platform for active communication – within RasGas, the LNG industry and the society we live in. This edition of RasGas Magazine focuses on topics including developments in the LNG value chain; how safety, health and environmental initiatives are paying off; and developments in healthcare.

Dr Sheikha Ghalia Al Thani shares with us her vision of a world-class healthcare future for Qatar. Under Dr Al Thani's leadership the National Health Authority has launched a programme of major reform and restructuring. The programme involves complex issues of finance, infrastructure and long-term planning: at the end of it Qatar's residents will enjoy a comprehensive healthcare system. RasGas has always made health a top priority. We regularly support healthcare education initiatives from the Al Khor Medical Centre focusing on prevention, early detection and treatment of diseases and medical conditions. On a national basis, we recently joined forces with Qatargas to sponsor an international conference on breast cancer, organised by the Qatar National Cancer Society.

In the workplace, RasGas is committed to the highest standards of safety, health and environmental management (SHE). On page 24, Brett Doherty, our Safety, Health and Environment Manager, explains the importance of good design and operational management in the safe operation of RasGas Alpha, our offshore production platform. These SHE principles are paying off: RasGas Alpha has just celebrated a full eight years without a lost-time injury.

We also visit the World LNG Summit in Rome, where Qatar Petroleum received the prestigious CWC World Gas Intelligence LNG Award for 'Outstanding Contribution to the Development of the LNG Industry 2006'. The award is recognition for employing innovative technologies and for developments in the LNG value chain through Qatar Petroleum's subsidiaries and partners.

We then turn our gaze to the Atlantic Basin, an area of critical importance in the growth of the LNG industry. Mike Corkhill, editor of LNG World Shipping, has written an intriguing analysis of developments on both sides of the Atlantic as importers build new terminals and pipelines to cope with accelerating demand.

An example of these new facilities is the Golden Pass receiving terminal in south-east Texas. Our feature on page 20 contains not only an overview of the reasons for building the new terminal, but also details of the sheer quantities of raw materials that will be used during construction. Try to imagine 250,000 tonnes of concrete, for instance, or 50 million pounds of steel...

Finally, we return to Qatar to see the equivalent development at this end of the LNG supply chain. In this case, construction is under way at Ras Laffan port, which is expanding to accommodate Qatar's growing LNG exports. It is a symbol of the success of RasGas, and of the whole of Qatar's LNG sector, that within five short years Ras Laffan port will be the world's largest man-made harbour.

So there is no shortage of fascinating material in this edition of RasGas Magazine, which gives the reader an insight into some developments in value-chain integration and into our contributions, direct and indirect, to society. RasGas Magazine can serve its purpose better with your support and contribution of articles. Let us join hands to make future editions of the magazine even more interesting.

I hope you enjoy reading this issue.

Dr Mohammed Al Sada
Managing Director



Contents

10



04 NEWS

Environment, health and safety survey; college announcement for Ras Laffan; health initiatives from Al Khor Medical Centre; new wireless bar-coding system

06 ATLANTIC LNG

In 10 years Atlantic Basin LNG trades will account for 50 per cent of the global total, so importers are building new facilities

10 VISION

Dr Sheikha Ghalia Bint Mohammed Al Thani, Chairwoman of Qatar's National Health Authority, on the building of a world-class healthcare system

14 THE POWER OF EDUCATION

RasGas is backing initiatives by the Qatar National Cancer Society and the Al Khor Medical Centre to combat cancer, one of the world's leading causes of death

16 INTERSHIPS

How the RasGas Summer Internship Programme has made a real difference to 30 students' budding careers

20 GOLDEN PASS

The Golden Pass receiving terminal project in south-east Texas is creating a new supply channel for Qatari LNG in the United States

22 WORLD LNG SUMMIT

In Rome, Dr Mohammed Al Sada highlights the critical success factors in RasGas' development as a world-class business

24 SAFETY ON RASGAS ALPHA

With safety the foremost priority in its construction and operation, RasGas Alpha celebrates a remarkable safety achievement

28 PORT EXPANSION

As LNG traffic grows, a five-year development programme is transforming Ras Laffan port into the world's largest man-made harbour

20



24



In this issue: Dr Sheikha Ghalia Al Thani, Chairwoman of the National Health Authority (top); artist's impression of the Golden Pass terminal (middle); and Dr Al Sada aboard RasGas Alpha



Dealing with danger: improving standards and awareness will keep RasGas safety performance levels high

Environment, Health and Safety Survey

The elements for excellence in essential operational areas such as health, safety and protection of the environment must adapt to the changing needs of a dynamic company and changing environmental restrictions. RasGas is committed to ensuring the highest standards in these areas through regular reviews of working practices and continual improvement of performance standards.

In November 2006, RasGas undertook a company-wide environment health and safety cultural survey, conducted by the Enterprise Development Network (EDN), an international company experienced in the oil and gas industry, with a focus on safety performance and productivity. The survey will enable RasGas to improve safety standards and environmental awareness through feedback received from employees, who rely on the company's standards to work in a safe and healthy environment. The results of the survey will be communicated to all employees in the first quarter of 2007 and practical steps will be taken to implement EDN's recommendations in association with the RasGas Safety, Health and Environment Group.

New college for Ras Laffan

Ras Laffan Industrial City (RLIC) will soon be home to an emergency and safety training college. As a major force in the world oil and gas arena, Qatar recognises the need for a facility that can provide professional and technical fire and safety training. Qatar Petroleum, in association with Texas Engineering Extension Service (TEEX), part of Texas A&M University, announced this milestone agreement in November 2007. RLIC, under the direction of Misnad Al Misnad, is a major global hub for LNG and GTL industries and is thus an ideal location. The college will cater for the general safety requirements of the energy and petrochemical industries in Qatar and the entire Middle East and North Africa

(MENA) region. It is a first for any country in the Middle East and demonstrates Qatar's long-term planning for its energy sector.

TEEX, which will operate the college, has provided technical skills training and fire and safety programmes since 1929. The college at RLIC will hold courses, from basic to advanced level, that will enable participants to deal with a wide range of emergency situations.

According to Misnad Al Misnad, construction activities will begin in mid-2007, with completion due in early 2009. The facilities, which will include classrooms, lecture theatres and laboratories, will be designed for academic, technical and practical training.



Learning detection techniques: delegates at the Al Khor cancer presentation

Al Khor Medical Centre

In continuing RasGas' Corporate Social Responsibility programme, Al Khor Medical Centre has launched several initiatives as part of its education programmes to prevent, or minimise the impact of, ailments such as diabetes and breast cancer



AL KHOR DIABETES ASSOCIATION

The Al Khor Community Diabetes Association was launched to support diabetes sufferers and their families residing at Al Khor. The association will raise awareness of diabetes, covering the recognition of early symptoms, the treatment of diabetes and establishing a healthy lifestyle. Among the association's functions will be the provision of support and information to recently diagnosed patients and their families and the identification and education of those who are at risk of developing diabetes.

BREAST CANCER AWARENESS

With the support of Dr Khalid Bin Jabor Al Thani, Chairman of the Qatar Cancer Society and Vice Chairman of the National Health Authority, Al Khor Medical Centre hosted a breast cancer workshop in October to raise awareness of the increasing incidence of the disease among women. More than 190 female RasGas and Qatargas employees, and their families, attended the event held at the Al Waha Club at Al Khor. Dr Najaty Bsaiso, RasGas' Senior Medical Officer, gave a presentation informing women on good health practices that can aid the detection of breast cancer.

GROUNDBREAKING TECHNOLOGY FOR QATAR

RasGas Materials Department is operating a wireless bar-coding system that automates data captured for shipping, freight forwarding, warehouse, and auditing activities. The innovative system is the first of its type and functionality in the oil and gas sector in the Middle East.

The bar-coding system is capable of handling system applications and products for warehouse and inventory management transactions, as well as various network requirements. Thanks to this new system RasGas is able to trace materials from the country of origin right into its warehouses or, in the case of items for refurbishments, to vendors' locations.

Atlantic opportunities and challenges

LNG importers around the Atlantic Basin are driving the industry's dramatic growth, but not without challenges.
Mike Corkhill, editor of LNG World Shipping, reports

The global trade in LNG is expected to grow from 100 million tonnes (Mta) in 2000 to 250–270 Mta in 2010. Thereafter, the pace of expansion will ease off, but not by much, as worldwide movements are now expected to reach the 350 Mt mark in 2015. Ten years from now Atlantic Basin LNG trades will account for approximately 50 per cent of the global trade, as opposed to 30 per cent today.

The LNG industry has a tradition of carefully coordinating

the provision of the three key elements in the supply chain – liquefaction plants, ships and regasification terminals – because each long-term baseload project is treated as a stand-alone package. However, the current rapid growth of the market, not least in the Atlantic region, makes it difficult to coordinate the expansion of the supply chain elements so that they

align and do not hinder the flow of product to market.

The challenge is that much greater today due to several factors: the increasing popularity of shorter-term gas sale and purchase agreements (SPAs); the desire on the part of gas purchasers for a more diversified supply base; the emergence of many new ship owners and their readiness to order new vessels speculatively; and the willingness of producers to embark on a new liquefaction plant without a complete portfolio of SPAs in place.

Catching up with demand

Most players have underestimated the pace at which the demand for LNG has grown. Ship owners and shipbuilders have moved with the most alacrity and are supplying sufficient ships to meet market demand, to the extent that the fleet is overtonnaged from time to time.

In contrast, the long lead times involved in the permitting, planning and construction of land-based terminals make it more difficult for LNG producers and

receivers to provide their part of the infrastructure in a timely fashion. While they have been able to scale up the capacities of their facilities to accommodate the greater than anticipated demand for gas, reducing project lead times has been much more difficult to accomplish.

Having said that, a certain momentum is building up. The review of LNG exporters below describes the large volume of new LNG production capacity that has come onstream in recent months. As a result of that breakthrough, more attention is focusing on LNG importers and the availability of receiving terminal capacity.

Two major Atlantic Basin gas markets that have constantly been revising their LNG import requirements upwards in recent years, due to the inability of dwindling domestic gas reserves to meet rising demand, are the UK and the US. The UK, which was the destination for the first ever LNG cargo in 1964, has recently resumed LNG imports via a new terminal at the Isle of Grain after a hiatus of 15 years.

In addition, two further new terminals are under construction at Milford Haven. These high-capacity facilities will enable the UK to import upwards of 30 million tonnes per annum (Mta) by 2010. For UK consumers, who have just paid the highest ever prices for their gas during the 2005–06 winter season, this LNG will not be arriving a moment too soon.

New capacity in the US

US gas utilities, too, saw the writing on the wall several years ago and realised that significant import volumes would be needed by the end of the decade. The American gas market is so large that even a small percentage decline in domestic production means a huge leap in LNG purchases. Forecasters are predicting a leap in import levels from 14 Mta in 2005 to at least 50 Mta in 2010, but even this figure could turn out to be conservative.

Steps have been taken to provide the necessary import terminal capacity and, in overall volume terms, adequate facilities should be in place. The current expansion of three of the four existing US import terminals will help and, in addition, half a dozen new, large terminals have been

TWO MAJOR ATLANTIC BASIN GAS MARKETS HAVE CONSTANTLY BEEN REVISING THEIR LNG IMPORT REQUIREMENTS UPWARDS IN RECENT YEARS: THE UK AND THE US

approved for the US Gulf Coast and are under construction.

The problem is location. While gas can be piped from the US Gulf to large gas markets like New England and Florida, distribution costs are high and it would make more sense to deliver it as LNG, closer to the point of demand.

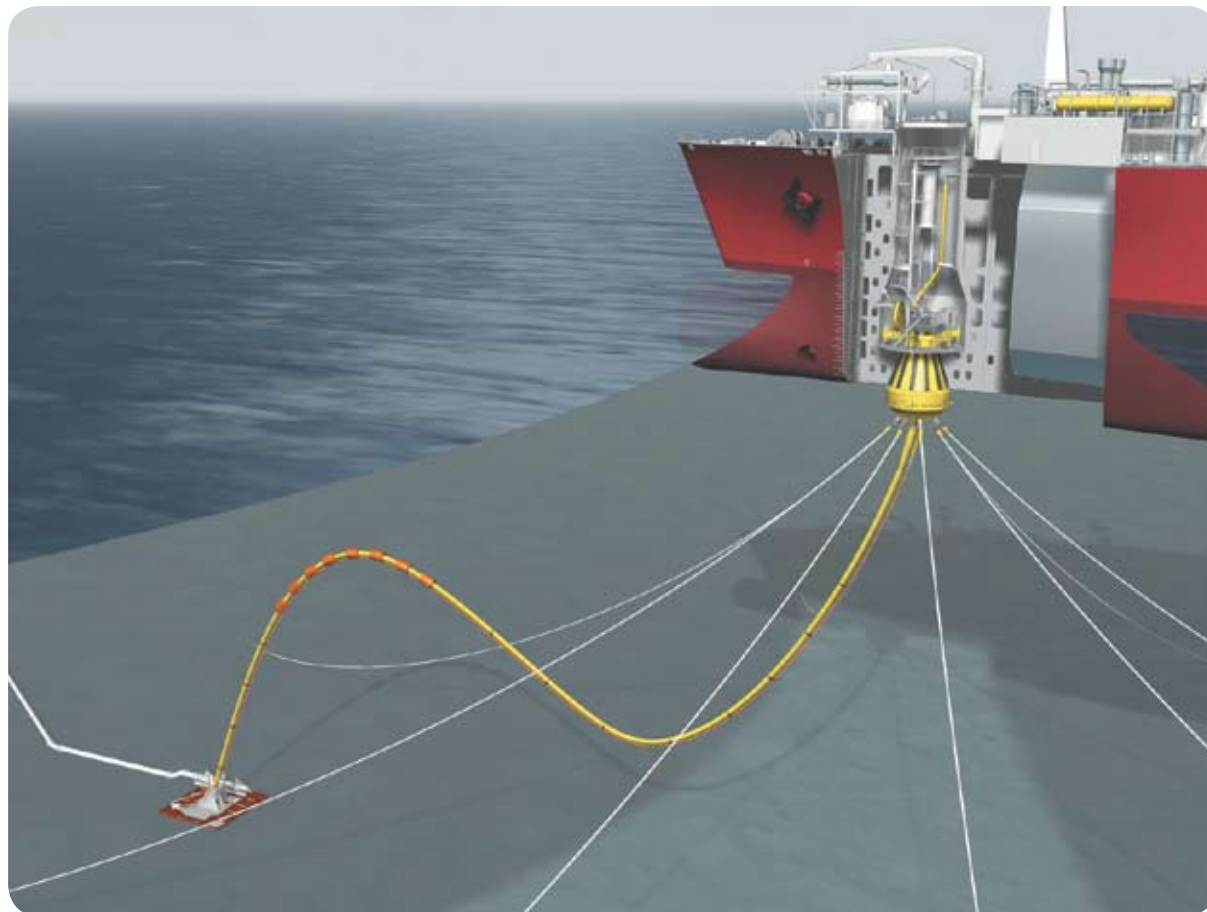
Unfortunately, the number of sites suitable for LNG terminals in these more populous states is much more limited and those facilities that have been mooted have stirred up strong local opposition on the grounds of perceived safety and security risks. Even the numerous offshore terminal proposals that have been tabled have incurred the ire of the boating public. California is another US state that, while it needs gas, has a number of terminal proposals which are all under fire.

Good next-door neighbours

Partial solutions are available in the form of new LNG terminals under construction in Canada and Mexico near their borders with the US. These facilities would utilise some of the incoming gas locally but would pipe much of it to the neighbouring US markets. Mexico is also building up a network of additional LNG terminals to serve its own domestic needs. One of these, at Altamira on the Gulf Coast, came on stream in August 2006.

In Europe the LNG cause was reinforced at the beginning of January 2006 when Gazprom, the Russian state gas

Regasification vessels look set to play a greater role in US LNG imports: new offshore terminal projects are on the table for Massachusetts, Florida and California



NEW LNG PRODUCTION CAPACITY ADDED SINCE SEPTEMBER 2005

Project	Country	Capacity	First cargo loaded
Idku LNG T2	Egypt	3.6 Mta	September 2005
RasGas (II) T4	Qatar	4.7 Mta	September 2005
Qalhat LNG	Oman	3.3 Mta	December 2005
Atlantic LNG T4	Trinidad	5.2 Mta	December 2005
NLNGPlus T4	Nigeria	4.2 Mta	January 2006
Darwin LNG	Australia	3.7 Mta	March 2006
NLNGPlus T5	Nigeria	4.2 Mta	March 2006
TOTAL		28.9 Mta	

HALF A DOZEN NEW, LARGE TERMINALS HAVE BEEN APPROVED FOR THE US GULF COAST AND ARE UNDER CONSTRUCTION

company and a major supplier of pipeline gas to Europe, withheld a percentage of its normal cross-border deliveries due to bitter cold temperatures and increased domestic demand. Italy lost more than 10 per cent of its normal gas supply for several days and came to look at its proposed LNG import projects in a different light. Although the country needs to diversify its range of gas sources, the public has been ambivalent about LNG terminals, again for reasons of perceived risk.

One offshore terminal designed around a gravity-based structure (this is the Edison terminal off the coast at Rovigo) is being provided for the Northern Adriatic, and in February 2006 approval was granted for another offshore facility – a floating storage and regasification unit (FSRU) for the Livorno coast which will use a converted Golar LNG carrier. Both these facilities are scheduled for 2008 start-ups.

A number of further onshore and offshore terminals have been proposed for Italy. The coming months should provide an indication of the extent to which the Gazprom disruptions have prompted the Italians to look more favourably on LNG.

Spain's master plan

Spain, already Europe's largest importer of LNG with incoming volumes of approximately 14 Mta, is bringing additional reception facility capacity onstream according to a well-advanced master plan. Sagunto, the country's fifth import terminal, was commissioned in February 2006 and the sixth, the Reganosa terminal at El Ferrol, is due to enter service in 2007.

Two further new terminals in the Canary Islands – on Tenerife and Gran Canaria – plus expansions of existing terminals at Barcelona, Huelva and Cartagena will provide Spain with 27 tanks totalling 3.3 million cubic metres of storage space for imported LNG by 2011, up from 16 tanks of 1.7 million cubic metres today.

All statements and expressions in this report are the opinions solely of the author and do not necessarily represent the opinions of RasGas Company Limited.



NEW CAPACITY WILL PROVIDE SPAIN WITH 27 TANKS TOTALLING 3.3 MILLION CUBIC METRES OF STORAGE SPACE FOR IMPORTED LNG BY 2011

Above: Spain's fifth LNG terminal, at Sagunto, north of Valencia, receives its first cargo, a shipment from Egypt carried by the Galicia Spirit

Since its formation a year ago, Qatar's National Health Authority has made great progress towards the provision of world-class healthcare. Here its Chairwoman, Dr Sheikha Ghalia Bint Mohammed Al Thani, discusses her ambitious goals

A national strategy for health

Guided by His Highness the Emir of Qatar, Sheikh Hamad Bin Khalifa Al Thani, and in line with the many restructuring initiatives under way in the country, the National Health Authority (NHA) is in a period of major reform. Although we envisage many challenges ahead our vision remains firmly focused on providing world-class healthcare facilities for the people of Qatar and becoming a model health authority.

To achieve this vision we must begin at the grass roots, by reviewing the current healthcare system, assessing present and future national requirements, defining the elements essential for building a world-class healthcare system, and developing a long-term national strategy to implement the reforms. The NHA will undertake all these tasks.

Previously the Ministry of Health ensured that all residents in Qatar had access to good health facilities and preventative measures were implemented for communicable diseases. The new NHA has many additional responsibilities, including the governance of private and public health care, building new hospitals and 'wellcare' centres, networking with international centres of medical excellence to ensure access to the latest medical knowledge, and the establishment of a national health insurance system.

Challenges for the NHA

Future planning I look at challenges from the perspective of how I can use difficult experiences to reach our goals and improve the quality of healthcare for the people of Qatar. Fortunately today we have no disease related to poor nutrition and our vaccination programme means that we don't experience communicable disease. Statistical analysis shows that the majority of our population is under 18, our general health is improving and we are living longer. As a result, and as wealth increases and our population grows, we are starting to see an increase in diseases common in the West, such as diabetes, heart disease and cancer. Our challenge is to direct the healthcare system to meet Qatar's specific needs. It is no longer sufficient to duplicate other countries' health programmes; our challenge is to understand our





people's requirements and to develop tailored healthcare programmes. A key element in structuring our long term plan is researching the genetic make-up of Qataris to identify current and future health risks.

My second challenge is to train and develop national employees to meet our employment needs. We are presently reliant on doctors, nurses and medical administrators of many nationalities, but in the future I hope our national health services will be staffed primarily by Qatari nationals, all experts in their fields. Through research into future patient requirements we have determined the number of medical professionals required, and with this data we are advising the educational authorities on the numbers of doctors, psychiatrists, physiotherapists, pharmacists and so on, and are supporting Qatari students who wish to enrol in medical courses both locally and overseas.

Finance As in many countries, long-term healthcare financing is a significant challenge. The budget allocated for the public health for the 2006-07 financial year is QR3.8 billion, of which QR239 million has been set aside for public works. This level of funding shows the commitment and support given to the NHA, but such funding cannot be indefinite. So, to develop a healthcare system that is financially sustainable in the long term, health insurance is a necessity and we are in the final stage of getting the scheme approved. We aim to cover everyone living in Qatar, whether national or non-national. The other element of financial sustainability is the fund established by His Highness the Emir to support health and education.

Infrastructure Until now Qatar has provided a central healthcare system for residents through the Hamad Medical Corporation. This met residents' needs while the population remained small, but recent population growth and new communities in Al Khor, Dukhan and Wakra mean that we need to expand healthcare facilities.

We have begun a programme of building district hospitals outside Doha. The first district hospital opened

“A fully developed country needs a healthcare system which promotes wellbeing in all its aspects: prevention, therapy, research and development”

in Al Khor in late 2005, two more are planned in Wakra and Dukhan, and others will follow. These hospitals will offer outpatient services and a secondary level of medical and surgical care. Patients requiring more specialised medical expertise will be referred to Hamad Medical Centre or a specialist treatment centre.

Wellcare centres One of our main challenges is encouraging people to seek primary medical care. Many residents go to our tertiary services for even the simplest problems, which is not cost effective and is a huge burden on specialised services intended for more complex cases. The NHA plans a series of 'wellcare' centres throughout Qatar, which will replace the current primary health centres over time and will offer four main services to the residents in their areas. The cornerstone is family physician units that will provide preventive, diagnostic, and treatment services. The second element is lifestyle units that include education and support for people to lead healthy lifestyles – nutritional education and physical training facilities, for example. Mental health units will address everyday mental health issues, including stress alleviation and childhood behavioural problems. And the final component is social units, which we will set up with the Supreme Council of Family Affairs and which cater for people in difficult social circumstances, such as victims of domestic violence.

Long-term health Finally, my greatest challenge is to develop the health education system in Qatar. People should be encouraged to take responsibility for their own health and that of their families. Regular exercise,

a healthy diet and giving up smoking can all improve health dramatically. It is our challenge to ensure that health education messages reach their target audiences. We want to educate teenagers about the dangers of smoking before they start, we want to educate mothers in the early stages of pregnancy on the benefits of breastfeeding, and we want to inform everyone that diet and exercise are important elements of a healthy, productive life.

Corporate sponsor: education Health education takes many forms. Companies in Qatar already work with charities and health organisations to promote health education. Corporate funding for health campaign advertising, specialist health education conferences (such as the breast cancer conference sponsored by RasGas and Qatargas) and health information booklets is valuable in reaching the widest audience possible. And large corporations' internal communication systems enable the flow of health information to employees and their families.

My personal role

Working for the United Nations Committee on the Rights of Children has taught me a lot about the world and what the world does for children in every aspect. My focus on the committee is health and disability, and I do a lot of work on these topics in the region. Each committee member has a certain discipline, which enables us to share information and best practice from around the world for the protection of children. All participants benefit from this interaction: we learn from one another's experiences and bring valuable

The North Hospital in Al Khor opened in 2005 and is the first in a series of planned district hospitals



information home. A good example is sharing information on various programmes to integrate disabled children into mainstream school environments.

Future vision: 2016

As Her Highness Sheikha Mozah Bint Nasser Al Missned says, "The success and prosperity of a nation depends upon the health of its citizens. Without sound physical and mental health, people cannot realise their potential. A fully developed country needs a healthcare system which promotes wellbeing in all its aspects: prevention, therapy, research and development."

My personal aim is that the NHA will be a model for healthcare governance for the world. It will be a system that is dynamic, that restructures the existing healthcare system to provide state of the art health care, that regulates standards and that is a model for other countries to follow. Our planned hospitals will be in operation, our network of expert wellcare centres will be staffed by a greater percentage of Qatari nationals than today's healthcare system. Qatar's healthcare financing system will be sustainable, depending on insurance coverage for everyone running parallel with government funding. State-of-the-art information technology will enable controlled, instant access to patients' records and, finally, research programmes will be developing medicines for the future. Beyond these achievements I hope the people of Qatar will have been encouraged by our efforts in health education and will be taking responsibility for their health and wellbeing.

"The success and prosperity of a nation depends upon the health of its citizens."

The power of education

In Qatar, RasGas is supporting initiatives by the Qatar National Cancer Society and the Al Khor Medical Centre to combat one of the world's leading causes of death. Sinéad Mangan-Mc Hale reports

Despite great progress in the world of medical science, cancer remains one of the world's leading causes of death: more than 11 million people are diagnosed with cancer each year. The World Health Organisation estimates that 7.6 million people died of cancer in 2005, or 12.5 per cent of deaths worldwide, and 84 million people will die over the next 10 years if no action is taken. Although more than 40 per cent of cancers are preventable, figures for significant risk factors such as tobacco use and obesity continue to rise. Tobacco alone accounts for some 1.5 million cancer deaths per year.

Cancer is the uncontrolled growth and spread of cells, which can affect almost any bodily tissue. It affects men and women alike, with lung, colorectal and stomach cancers among the top killers for both men and women. The most common cancers for men are lung and stomach, while breast and cervical cancers are the most frequent among women.

The expert consensus is that the most effective approach to reducing cancer rates is a combination of prevention strategies, early detection and treatment. But this goal can only be achieved through a proactive education programme aimed not just at the medical profession but at all potential cancer sufferers.

This focus on public awareness is central to the mission of the Qatar National Cancer Society

IN QATAR'S FIRST MAJOR RESEARCH INTO BREAST CANCER, THE HAMAD HOSPITAL STUDIED 1,336 CASES OVER 10 YEARS



Screening can help doctors find and treat cancer while it is still in the early stages of development

[see panel]. In April 2006, under the patronage of HH Sheikha Mozah Bint Nasser Al-Misnad, the society held an international conference on The 21st-Century Approach in the Treatment and Prevention of Breast Cancer, proudly sponsored by RasGas and Qatargas as part of their Corporate Social Responsibility programmes. The conference brought together cancer specialists from around the world, eager to share their experiences in cancer research, detection, treatment and palliative care.

Breast cancer respects no geographical boundaries and is as prevalent in Arab countries as it is in the West. Qatar's first major research into breast cancer, however, revealed that breast cancer is significantly less common in Qatar than in the West and that the cancer affects younger people in the West – the average age difference is up to 10 years.

Despite the research findings, the medical profession in Qatar is keen, with the support of Qatar's major companies, to improve education and awareness among all women. Up to two-thirds of the cancer burden can be reduced through prevention

and early detection – to translate this knowledge into practice, the Al Khor Medical Centre has developed a programme, led by Dr Najaty Bseiso, of lectures, demonstrations and information material. Two lectures on breast cancer at Al Khor in 2006 were well attended, and the Medical Centre runs self-examination courses for women, and female doctors visit senior classes at the Al Khor schools to educate female teenagers.

To accompany its lecture series the Medical Centre has produced a simple booklet on breast cancer that will be delivered to Al Khor households and will be available on the RasGas and Qatargas intranets. But breast cancer is not the sole focus – the Al Khor Medical Centre also runs information programmes on skin cancer, lung cancer and prostate cancer.

The Medical Centre's Cancer Aware Programme is at the heart of RasGas' Corporate Social Responsibility programme: the company is determined to fulfil its duty to improve not only its employees' lives, but the lives of all residents of the communities it operates in.

QATAR NATIONAL CANCER SOCIETY

The Qatar National Cancer Society was established in 1997. Under the direction of its chairman, Dr Khalid Bin Jabor Al Thani, the society's work has five strands:

- research
- prevention
- detection, treatment, information and education
- patient services
- advocacy and public policy

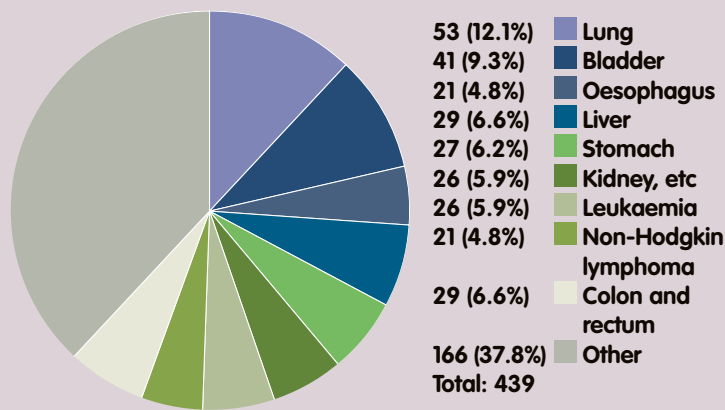
The society works in close conjunction with international experts and achieves its objectives through promotional materials, lectures, international conferences and research studies.

AL KHOR MEDICAL CENTRE

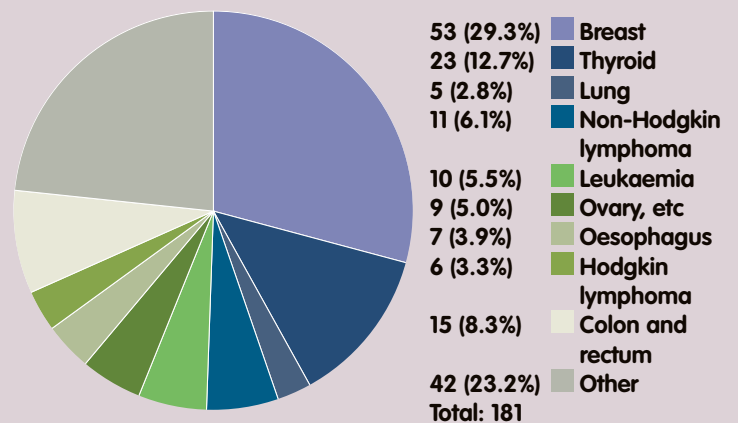
The Al Khor Medical Centre is a joint medical resource for RasGas and Qatargas. Under the direction of Dr Nigel Shanks, Chief Medical Officer, and his expert team, the clinic offers comprehensive medical, dental and nursing care to employees and their dependants.

In addition to primary care, the clinic offers a range of specialist clinics (well-baby, immunisations, well-woman, antenatal, hypertension, diabetic, dermatology), school hearing and eye tests, and lectures and booklets on asthma, diabetes, osteoporosis, breast cancer, stop-smoking campaigns, skin cancer, vaccination programmes and heat stress.

NEW CANCER CASES IN QATAR FOR 2002 MEN (ALL AGES)



WOMEN (ALL AGES)



Source: www.qncs.org.qa (extracted from GLOBSCAN 2002 - IARC)



Internship programmes offer students the chance to make the transition from university to workplace as smooth as possible. The RasGas Summer Internship Programme added real experience to 30 students' budding careers

Golden opportunities for students

In order to excel in a global society, Qatar’s graduates must possess not only the highest academic knowledge but practical workplace skills. Summer internships offer students a bridge between university and employment.

Internships are an integral part of higher-level education in many countries with global industry leaders competing for the pick of the student crop. As Qatar continues to invest and focus on developing its future leaders, student internships are fast becoming a key feature of local university programmes.

An internship is usually a short-term employment assignment during vacation, offering students a structured learning experience in a professional work environment. The importance of these programmes is the real value added to the students, allowing them to apply theoretical and academic concepts taught in school in a real-life experience.

Companies in Qatar are willing participants in internship programmes offered by many of the universities. Students have had the opportunity

to work in challenging environments in companies such as Qatar Petroleum, RasGas, Qatargas and Q-Tel. These employers have benefited from the student’s enthusiasm and energy while contributing to the overall development of a skilled professional workforce in Qatar.

However the acceptance of internships is not purely altruistic: employers also get real value. In the short term, employers gain the services of talented, motivated students keen to impress and apply their new skills. These students arrive with cutting-edge business and technical skills, and unlimited energy and willingness. In the longer term, an internship programme can be a creative and productive tool for recruiting the most highly qualified college students. This is an opportunity to pre-screen a potential employee’s ability, skills and work ethos. In addition, internship programmes are an excellent opportunity to prepare students in companies’ scholarship systems for their target positions after graduation.

“What the students achieved over the summer reflects the massive efforts they deployed within RasGas. The RasGas Internship Programme gives the students the opportunity to better plan their future. This effort enhances the co-operation between industry and academic institutions, which benefits not only RasGas but the whole State of Qatar.”

Dr Mohammed Al Sada,
RasGas Managing Director

Noora and Sahrr, second-year students in business administration at Carnegie Mellon University Qatar, learning from their mentor Alan Jones about the RasGas financial model, during their eight-week summer internships



The benefits to the students are plentiful. Not only do they gain practical professional skills, but they gather insight into particular industries and organisational cultures while establishing a network which will assist when seeking full-time employment. Students are given a golden opportunity to determine whether they have chosen the right career path, to discover how to work as part of a team and to take part in practical work experiences. There is no question that an internship lays the foundation of a strong, resumé-enhancing marketability.

The test of a worthwhile internship programme is the validity of the work assignments. Companies must provide productive and interesting programmes, which will take time and commitment to develop. Bright and motivated students should not be asked to do the most basic administration tasks. They should be provided with well-structured internship plans with clear tasks and objectives related to their fields of study.

As part of its Corporate Social Responsibility programme and its drive to recruit qualified Qatari employees, RasGas launched its summer internship programme in 2006.

The programme was developed and managed by the RasGas University Advisory Committee (UAC) in co-operation with the Human Resources (HR) department, and was designed to support the values and mission of the education reform in Qatar, strengthen the relationship between industry and universities, and promote technical development of Qatari students. Its key objective is to offer students a practical working experience to enable them to bridge the gap between academic and real-life applications. In the first structured internship programme 14 male and 16 female university students across a variety of disciplines joined RasGas over the summer period. The group included students from local universities – Qatar University, Texas A&M Qatar, Carnegie Mellon University Qatar and College of the North Atlantic Qatar – and Higher



Dr Mohammed Al Sada, RasGas Managing Director, congratulates students at a ceremony to celebrate the successful completion of the RasGas summer internship programme

Education Institute –sponsored students at overseas universities.

The internship programme officers were keen to stress the availability of opportunities in all departments across the organisation, including Subsurface, Operations, Finance, Human Resources, Management Services, and Commercial & Shipping. Each department was responsible for developing a structured, productive programme and assigning mentors with excellent experience in their area of expertise. The mentors participated in the selection process, in which the programmes were shared with the interviewed students.

The following three programmes are examples of the 30 individual programmes developed by RasGas for its first interns.

Ali Dashti, a RasGas-sponsored student at Texas A&M Qatar studying mechanical

“My experience with RasGas was very interesting and useful to me as it has given me a sense of the practical world of engineering. I would like to thank all my mentors for their guidance and all the staff who made my training period at RasGas a comfortable and memorable one.”

Maha Al Sulaiti, Texas A&M Qatar

“Our interns enjoyed the opportunities you have provided them. Our institution is profoundly grateful for your training programmes. We see your contributions as vital to the professional development of our students.”

Chuck Thorpe, Dean, Carnegie Mellon University Qatar



engineering, joined the Operations Group and worked on boiler design and operations, focusing on activities related to the process engineering section and, more specifically, on the steam-generation system. The assignment was tailored to fit his target position following graduation. Ali spent a good part of his assignment at the plant under the supervision of highly qualified engineers.

Another project was developed by the Finance Department for Noora Al Ansari and Sahrr Al Malik (both Carnegie Mellon University Qatar). The primary purpose of the students' internships was to expose the students to the

financial working environment in the energy industry. The interns began the eight-week assignment with a full day of induction before starting a rotational assignment through the Treasury, Financial Reporting and Accounting Departments. During the assignment they were mentored by Alan Jones, Financial Compliance Manager. At the conclusion of their internship, the students formally presented their findings to management and department heads.

Amna Al Tayab, a third-year student at Texas A&M Qatar, undertook an internship programme focused on activities related to reservoir engineering and, more specifically,

processes required to acquire reservoir surveillance data via well intervention, as well as data analyses using technical software such as Emeraude and Saphir. Amna was mentored by Chik Amran, Reservoir Engineering Adviser. During her eight-week assignment, Amna completed a real engineering task and formally presented her work to management.

Students on the RasGas intern programme benefited from working alongside senior managers with exposure to many aspects of company operations, practical application of their academic studies, insight into the structure of the plant and a number of offshore trips.

To help the future growth of the programme (the intake for 2007 is expected to be twice this year's), the UAC developed an evaluation process to measure students' satisfaction and enable their comments to help enhance the programme next year. A process was also created to provide mentors with the means to capture recommendations and comments to help their departments and the Human Resource Department consider interns for post-graduation employment opportunities.

The feedback from all participants was very positive. They found the experience to be a great learning opportunity academically and professionally. All of them showed interest in joining the RasGas Summer Internship Programme next year. RasGas is planning to expand the programme in the next few years, while maintaining its high standards.



Above: As part of the internship programme, RasGas held regular meetings with the students. Left: Ali, a third-year student at Texas A&M University Qatar, receives on-the-job training from his RasGas mentor

As demand for natural gas grows in the United States, construction of a new receiving terminal in Texas is creating a new supply channel for Qatari LNG. Sinéad Mangan-Mc Hale reports on the Golden Pass project

As a result of its clean-burning qualities, natural gas is increasingly the fuel of choice for residential and commercial use in the United States. In 2003, Americans used some 22 trillion cubic feet of natural gas, up from 19 trillion in 1990. By 2025, consumption is forecast to reach 27 trillion cubic feet.

With this increasing demand for natural gas and shrinking domestic resources, American energy providers are seeking alternative supplies. Traditional sources such as the Gulf of Mexico and Canada will continue to supply the US, but even with the eventual completion of the long-awaited Alaska gas pipeline, there is a need to form relationships with additional, long-term natural gas suppliers.

With reserves of more than 900 trillion standard cubic feet in the North Field and a reputation for safe, competitive and reliable supply of liquefied natural gas (LNG), Qatar is a natural choice to fulfil part of the United States' large gas supply-demand puzzle.

In 2006, Qatar became one of the world's largest suppliers of LNG: RasGas now operates 16 million tonnes per annum (Mta) of production capacity and its sister company Qatargas operates over 10 Mta. By 2010 the country aims to be producing 77 million tonnes each year, giving it around a third of the projected global LNG market. In October

2003, Qatar Petroleum (QP), Qatar's national oil and energy corporation, and ExxonMobil and ConocoPhillips, its joint venture partners, signed agreements that will make Qatar one of the largest suppliers of LNG to the growing American market. As well as building onshore and offshore facilities in Qatar, the partners are investing in a regasification terminal in the United States.

The LNG will leave Ras Laffan port on board either the Q-Flex or Q-Max LNG tankers, currently the largest LNG carriers in the world. These ultra-modern ships, with capacities of up to 266,000 m³, will play a crucial role in Qatar's delivery flexibility to markets around the world.

Golden Pass LNG

QP and its partners have joined forces, forming Golden Pass LNG, which will construct a receiving and regasification terminal on the coast of the Gulf of Mexico.

In June this year, construction work began. Located near Sabine Pass, Texas, the terminal will include two ship unloading berths, five LNG storage tanks, regasification facilities and a transmission line connecting the terminal to the existing US pipeline infrastructure. Sabine Pass is an ideal location, with an existing pipeline infrastructure capable of handling the increase in the volume of imported natural gas. The Golden



American
venture

Pass terminal is due to be operational by 2009 and fully completed in 2010, processing up to 15.6 Mta of LNG (approximately two billion cubic feet per day).

A massive dredging operation is under way on site, under the guidance of Chicago Bridge and Iron Company. This is the first stage of a major three-year construction project: at the height of the project more than 1,000 workers will be required. For a shopping list that includes 250,000 tonnes of concrete, 50 million pounds of steel and at least 5,000 valves, local suppliers and subcontractors will be used wherever possible as part of a commitment to reinvest in a region still suffering in the aftermath of Hurricane Rita. In the long term, about 70 permanent employees will operate and maintain the terminal.

Connecting to the network

As part of the Golden Pass Terminal project, a 42-inch natural gas pipeline will be built to

transport the natural gas from the terminal to the existing pipeline infrastructure. The new pipeline will have a daily capacity of 2.5 billion cubic feet, feeding into Texas and beyond. Conscious of any potential adverse impact on the environment, the construction will take advantage of existing rights of way where possible and will comply with the strict guidelines laid down by federal agencies.

Community relations and corporate citizenship initiatives are a very important focus for the shareholders. QP's partners in Qatar run strong corporate social responsibility programmes, and ExxonMobil and ConocoPhillips have a reputation in the US for investing in communities where they are active. In addition to a firm commitment to reinvest in the local economy, Golden Pass LNG has been involved with the Sabine Pass School via sponsorship of senior class programmes and the purchase of new scoreboards for the school's athletic fields.

Below: an artist's impression of the Golden Pass LNG terminal. Right: the proposed route of the pipeline, which will run approximately 70 miles, from the terminal to an interstate pipeline connection near Starks, Louisiana



AT THE HEIGHT OF THE PROJECT MORE THAN 1,000 WORKERS WILL BE REQUIRED

IN 2003, AMERICANS USED SOME 22 TRILLION CUBIC FEET OF NATURAL GAS, UP FROM 19 TRILLION IN 1990

THE SUPPLY CHAIN

- Supplier**
- Qatar North Field (RasGas 3 and Qatargas 3 projects)**
- LNG converted into liquid form by liquefaction below minus 260 degrees Fahrenheit. As a liquid, the gas occupies 600 times less space and is less volatile**
- Transported on Q-Max or Q-Flex LNG ships keeping the gas chilled and secure for the 21-day journey**
- Dock at the two specially constructed offloading berths**
- Stored in the five full-containment storage tanks with a capacity of 15.6 Mta**
- Processed through the regasification facility to return the liquid to natural gas**
- Fed into the Golden Pass pipeline to link with established gas pipeline systems**
- Customers**
- End users**

Many factors underpin RasGas' success, but at the heart of the enterprise, said Dr Mohammed Al Sada at the World LNG Summit, is the philosophy of achieving excellence through people

Energising Europe

At the seventh annual CWC conference, in Rome in October 2006, Dr Mohammed Al Sada, RasGas Managing Director, detailed the critical path to RasGas' success. The World LNG Summit is recognised as a strategic LNG event where senior officials do business and exchange views. Its aim is to add value to the sector, to offer opportunities for debate and resolve some of the questions challenging the LNG industry.

Addressing an audience of oil and gas executives from around the world, Dr Al Sada outlined how RasGas will contribute to Qatar's plans to increase its LNG production capacity by 300 per cent in the next five years. His keynote presentation, *Transforming Vision and Innovation into Reality: The Five Most Important Steps*, explained how RasGas has successfully combined five elements central to its business: long-term planning; an integrated LNG value chain; keen pricing and excellent service; partnership with shareholders and contractors; and a high-calibre, highly motivated workforce.

The five steps

The foundation for commercial success lies in long-term planning and developing a vision for the future. RasGas' vision for growth, development and use of the North Field is fully supported by Qatar's government, RasGas' shareholders and international financial

institutions. The combination of working to a long-term plan and support from key players in the economy is a critical success factor.

The next step on the path to success is the continuous development of an effective integrated LNG value chain, from LNG production to customer delivery. As a pacesetter company RasGas is constantly pushing industry boundaries in the creation of such a value chain. Its growing fleet of LNG vessels enables delivery to an international customer base, for example, and RasGas (through its majority shareholders, Qatar Petroleum and ExxonMobil) is party to Qatar's strategic move into the LNG terminal and regasification business. Through control of the vital links in the supply chain, RasGas can ensure consistently efficient, safe and reliable delivery.

Being competitive on price, meanwhile, is a result of technological innovation that brings economies of scale through synergies in RasGas' onshore and offshore operations. But Dr Al Sada emphasised that serving the customer is equally important. RasGas has a strong customer focus and marketing innovations made possible by supply flexibility have cemented long-term relationships with customers in Asia, Europe and the United States.

Acknowledging the importance of RasGas' shareholders' strong commitment, and

recognising the cost-saving benefits and outstanding safety record achieved through working closely with onshore and offshore contractors, Dr Al Sada highlighted the significance of partnership in the company's success.

The interaction of a variety of elements has led to RasGas' accomplishments, but underpinning everything is the philosophy of achieving excellence through people. RasGas recruits world-class employees, operates in an environment of continuous improvement, and is committed to building an international workforce while taking advantage of the growing bank of Qatari professionals. The key to the company's success is the dedication and hard work of its people.

Looking to the future

"The interaction of these elements," said Dr Al Sada, "has led to our position as one of the largest suppliers of LNG in the world.

"Today, with four trains in operation, RasGas produces 16 million tonnes of LNG per annum," he went on. "In the coming weeks our fifth LNG train will begin production, increasing our capacity by a further 4.7 Mta and making RasGas one of the largest suppliers of LNG in the world and a key contributor to Qatar's growth plans. With two further trains in 2008 and 2009, we are proud to be part of history in the making."



QATAR PETROLEUM WINS CWC AWARD

On the eve of the opening of the World LNG Summit in Rome Qatar Petroleum received the prestigious "CWC World Gas Intelligence LNG" Award in recognition of its outstanding contribution to the development of the LNG industry in 2006.

"It is a great honour to represent HE Abdullah Bin Hamad Al Attiyah, Second Deputy Premier and Minister of Energy and Industry and Chairman of Qatar Petroleum, here in Rome," said Dr Mohammed Al Sada, accepting the award on behalf of Qatar Petroleum. "His Excellency regrettably had a longstanding commitment that kept him from attending. However, he asked me to express how deeply honoured Qatar Petroleum is to receive this prestigious award, and how proud he is to accept this award on behalf of Qatar Petroleum, its subsidiaries, partners and several thousand employees."

Dr Mohammed Al Sada detailing the critical path to RasGas' success in Rome at the World LNG Summit.

"THE INTERACTION OF THESE ELEMENTS HAS LED TO OUR POSITION AS ONE OF THE LARGEST SUPPLIERS OF LNG IN THE WORLD."



Safety on RasGas Alpha



RasGas’ offshore operation recently achieved its eighth consecutive year without a single lost-time injury – an injury that prevents someone from working. **Brett Doherty**, Safety, Health and Environment Manager, explains the significance of this accomplishment

In the oil and gas industry, going eight years without a lost-time injury is quite an accomplishment. You may be thinking, “Another year? Is it really that difficult to achieve? Are offshore production activities really that hazardous?”

In short, they are not that hazardous if several critical factors are addressed: adherence to an exhaustive safety management programme; experienced leadership; an ever-vigilant team; and total commitment to avoiding workplace injury and to environmentally responsible work practices.

Technology also has an important part to play. Offshore installations operate in challenging, often hostile environments, and they possess both marine and process characteristics, so technological innovation is crucial in their design and operation.

Like ships, offshore installations experience hazards such as severe weather, potential collisions with marine vessels and, in a worst-case scenario, possible escape to sea. In addition, platforms contain high-pressure gas and condensate, and potential exposure to hazards associated with onshore processing facilities. The role of the Offshore Installation Manager (OIM) is of particular importance to the overall safety and performance of the platform. The OIM must appreciate all the particular hazards, and be able to take command in the event of an emergency.

The Piper Alpha disaster

To fully appreciate the hazards, it’s worth recalling the Piper Alpha disaster and the subsequent Piper Alpha Cullen Report (resulting from the public inquiry led by Lord Cullen), which led to a step improvement in offshore installation design and operation around the world. Operations such as RasGas Alpha are the beneficiaries of the report’s findings and recommendations.

The disaster took place on 6 July 1988 in the North Sea, when an explosion and subsequent fire ripped through the Piper Alpha oil and gas production platform. Although 62 men escaped, 167 died, mostly trapped in the accommodation quarters with lifeboats inaccessible due to intense heat and smoke. The incident is the world’s worst offshore disaster to date.

A public inquiry was set up by the UK authorities to examine what had happened and make recommendations to avoid similar incidents in the future. Lord Cullen’s

recommendations were adopted completely by the British Parliament and enshrined in legislation. Most of the recommendations, even in the absence of specific regulation in other jurisdictions, have become industry standards since.

RasGas offshore facilities: design

As RasGas Alpha was built after the Piper Alpha disaster, all substantive improvements recommended in the Cullen Report were included in its design and construction. These include the following key features:

Connecting bridge A bridge connects the accommodation platform with the processing and wellhead platforms, for example. Separate accommodation platforms are commonplace in Qatar’s North Field as a result of the Cullen Report’s recommendation to provide a ‘temporary safe refuge’. On Piper Alpha, the accommodation and processing plant were together on a single platform leaving no safe place for the men to await rescue once the fire escalated. On RasGas Alpha mustering, lifeboat loading and launching take place from the accommodation platform, and alternative methods of evacuation are provided on the other platforms in case the bridge to the accommodation platform is inaccessible.

Inherently safe design The incorporation of ‘inherently safe design’ principles – that is, minimising inventories of hydrocarbon liquids on the platforms and locating the riser pipelines (connecting the remote, unmanned wellhead platform to the central processing platform) apart from the processing plant – reduces the risk of riser failure through jet fire that led to the drastic escalation on Piper Alpha.

Emergency shutdown system An independent emergency shutdown system has been installed, with its own power

OFFSHORE INSTALLATIONS EXPERIENCE HAZARDS SUCH AS SEVERE WEATHER, POTENTIAL COLLISIONS WITH MARINE VESSELS AND, IN A WORST-CASE SCENARIO, ESCAPE TO SEA



supply. The system requires no operator action and operates even if the platform's main control computer malfunctions or loses process control.

Safety valves Subsurface and surface safety valves on each production well isolate the reservoir far below the platform in an emergency – the valves will close even if the controls on the platform are damaged.

Stronger systems Enhanced fire walls, fire pumps and monitors, deluge systems, and fire and gas detection systems, as recommended in the Cullen Report.

RasGas offshore facilities: operations

Since production began on 12 October 1998, the RasGas Alpha team, with support from RasGas onshore operations, has set up world-class maintenance, process monitoring, work management and emergency response systems, underpinned by the company's integrity management system, RasGas Elements of Excellence (RGEE). The RGEE system explicitly requires the use of procedures that govern the following examples of good offshore work practices recommended in the Cullen Report.

Permits to work All work conducted by RasGas and contractor staff must be controlled under a 'permit to work'. The Cullen Report found significant inadequacies in the Piper Alpha permit system, identifying them as a contributory factor to the disastrous incident. The RasGas system addresses those inadequacies and requires a number of authorities to sign off work. Additionally, all personnel working under the RGEE system, including contractors, must undergo intensive training in it prior to working on the platform.

Competency assurance programme All employees working on RasGas Alpha, including contractors, form an integral part of the system to ensure incident-free

THE CULLEN REPORT'S RECOMMENDATIONS HAVE BECOME INDUSTRY STANDARDS

operation. A comprehensive competency assurance programme, augmented with essential training programmes, ensures that all personnel are competent in current work procedures. Employee input and participation are encouraged on safety programmes such as safety walks, the safety observation programme and the B-Safe behaviour-based safety programme, to ensure the sustainability of these initiatives.

Testing of safety systems Rigorous and frequent testing of all safety systems, based on known equipment and instrument failure rates, have been put in place. The safety systems include fire fighting, fire and gas detection, emergency shutdown valves and lifeboats.

Evacuation, escape and rescue plan The evacuation, escape and rescue plan is rehearsed on a monthly basis, and the results are scrutinized by platform and onshore management to ensure the lessons are learned from each exercise. A simple list of actions for each accident scenario is part of the offshore RasGas Emergency Management System.

Hazard and operability review Through a hazard and operability review the RasGas Safety, Health and Environment (SHE) Group and the Operations Department have this year completed an extensive review of RasGas Alpha's process-critical drawings. The requirement to maintain up-to-date critical drawings is part of our RGEE system – the failure to maintain such drawings was identified in the Cullen Report as a causal factor in the Piper Alpha disaster.

Safety procedures Other systems RasGas has in place that were absent or ineffective according to the Piper Alpha investigation include rigorous procedures for controlling bypasses of shutdown instruments, for maintaining and operating the platform, and for scheduled auditing of the platform's procedures and equipment by shore-based staff.

A magnificent team effort

The various design and operational factors mentioned above and addressed by RasGas were all found to have contributed to the Piper Alpha disaster. As you can see, that's a lot of things to focus on, requiring intensive and ongoing effort by the RasGas Alpha team. The diligent, ongoing effort that the RasGas Alpha team has invested over the last eight years to maintain these work management systems is commendable – on every job, shutdown and simultaneous drilling operation, and on all activity, no matter how seemingly insignificant.

That is what it has taken to achieve an injury-free workplace for eight years. It's also what's required tomorrow, the next day and every day that follows. So bravo to the team and bring on nine years!

THE EVACUATION, ESCAPE AND RESCUE PLAN IS REHEARSED ON A MONTHLY BASIS, AND THE RESULTS ARE SCRUTINISED BY PLATFORM AND ONSHORE MANAGEMENT

OFFSHORE CELEBRATION

In October 2006 more than 50 offshore employees, representing more than ten nationalities, joined Dr Mohammed Al Sada, RasGas Managing Director, on board RasGas Alpha to celebrate their eighth consecutive year without a lost-time incident. Dr Al Sada was accompanied by members of the senior management team to acknowledge the offshore operators' continuous effort and commitment.

Since production began on 12 October 1998, the RasGas Alpha team, with support from onshore operations, has set up a comprehensive system of maintenance, process monitoring, work management and emergency response which is comparable to the best in the industry. All employees are trained to be aware that everyone is responsible for the safety of all, on and off the job. The offshore team has worked diligently over the last eight years to maintain these work management systems on every job, shut down and simultaneous drilling operation, no matter how small.

The RasGas offshore team is committed to continuing its efforts towards safe operations and to extending this excellent safety record for the full life cycle of the project.



Dr Al Sada on board RasGas Alpha to celebrate a record-breaking eighth consecutive year without a lost time incident

Ras Laffan: extending the gateway of energy

As LNG and other shipping traffic grows, a five-year development programme is under way that will transform Ras Laffan port into the world's largest man-made harbour

On its way to becoming a world energy leader in liquefied natural gas (LNG), Qatar continues to develop its infrastructure to facilitate growth. Nowhere is this expansion more evident than in the construction projects under way at Ras Laffan City and, in particular, at Ras Laffan port.

Constructed originally with two LNG berths, Ras Laffan is already one of the largest LNG export facilities in the world. None the less, with RasGas and its sister company Qatargas still in major expansion mode, the port needs further development to accommodate Qatar's growing LNG export capacity needs. With six new LNG trains being built to boost exports to 77 Mta by 2011, the port is now undergoing an extensive reconstruction programme to handle the increased volume of LNG and associated liquid products.

To accommodate this growth in LNG traffic RasGas and Qatargas are also gearing up their combined shipping fleet, which, by the end of 2006, will include 21 LNG carriers ranging in size from 135,000 to 151,700m³. Longer-term, the plan is to increase the fleet to some 70 ships, including a number of Q-Flex and Q-Max carriers, by early 2010. By 2012 the port will be handling up to 3,000 vessels annually to deal with the growth in LNG and other liquid exports.

To manage this expansion a master plan

has been developed by the management of Ras Laffan under the direction of its director, Misnad al Misnad. With the support of the industrial city's residents, the Qatari government and Qatar Petroleum, the port is already undergoing significant construction work. A third LNG berth is in service and able to accommodate Q-Max ships of up to 265,000m³, berths 4 and 5 are under construction, and there are plans for up to five more berths to cope with expected growth in LNG exports. In parallel, more liquid berths and an offshore Single Point Mooring (SPM) facility are also being built to handle the growing volume of LNG by-products such as LPG, condensate and sulphur. These will assist in reducing the traffic, particularly that of large crude carriers, to the inner port.

There are plans in place, too, to take the port facilities one step further by developing a ship-repair yard at Ras Laffan to service the LNG fleet and other ships docking there. The first phase of this plan is due to be completed by 2009.

When all the developments are complete, the LNG and liquid product jetties, associated container berths and repair facilities are enclosed by 26 kilometres of breakwaters. At that point Ras Laffan will be in the record books as the largest man-made harbour in the world.





By 2012 the port will be handling up to 3,000 vessels annually to deal with the growth in LNG and other liquid exports



NEW LNG CARRIERS FOR RASGAS

In October 2006 RasGas added to its growing fleet of LNG carriers when its ninth and 10th ships were named at a ceremony in Korea. Naming the ships were Dr Mohammed Al Sada, RasGas Managing Director, and Cathia Bruggeman Houston, the wife of Denny Houston, ExxonMobil's Executive Vice President of Refining and Supply.

The Al Marouna and Al Areesh each have a cargo capacity of 151,700 m³ and are the largest RasGas ships to date. They will arrive at Ras Laffan port in October 2006 and January 2007 respectively and are chartered from the Teekay Nakilat Corporation consortium of ship owners. The ships were built in Korea by Daewoo Shipbuilding and Marine Engineering.

RasGas

MAGAZINE

Issue 16 | December 2006

PORT EXPANSION

Ras Laffan port: extending the gateway to energy

ATLANTIC LNG

As demand grows, Atlantic Basin LNG importers develop new terminals and pipelines

THE POWER OF EDUCATION

Two organisations launch initiatives to combat one of the world's leading causes of death

WORLD-CLASS HEALTHCARE

Dr Sheikha Ghalia Al Thani on Qatar's plans to create a healthcare system founded on excellence

SAFETY

INTERNSHIPS

SHIPPING

LNG SUMMIT